

Solid Waste Management Plan

Consultation Summary
Report

V. 1.0; October 2021



Regional District of
Kitimat-Stikine



Love this place.
Reduce your waste.



MORRISON HERSHFIELD

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1. Introduction

The Environmental Management Act requires each of BC's regional districts to have a solid waste management plan. The Regional District of Kitimat-Stikine (RDKS) has developed a new Solid Waste Management Plan (SWMP or simply "the Plan") to replace the SWMP that was approved in 1995. The purpose of the new SWMP is to enhance existing solid waste programs and provide direction for how we will reduce, reuse, recycle and dispose of our waste for the next decade.

This Consultation Summary Report describes the public consultation that was undertaken by the RDKS during development of the new SWMP. Development of the new Plan has followed the four-step process described in the Guide to Solid Waste Management Planning (BC Ministry of Environment, 2016) shown in Figure 1.



Figure 1: Main steps in the Plan Development Process

2. Goals and Commitments

The RDKS is committed to using the consultation approach developed by the International Association of Public Participation (Figure 2). The engagement with the public took place at the **inform** and **consult** levels of participation, and the engagement with a select group of stakeholders at the **collaborate** level of participation. The RDKS made the commitment to engage stakeholders at the **involve** level of participation on request. The empower level of participation, which places final decision-making in the hands of the public, was not used for the development of the SWMP. The following goals were established by the RDKS:

- Provide information to enable stakeholders and the public to determine how their interests may be affected and decide on their desired level of involvement;
- Use a variety of methods to notify the public and stakeholders of each consultation opportunity;
- Provide time for stakeholders and the public to respond to draft documents;
- Document the proceedings and outcomes from the consultation process and make them available for public review, to demonstrate how the plan addresses input received; and
- Collaborate with member municipalities, First Nations representatives and community associations to deliver consultation.

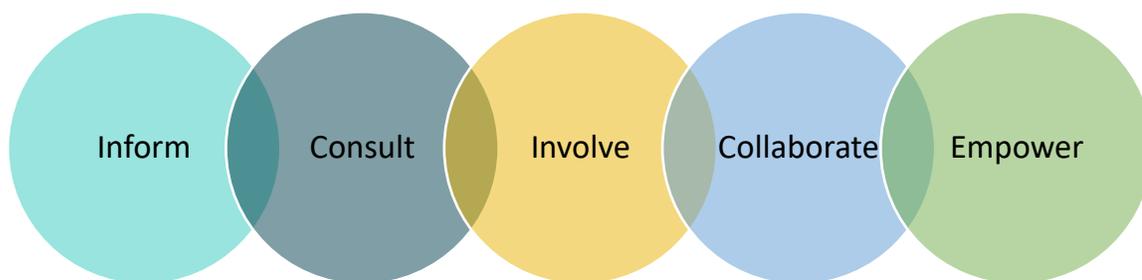


Figure 2: The IAP2 spectrum of public participation

3. Step 1: Initiate the Planning Process

The RDKS initiated the process of developing a new SWMP in 2017 and undertook the preliminary work to support the development of a new SWMP and set the Plan direction. The consultation tasks in Step 1 included: defining the Plan area; assembling background information (i.e., current waste management practices); setting the scope of work; developing the consultation plan; setting the project budget; presenting the draft approach to PMAC; gaining Board approval to develop the Plan; developing a comprehensive list of interested parties; and notifying interested parties of the SWMP and inviting them to join PTAC. This work resulted in the development of the following documents:

- Appendix 1 – Solid Waste Management Plan Review Process – Overview (Sarah Wilmot, April 19, 2017);
- Appendix 2 – Step 1 Memo – Proposed Approach to Solid Waste Management Plan Review Process (Sarah Wilmot, November 15, 2017); and
- Appendix 3 – Draft Background Information and Assessment of the Current Solid Waste System (Sarah Wilmot, August 1, 2017; revised January 4, 2019).

The process to develop a new SWMP was developed and presented to PMAC in August 2017. A draft consultation strategy was subsequently developed and presented to PMAC in November 2017. Feedback from PMAC members was incorporated into a revised draft of the consultation plan. Refer to Appendix 4 – Draft Consultation Strategy for the Development of a Solid Waste Management Plan (Sarah Wilmot, Updated January 30, 2019).

In January 2018, the Regional District Board of Directors (Board) reviewed the draft consultation strategy and other work completed in 2017 and granted authorization to proceed with development of a new SWMP.

4. Step 2: Set the Plan Direction

In August 2018, RDKS Administration began work to support the consultation process. The tasks related to Step 2 included: developing and adopting a brand for the new SWMP, transition of PMAC to a new Public and Technical Advisory Committee (PTAC), solicitation and selection of new PTAC membership, consultation with public, stakeholder and special interest groups, setting plan objectives, and exploring waste management options.

4.1. SWMP Brand

The RDKS Administration developed three brand options, which were presented to PMAC for selection of a brand on July 18, 2018. PMAC members voted on their preferred brand. The preferred brand selected by PMAC uses the existing RDKS zero-waste logo, with a new slogan of “Love this place. Reduce your waste” (Figure 3). This slogan was originally developed by the Squamish-Lillooet Regional District (SLRD). Administration contacted staff at the SLRD to determine if they had any objections to the RDKS borrowing their slogan. SLRD staff noted that the development of their slogan had required substantial resources and referred the decision to the SLRD Board. Approval from SLRD Board was granted. On August 18, 2018, the RDKS Board authorized use of the brand for the new SWMP.



Figure 3 SWMP Brand

The brand has been used on promotional material to inform the public of the SWMP and recruit members to PTAC.

4.2. Dissolution of the PMAC

The Plan Monitoring Advisory Committee (PMAC) held their final meeting on September 5, 2018, in New Hazelton. Because the RDKS was developing a new SWMP rather than simply amending its existing plan, it was determined that a new committee should be formed to advise on development of the new Plan. At its final meeting, PMAC reviewed information to support development of the new SWMP, including the “*Solid Waste Management Plan Issues Paper*” (Sarah Wilmot, August 8, 2018), contained in Appendix 5.

PMAC was provided an update regarding the planned recruitment for members to the new Public and Technical Advisory Committee (PTAC). PMAC members were encouraged to apply to participate on PTAC and were provided application forms for completion.

4.3. Announcement of New SWMP and Recruitment to PTAC

On August 18, 2018, the RDKS Board authorized Administration to inform stakeholders and the public of the new SWMP planning process and solicit members to PTAC using letters, posters, a brochure, and advertisements.

4.3.1. 2018 Advertising for the New SWMP and PTAC Recruitment

In the fall of 2018, the public was informed of the new SWMP development process and members of the public were solicited for participation in PTAC. Outreach material, including a

poster and advertisement, was branded with the slogan: “Interested in how we manage garbage?” Throughout October and November 2018, the RDKS implemented the following advertising and outreach activities:

- 70 posters were distributed and posted to visible locations throughout the Regional District;
- Two advertisements were run in the Terrace Standard, Kitimat Connector, Bulkley Browser and Smithers Interior News;
- Advertisements were posted to RDKS Economic Development social media pages on Facebook and Twitter; and
- SWMP-specific email address and webpages were developed, as follows:
 - ◆ solidwasteplan@rdks.bc.ca
 - ◆ www.rdks.bc.ca/solidwasteplan
 - ◆ www.rdks.bc.ca/PTAC.

The poster, advertisement, copies of the newspaper ads, copies of the social media posts and snapshots of the RDKS website posts can be found in Appendix 6.

4.3.2. Recruitment of Targeted Stakeholders to PTAC

Stakeholders anticipated to have an interest in regional solid waste management were contacted directly through a mail-out. The stakeholder list was developed by Administration, reviewed by PMAC and approved by the Manager of Works and Services.

Stakeholders were organized into 16 groups, and tailored letters were developed for each group. Depending on the inferred level of interest, some groups received an “Inform” letter providing information regarding the new SWMP and PTAC, while others received “Invite” letters soliciting their participation in PTAC.

During September 2018, RDKS Administration sent out 194 tailored “Invite” or “Inform” letters to government agencies, neighboring Regional Districts (North Coast and Bulkley Nechako), Extended Producer Responsibility / stewardship organizations, chambers of commerce, community associations, department and grocery stores, educational institutions, environmental groups, First Nations communities, health authorities and health service providers, industrial camps and local industry, member municipalities, PMAC members, private waste haulers, recycling depots, and thrift stores. A flat-sheet brochure outlining the SWMP implementation steps was included with the letters. Some stakeholders were also sent a PTAC Application Form or were directed to the SWMP and PTAC websites for more information.

The following appended documents were used to inform stakeholders of the SWMP and recruit members to PTAC:

- Appendix 7 – Solid Waste Management Plan Targeted Stakeholder List;
- Appendix 8 – Solid Waste Management Plan “INVITE” Letter Template and Public and Technical Advisory Committee “INFORM” Letter Template;
- Appendix 9 – Targeted Letter Content;

- Appendix 10 – Brochure: Solid Waste Management Plan, Step 2 Implementation, August 2018; and
- Appendix 11 – Public and Technical Advisory Committee (PTAC) Membership Application Form 2018.

4.3.3. Targeted Email Recruitment to PTAC

Following closure of the application period on November 16, 2018, RDKS Administration reviewed the applications and identified gaps in representation. An email requesting participation in PTAC was sent to the following unrepresented local governments on December 4, 2018:

- District of Kitimat;
- Village of Hazelton;
- Gingolx Nisga'a Village Government;
- Laxgalts'ap Village Government;
- Gitwinksihlkw Village Government;
- Gitlaxt'aamiks Village Government;
- Gitanmaax Band Council;
- Gitsegukla Band Council;
- Gitwangak Band Council;
- Kispiox Band Council;
- Glen Vowell Band Council- Sik-e-dakh;
- Gitanyow Band Council;
- Moricetown Band Council;
- Hagwilget Village Council;
- Iskut Band Council;
- Kitselas Band Council;
- Kitsumkalum Band Council;
- Tahltan Band Council; and
- North Coast Regional District.

A copy of the email is contained in Appendix 12.

In response to this email, a participant from the North Coast Regional District was appointed to PTAC. Two enquiries were made by First Nations governments; however, no PTAC applications were received at that time.

In response to the September 6, 2018, PTAC solicitation letter, a representative from Indigenous Services Canada (ISC; formerly AANDC), Shawna Sturgeon, contacted the Environmental Services Coordinator for more information regarding the SWMP. ISC is currently working with many of the First Nation communities within the RDKS to develop solid waste management systems. Ms. Sturgeon declined direct involvement in PTAC, however requested that ISC may maintain a high level of involvement during the SWMP planning process. Discussions indicated that ISC would be willing to assist the RDKS in engaging First Nations representatives within calls, meetings, workshops and/or focus groups regarding specific topics that may affect their communities.

4.4. Establishment of PTAC

The PTAC application period was open from early September to November 16, 2018. Applications were accepted by mail, fax, email and in-person. The RDKS Environmental Services Coordinator was responsible for receiving and reviewing the applications. Administration recommended membership to the Board. The Board appointed 25 primary members and nine alternate members to PTAC at the Board meetings on December 14, 2018, and January 24, 2019. Updates to the PTAC membership occurred in 2020 and 2021. Table 1 and Table 2 presents the most current list of voting and non-voting PTAC members.

The PTAC Terms of Reference, developed in February 2019 and updated in December 2019 are included in Appendix 13.

Table 1: PTAC Voting Members

	Member	Alternate
RDKS Board Liaison		
District of New Hazelton	Gail Lowry	Gina McKay
City of Terrace	James Cordeiro	Sean Bujtas
Member Municipalities		
District of Kitimat	Robert Machial	
City of Terrace	Jonathan Lambert	Ben Reinbolt
District of Stewart	Jennifer Larson	Tammy McKeown
District of New Hazelton	Wendy Hunt	Robyn Carle
Village of Hazelton	Julie Maitland	Lina Gasser
First Nations		
Haisla Nation Council	Candice Wilson	Kim Vroon
Iskut Band	Maggie Dennis	
Public Representation - Electoral Areas		
Electoral Area A		
Electoral Area B	Ronald Harris	
Electoral Area C	Ian Gordon	
Electoral Area D (Iskut)		
Electoral Area E	Sandy Crawford	
Electoral Area F		
Public Representation - Municipalities		
City of Terrace	Stew Christensen	
District of Kitimat	Ken Maitland	
District of Stewart		
District of New Hazelton	Ruth McAfee	
Public Representation - Community Interests		
Geier Waste	Rob Geier	Glenn Peterson
Do Your Part	Kasey Lewis	Annie Schlamp
KUTE	Michelle Martins	
Kitimat Chamber of Commerce	Katherine Gauer	
Rio Tinto	Andy Lecuyer	
Skeena Sawmills	Roger Keery	Vik Makela

Table 2: PTAC Non-Voting Members

	Member	Alternate
Provincial Agency Representatives		
Northern Health	Michael Kerwin	
Ministry of Environment and Climate Change Strategy	Leonard Cook	Erin Brown
Ministry of Transportation	Rosemary Barnewall	Lauren Bell
Regional District Representatives		
Regional District of Bulkley Nechako	Janette Derksen	
North Coast Regional District	Tim Des Champs	
RDKS Administration		
Director of Works & Services	Michael Baker	
Solid Waste Manager	Erin Blaney	
Environmental Services Coordinator	Nicki Veikle	
Morrison Hershfield – RDKS Consultants		
Solid Waste Planner	Veronica Bartlett	
Solid Waste Engineer	Eva Robertsson	
Member Municipalities Consultants		
District of Kitimat-Independent Consultant	Carey McIver	

4.5. Involved Working Group

The RDKS anticipated that certain stakeholders would have a high level of interest in the development of the Plan but may not be able to participate directly in PTAC. These groups were identified for inclusion in the SWMP Involved Working Group.

A letter to the original stakeholders (i.e., stakeholders that received targeted letters) was sent in February 2019. The letter updated them on the formation of PTAC and the SWMP process and asked how each stakeholder wished to stay involved in the planning process. The original Involved Working Group membership was formed based on responses to this letter. All First Nations communities were included in the Involved Working Group unless they opted out. Following the 2019 public survey, the Involved Working Group was expanded to include individuals that indicated their interest in learning more about solid waste management on the survey.

The 378 individuals on the Involved Working Group received monthly or bi-monthly email communication with Plan updates, including PTAC agendas, minutes, presentations, etc. These individuals had the opportunity to reach out directly to the RDKS to become involved in certain elements of the Plan.

Emails to the Involved Working Group are included in Appendix 14.

4.6. Consultation to Set the Plan Direction

In early 2019, RDKS Administration began the work of educating the public and stakeholders on the existing solid waste system, the solid waste management planning process, and soliciting input to help set the priorities and direction for the Plan.

4.6.1. PTAC, Board and Staff Workshops

During the first two PTAC meetings on January 15 and February 12, 2019, RDKS Administration and solid waste planning consultant, Sarah Wilmot, held workshop presentations

to provide the new committee background information on the existing solid waste system, the SWMP planning process, and the proposed consultation strategy.

As the RDKS Board and staff were considered key stakeholders in the SWMP planning process, consultation with the Board and staff was initiated in conjunction with the kick-off of the PTAC committee. On February 21, 2019, Administration provided the RDKS Board with a presentation and workshop on the new SWMP. This presentation is contained in Appendix 15. A similar workshop was provided to all RDKS staff on February 26, 2019.

4.6.2. 2019 Solid Waste Survey

At their February 12, 2019, meeting, the PTAC committee reviewed and approved the 2019 Solid Waste Survey for distribution. Two slightly different surveys were developed for each the Terrace Service Area and the Hazelton and Highway 37 North Service Area. The survey was launched on March 1, 2019, and ran until April 1, 2019. The purpose of the survey was to:

- Gauge user satisfaction with existing solid waste systems,
- Provide awareness regarding solid waste management services (i.e., EPR depots),
- Discover how citizens perceive and prioritize topics proposed within the SWMP, and
- Solicit feedback and comments from citizens to help set the priorities and direction for the SWMP development.

The survey can be viewed in Appendix 16.

4.6.3. Advertising for the 2019 Solid Waste Survey

In early 2019, RDKS Administration developed a public survey and corresponding advertisements. Throughout February and March 2019, RDKS implemented the following advertising and outreach activities:

- The 2019 Solid Waste Survey was published online (using Canadian-based survey software company, Jitsutech) at <https://jitsutech.ca/solidwasteplan> on February 27, 2019;
- 14,200 printed surveys were sent to all households within the Regional District on February 27 and 28, 2019;
- 36 survey collection boxes and/or self-addressed envelopes were sent or delivered to municipal and band offices, educational institutions, public centers, and high-traffic businesses between March 3 to 8, 2019. These locations collected completed surveys and returned them to the RDKS by April 2, 2019;
- Two advertisements were run in the Terrace Standard, Kitimat Connector, Smithers Interior News, and Bulkley Browser between March 14 to 28, 2019, directing citizens to complete the online survey;
- The survey was publicized through social media posts on Facebook and Twitter;
- The survey was publicized on the RDKS website; and

- Completion of the survey was incentivized by anonymously selecting two survey respondents to win \$100 Visa gift cards.

The survey advertisement, copies of newspaper ads, copies of the social media posts, snapshots of the RDKS website posts, and a list of the collection locations can be found in Appendix 17.

4.6.4. 2019 Solid Waste Survey Results and RDKS Response

The 2019 Solid Waste Survey received 875 responses, which represented approximately 2.2% of the total RDKS population. Survey respondents were generally self-reporting as good recyclers (i.e., utilize the EPR depots available) and were predominantly in support of the SWMP initiatives proposed. RDKS Administration reviewed the comments received on the survey and categorized the comments into themes. These comment themes helped set the direction for new initiatives in the SWMP.

In response to the 2019 Solid Waste Survey respondents, RDKS Administration prepared a document entitled: “What we Heard from You: RDKS Response to the Solid Waste Survey.” This document was publicized on the RDKS website. Additionally, the RDKS solid waste team conducted an interview with the Terrace Standard, which resulted in the publication of an article in the Standard on July 18, 2019.

A summary of the survey results, RDKS response to the survey, and the Terrace Standard article can be found in:

- Appendix 18 - Solid Waste Survey Results and RDKS Response
- Appendix 19 – July 18, 2019, Terrace Standard Article re: Waste Management

5. Step 3: Evaluate Options

Step 3: Evaluation of Options, occurred throughout 2019 and 2020, and involved discussions with PTAC members during several meetings.

The RDKS, with support from solid waste planning consultants with Morrison Hershfield, worked closely with PTAC to identify key issues with the existing solid waste management system, review potential options for addressing the region’s future needs, and develop / select preferred options for future waste management. The discussions informed the strategy development and options analysis described in step 5.

5.1. PTAC Options Evaluation

Table 3 presents the PTAC Meeting Schedule and the discussion topics, which were grouped according to the waste management hierarchy.

Table 3: PTAC Meeting Schedule and Topics

Dates	Theme	Main Topic(s)
January 15, 2019	PTAC Business	<ul style="list-style-type: none"> Review the existing RDKS solid waste management system
February 12, 2019	Consultation strategy; Efficiency	<ul style="list-style-type: none"> Review and approve consultation strategy and public survey Discuss efficiency for RDKS Solid Waste Programs and Facilities as a SWMP theme
April 16, 2019	Reduce, Reuse and recycling	<ul style="list-style-type: none"> Discuss specific reduce, reuse and recycling strategies (e.g., food waste reduction single-use items, waste management space in new buildings, deconstruction)
June 11, 2019	Reuse and Recycling; 2019 Solid Waste Survey Results	<ul style="list-style-type: none"> Discuss specific reuse and recycling strategies (e.g., reuse initiatives) Review 2019 Solid Waste Survey responses
January 7, 2020	Reduce and Reuse Options	<ul style="list-style-type: none"> Summary of reduce and reuse options Options evaluation and selection of preferred reduce and reuse options
February 11, 2020	Recycling and Composting Options	<ul style="list-style-type: none"> Recycling and composting Options evaluation and selection of preferred recycling and composting options
March 10, 2020	Residual Waste Management at Existing Facilities	<ul style="list-style-type: none"> Residual Waste Management at Existing Facilities Options evaluation and selection of preferred residual waste management options
May 28, 2020	New Facilities & Service Areas, and Cost Recovery	<ul style="list-style-type: none"> New Facilities and Service Areas Cost Recovery Options evaluation and selection of preferred options for new RDKS facilities and service areas
June 4, 2020	New Facilities & Service Areas, and Cost Recovery Continued	<ul style="list-style-type: none"> Continuation of options evaluation and selection of preferred options for new RDKS facilities and service areas
June 25, 2020	Evaluation of preferred options	<ul style="list-style-type: none"> Review and discuss the selected strategies Evaluate the preferred options to form the basis of the Draft SWMP
August 14, 2020	Draft SWMP for PTAC review	<ul style="list-style-type: none"> Email correspondence only (no meeting) The Draft SWMP was circulated via email to the PTAC Committee for review
December 9, 2020	Consultation on Draft SWMP	<ul style="list-style-type: none"> Review and approved the updated Consultation Strategy and 2021 Solid Waste Survey to consult on the Draft SWMP
September 28, 2021	Final SWMP	<ul style="list-style-type: none"> Review results of the 2021 consultation on the Draft SWMP Review revisions to the SWMP based on consultation Approve the Final SWMP

Several technical memoranda and reports were prepared by consultants to support the PTAC in the discussion and evaluation of options and included as:

- Appendix 20 – Memo 1: Efficiency for RDKS Solid Waste Programs and Facilities (February 2019)
- Appendix 21 – Memo 2: Reduction and Reuse Options (April 2019)
- Appendix 22 – Memo 3: Reduce Single Use Items (April 2019)

- Appendix 23 – Memo 4: Food Waste Reduction Strategy (April 2019)
- Appendix 24 – Memo 5: Waste Management Space Requirements for New ICI Construction (April 2019)
- Appendix 25 – Memo 6: Building Deconstruction vs. Demolition (April 2019)
- Appendix 26 – Memo 7: Summary of Reduce and Reuse Options to Consider for Inclusion in the SWMP (December 2019)
- Appendix 27 – Memo 8: Recycling Options to Consider for Inclusion in the SWMP (February 2020)
- Appendix 28 – Memo 9: Options for Residual Waste Management at Existing Facilities to Consider for Inclusion in the SWMP (March 2020)
- Appendix 29 – Memo 10: Options for Waste Management at New Facilities or in New Service Areas to Consider for Inclusion in the SWMP (May 2020)
- Appendix 30 – Memo 11: Options for Cost Recovery to Consider for Inclusion in the SWMP (May 2020)
- Appendix 31 – Memo 12: Evaluation of Preferred Options for Inclusion in the Solid Waste Management Plan (June 2020)

The Involved Working Group were informed of the meeting outcomes via email and all documents were made available on the RDKS' website for interested parties.

During each meeting held between January to May 2020, PTAC members were able to “vote” for which of the discussed options should be selected and considered as part of preferred options. Based on PTAC preferences at each meeting, MH recommended a list of strategies and priorities, which were carried over into the PTAC meeting on June 25, 2020, when the overall preferred options were selected. During the June 4 meeting, the PTAC members had a second opportunity to review and discuss the selected strategies all together and evaluate the preferred/ selected options from previous meetings. The preferred options were selected by PTAC members to form the basis of the draft SWMP.

Based on the preferred options selected by PTAC, Morrison Hershfield drafted letters of recommendation for options and strategies to be included in the SWMP. These letters are contained in Appendix 32.

All PTAC meeting agendas and minutes are available for review on the [RDKS website](#).

5.2. Financial Working Group

During the planning process, a Financial Working Group (FWG) met twice to discuss the current cost recovery models, options to improve the cost recovery, and the member communities' ideas, concerns, and observations. The FWG was made up of financial representatives from member municipalities and First Nations within the RDKS. The FWG met on February 11, 2020, and May 13, 2020. The FWG established Guiding Financial Principals for the development of cost recovery options and had input on the cost recovery options, which were further discussed by PTAC members.

The meeting agendas and minutes from the FWG are available in Appendix 34.

6. Step 4: Prepare and Adopt the Plan

Step 4, which involved preparation of the Plan, commenced after the PTAC meeting on June 4, 2020. This step also involves the approval of the Plan by the Board, the submission of the final SWMP and at last, the final adoption by the Board.

6.1. Preparation of Draft Plan from Preferred Options

During meetings on June 4 and 25, 2020, the PTAC evaluated and selected the preferred options, which informed development of the Draft SWMP. Morrison Hershfield supported RDKS staff to prepare the Plan.

The RDKS shared the Draft Plan with PTAC members via email on August 14, 2020, and asked for feedback by August 31, 2020. Members were offered to attend a meeting if specific feedback required further discussion with all PTAC members. No meeting was requested, and all PTAC feedback was provided via email to RDKS staff. The Draft SWMP was finalized with this input from PTAC members.

6.2. Board Approval of Draft SWMP for Public Consultation

On October 23, 2020, the Draft SWMP was presented to the RDKS Board for review and approval. At that Committee of the Whole meeting, the Draft Plan was approved for use in public consultation. Board meeting agenda and minutes from this meeting are available on the [RDKS website](#). The Draft SWMP and presentation are contained in:

- Appendix 35 – Proposed Solid Waste Management Plan Draft for Board Consideration.
- Appendix 36 – October 23, 2020, Draft SWMP Presentation to RDKS Board.

6.3. Public Consultation on the Draft SWMP

The original Consultation Strategy developed in 2019 proposed a series of in-person open houses to consult on the Draft SWMP. However, during the consultation period, the global COVID-19 pandemic prevented in-person gatherings. The original engagement techniques relied heavily on these in-person meetings, which were no longer suitable under pandemic circumstances.

Morrison Hershfield issued a memo as an addendum to the approved 2019 Consultation Strategy. It presented a brief overview of more appropriate engagement techniques that could be used to replace the in-person open houses during consultation.

The engagement techniques were presented to PTAC meeting on December 9, 2020, and PTAC approved the proposed engagement techniques, which included a public survey, a series of virtual open houses and targeted stakeholder interviews. These techniques were also approved by the Board on January 22, 2021. These three non-contact techniques cover different parts of the public participation spectrum (refer to Figure 2) and are discussed in detail in the following appended documents:

- Appendix 37 – Addendum to the RDKS Consultation Strategy for the Development of a Solid Waste Management Plan – Engagement Techniques to Consider for Public Consultation (Dec 2020).
- Appendix 38 – December 9, 2020, Presentation to PTAC re: Engagement Techniques for Public Consultation on the Draft SWMP.

The table below presents the timeline for public engagement using the selected engagement techniques. The survey distribution, which took place in early 2021, was intended to help raise awareness of the virtual events held a month later.

Table 4: Timeline for Public Consultation on the Draft SWMP.

Timeline (2021)	Engagement Technique
February 2 – March 13	Online and mail survey
April 7 – April 17	Virtual open houses (webinars)
May - August	Targeted interviews with key stakeholders (phone call or meeting)

A variety of communication tools were used to promote the survey and the open house events to increase participation.

6.4. 2021 Solid Waste Survey

The 2021 Solid Waste Survey was approved for distribution to the public by PTAC at the meeting on December 9, 2020, and by the Board on January 22, 2021. Only one version of the survey was developed, as it was not specific to service area. The survey was launched on February 1, 2021, and ran until March 14, 2021. The purpose of the survey was to consult the public on the strategies proposed within the Draft SWMP.

The survey can be viewed in Appendix 39.

6.4.1. Advertising for the 2021 Solid Waste Survey

In early 2021, RDKS Administration with support from Morrison Hershfield, developed the solid waste survey and corresponding advertisements. Throughout February and March, RDKS implemented the following advertising and outreach activities:

- The 2021 Solid Waste Survey was published online (using Microsoft Forms) at www.link.rdks.bc.ca/solidwastesurvey2021 on February 1, 2021;
- 16,040 printed surveys were sent to all households within the RDKS on February 9, 2021;
- The survey link was publicized as a news story “Don’t WASTE your chance to talk TRASH to us” on the RDKS website on February 2, 2021;
- The survey was publicized through social media on Facebook, Twitter and Instagram on February 2, 2021;
- Two advertisements were run in the Terrace Standard, Kitimat Connector, and Bulkley Browser between February 4 and 26, 2021, directing citizens to complete the online survey and providing a QR Code for easily accessing the survey; and

- Completion of the survey was incentivized by anonymously selecting two survey respondents to win \$100 Visa gift cards.

The survey advertisement, copies of newspaper ads, copies of the social media posts, and snapshots of the RDKS website posts, can be found in Appendix 40.

6.4.2. 2021 Solid Waste Survey Results and RDKS Response

The 2021 Solid Waste Survey received 1,215 responses, which represented approximately 3% of the total RDKS population. 768 responses were from the Terrace Service Area and 133 responses were from the Hazelton and Highway 37 North Service Area. Overall, the survey provided excellent feedback on the initiatives proposed within the Draft Plan. Survey respondents were generally very supportive of waste reduction and diversion efforts. The 720 comments received through the survey were categorized into themes. A summary of survey results and themes observed through the survey comments are included in the appended “2021 SWMP Survey Results and RDKS Response” memo. These comment themes have assisted in making the revisions and addition of new initiatives in the Draft SWMP.

In response to the 2021 Solid Waste Survey respondents, RDKS Administration and Morrison Hershfield prepared a document entitled: “What we Heard from You: RDKS Response to the Solid Waste Survey.” This document was publicized on the RDKS website. Additionally, main themes from the “What we Heard” document were condensed into a brief news release that was forwarded to the Terrace Standard, CFNR radio station, CBC Daybreak North, CFTK News channel, and Bell Media for release on September 13, 2021.

A summary of the survey results, RDKS response to the survey, and the news release can be found in:

- Appendix 41 – 2021 Solid Waste Survey Results and RDKS Response;
- Appendix 42 – September 10, 2021, News Release re: SWMP Survey Results.

6.5. Virtual Open Houses

A series of virtual open houses was approved as a consultation technique by PTAC at the meeting on December 9, 2020, and by the Board on January 22, 2021. Administration and Morrison Hershfield developed an open house presentation with the branded slogan of “Let’s Talk Trash!”

The open houses were chaired by Nicki Veikle, RDKS, with presentation by Erin Blaney, RDKS, and Veronica Bartlett, Morrison Hershfield. Each 1.5-hour event included background information about the SWMP development process followed by a series of brief presentations covering four topics: reduce & reuse, recycling & composting, waste to landfill, and funding. A short question and answer-session was held after each presentation with a final opportunity to provide further comments at the end of the event.

The presentation was delivered using the StoryMap interactive platform on ArcGis. This platform enabled georeferenced maps to be included in the presentation. The open house StoryMap presentation can be viewed [online](#). A copy of the presentation is included in Appendix 43.

In parallel with the open house events, Nicki Veikle, RDKS Environmental Coordinator, presented a guest lecture virtually to the University of Northern British Columbia Environmental Science (ENSC404) class regarding the Draft SWMP and consultation process on March 31, 2021.

6.5.1. Advertising for 2021 Virtual Open Houses

Outreach material for the virtual open house events was branded with the slogan “Let’s Talk Trash!” In March and early April 2021, RDKS implement the following activities to promote the open house events:

- Targeted email invitations were sent to PTAC, the Board and Involved Working Group members;
- Targeted email invitations were sent to survey respondents that indicated interest in attending a virtual open house event;
- Open houses were scheduled as events on the RDKS website and publicized as a news story on March 29, 2021;
- Open houses were publicized through social media on Facebook and Twitter on March 18 and 31, 2021;
- An advertisement was run in the Terrace Standard, Kitimat Connector, and Bulkley Browser the week of April 1, 2021;
- A radio announcement was recorded for CBC Daybreak North on March 17, 2021.

Materials used to promote the open house events are included in Appendix 44.

6.6. Results of Virtual Open Houses

Six virtual open house events were hosted using Microsoft Teams online meeting platform between April 7 and April 15, 2021 (Table 5). A dial-in option was also provided for attendees.

Table 5: Event details for the Virtual Open Houses

Date (2021)	Time	Number of Participants	Number of Comments
April 7	1:00 pm - 2:30 pm	2	3
April 7	7:00 pm - 8:30pm	2	2
April 10	9:00 am - 10:30am	1	0
April 13	10:00 pm - 11:30am	7	5
April 13	7:00 pm - 8:30pm	4	4
April 15	3:00 pm - 2:30 pm	8	9

All comments and questions received at the virtual open houses were addressed by RDKS staff. The events were not well attended and provided minimal feedback on the Draft SWMP. However, there was feedback from one participant that required a minor change to the SWMP. The participant asked about a tool library; the Plan was revised to mention that the RDKS supports and promotes existing reuse organizations, such as second-hand stores and tool

sharing libraries (refer to STRATEGY 7. Support Reuse through Share Sheds and/or Reuse Stores).

6.7. Targeted Stakeholder Meetings

Between May and September 2021, RDKS staff reached out to targeted stakeholders to gather input on the Draft SWMP. The targeted consultation with key stakeholders, which included member municipalities and First Nations, provided valuable insight. RDKS Administration was successful in engaging directly with each member municipality regarding their specific waste management concerns; however, very few First Nations governments chose to engage in the SWMP process when contacted via letter mail and email. A copy of the letter sent to all First Nations is included in Appendix 45.

Key stakeholders that have endorsed the SWMP through letters of support include: the City of Terrace, Village of Hazelton, District of New Hazelton, District of Stewart, Kitsumkalum First Nation and Ministry of Transportation and Infrastructure (MOTI). The MOTI was engaged as they own and operate the Dease Lake Landfill. These letters are included in Appendix 46.

6.8. Revisions to the SWMP

The majority of proposed strategies were supported by the public. Feedback received through the 2021 consultation campaign has been consolidated into common themes and used to revise the Draft SWMP. A detailed record of the revisions made to the Draft Plan is contained in Appendix 47.

Notable additions to the Draft SWMP based on consultation feedback include:

- Increase the planned RDKS staffing hours from 100 to 200 hours per year for “Strategy 7. Support reuse through share sheds and/or reuse stores” due to strong community interest.
- Add new initiative “10C. Assess the feasibility of offering one-stop-drop recycling depots at suitable locations,” with a budget of \$15,000 for a feasibility assessment in Year 3¹.
- Add new initiative “10D. Support member municipalities in bylaw updates that require new multi-family and institutional, commercial and industrial (ICI) building designs to include designated waste management space” as a method of improving accessibility to recycling (no anticipated budget implications).
- Add new initiative “13D. Establish a recognition program and/or incentives for ICI users who demonstrate excellent in waste diversion and/or green procurement,” with a budget of \$8,000 in Year 1 and \$2,000 every subsequent year.
- Add new initiative “15D. Review the feasibility of collecting household hazardous waste (HHW) through existing curbside collection programs,” with a budget of \$15,000 for a feasibility assessment in Year 6.
- Add new initiative “28C. Pilot free disposal events for residential waste and implement if feasible”, with a budget of \$12,000 in Year 1 for distribution of two free bag tags to

¹ Note that Years 1 to 10 of the SWMP refers to 2022 to 2032.

homes in the greater Terrace area curbside collection program and \$22,000 annually in Years 2 and 3 for distribution of two free bag tags and one free disposal weekend at the Thornhill Transfer Station (assuming \$10,000 in waived tipping fee revenue). The purpose of this pilot would be to determine whether limited free disposal may assist in the prevention of illegal dumping.

These notable additions and other small revisions have been reviewed and approved by PTAC at the meeting on September 28, 2021. The meeting agenda and minutes are available on the [RDKS website](#). These revisions have been incorporated into the Final SWMP. Once approved by the RDKS Board, this final Solid Waste Management Plan will be submitted to the Ministry of Environment and Climate Change Strategy for review and approval. The final SWMP can be formally adopted by the RDKS Board following Ministry approval.

7. Consultation with RDKS First Nations

Development of the SWMP included periodic consultation with regional First Nations governments. Specific consultation and interactions with First Nations during development of the Plan included:

- Letter invitations to participate on PTAC sent in September 2018 (see Appendix 7, Appendix 8, and Appendix 9);
- Follow-up email for recruitment to PTAC on December 4, 2018 (see Appendix 12);
- Inclusion of all First Nations band offices in the Involved Working Group email distribution list (see Appendix 14);
- Haisla and Iskut First Nations participated on PTAC (see Table 1: PTAC Voting Members for PTAC membership);
- Mail-out of the 2019 Solid Waste Survey (Appendix 16) and 2021 Solid Waste Survey (Appendix 39) to all on-reserve households and Band offices within the RDKS;
- Established survey collection locations at select Band Offices (see Appendix 17);
- Invitation to participate and inclusion of select First Nations in the Financial Working Group (see Appendix 34);
- Letter (sent via email and mail) to all First Nations inviting their feedback on the Draft SWMP (see Appendix 45).

8. Potential Impact to Neighbouring Regional Districts from the SWMP

The RDKS invited neighbouring regional districts to participate in SWMP development process and they were sent informational letters at the start of the process. Representatives from the Regional District of Bulkley Nechako and the North Coast Regional District participated as non-voting members on PTAC.

The SWMP was developed to have minimal impact on neighbouring regional districts. In “STRATEGY 20. Set Limits on Solid Waste Volumes Accepted from Outside the Service Areas,” the RDKS will focus on developing a policy for out-of-service-area waste, which will allow disposal from neighbouring regional districts.

The RDKS is committed to collaborating with other regional districts wherever practical during Plan implementation. No specific feedback was received from any of the neighbouring regional districts during the consultation period.

9. Plan Implementation

The Final SWMP will be presented to the RDKS Board on October 22, 2021. Once approved by the RDKS Board, the Final Plan will be submitted to the Ministry of Environment and Climate Change Strategy for review and approval.

After the SWMP is approved by the B.C. Minister of Environment, the Board will need to formally adopt the new SWMP. Section 7 of the Plan will include the approval details (i.e., the date and resolution # of the Board approval).

Implementation of the new Plan will be overseen by a new Plan Monitoring Advisory Committee (PMAC). The RDKS will work with the PMAC to report to the Board on the Plan's progress and effectiveness on an annual basis. The PMAC will also provide guidance to RDKS staff regarding the results of feasibility assessments, cost benefit analyses and recommendations for implementation. The PMAC's recommendations will be forwarded to the Board for approval and subsequent action.

The RDKS will recruit members to PMAC through direct contact, as well as general open invitations. The PMAC Terms of Reference and final PMAC membership will require Board approval at the start of Plan implementation.

Appendix 1 – Solid Waste Management Plan Review Process – Overview

memo

To: Regional District of Kitimat-Stikine
From: Sarah Wilmot
Date: April 19, 2017
Re: Solid Waste Management Plan Review Process – Overview

Introduction

In British Columbia, the Environmental Management Act (2003) requires each regional district to develop a Solid Waste Management Plan (SWMP) that is a long-term vision of how municipal solid waste will be managed.

The Regional District of Kitimat-Stikine (RDKS) has been operating under a SWMP that was approved by the Ministry of Environment in 1995. Now that the bulk of the work described in the 1995 SWMP has been (or will soon be) accomplished, the RDKS is starting to plan for the development of a new SWMP. The 1995 Plan will be superseded by the new SWMP when the new SWMP is approved by the Ministry of Environment and adopted by the RDKS Board.

The SWMP will be developed following the Guide to Solid Waste Management Planning that was published by the Ministry of Environment in 2016. The Guide describes the Ministry's preferred approach to SWMP development and helps to clarify Ministry policy and the provisions of the Environmental Management Act as they relate to the management of municipal solid waste. The Guide also provides updates on provincial targets that should be integrated into regional plans.

This memo describes the overall approach the RDKS intends to take to develop the new SWMP. Subsequent memos will provide more details on individual steps of the process.

SWMP Focus

The 1995 SWMP included the development of a number of new facilities (including engineered landfills, transfer stations and an enclosed composting system) and the programs and policies required to support them (including curbside collection programs and disposal restrictions). Since these facilities, programs and policies have largely been implemented, the new SWMP will focus on monitoring and improving the operational efficiency of RDKS facilities, ensuring all staff and contractors know how to operate facilities to the standard expected by the Administration, maintaining staffing levels, providing staff with ongoing professional development, and maintaining and improving relationships with large generators. Administration also intends to draft detailed servicing plans that clearly define how to operate the new system, including how to respond when systems deviate from forecasts. The RDKS does not expect the new SWMP to call for new programs or major changes to current policies.

Summary of the Ministry's Preferred Content and Process for SWMP Development

The Ministry uses the pollution prevention hierarchy (also referred to as the 5 Rs) to categorize different approaches to managing solid waste. The first three levels (reduce, reuse, recycle) are given priority. The Ministry also wants regional districts to consider waste management in the context of the concept of the circular economy. Eight guiding principles developed by the Ministry provide further details on the Ministry's preferred approaches to managing municipal waste. Regional districts are expected to include these guiding principles in their SWMP, along with additional locally-relevant principles. The eight guiding principles are:

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

The Ministry has set provincial targets for solid waste management; regional districts may set their own targets in support of the provincial targets. Regional targets should be achievable, time-bound, and demonstrate continual improvement. The provincial targets are to lower the municipal solid waste disposal rate to 350 kg per person per year by 2020 and to have 75% of B.C.'s population covered by organic waste disposal restrictions by 2020. Small, rural regional districts may be focused on improving the solid waste infrastructure and services, and regional targets and programs should align with local capabilities and opportunities.

The Ministry recommends that regional districts develop annual reports on SWMP implementation and conduct a review of SWMP effectiveness every five years. In addition, the Ministry would like SWMP to be renewed every 10 years, and for SWMP to be "living documents" that are structured to allow minor amendments to be made simply (e.g. by using schedules). Regular review and amendment will help to ensure that SWMP reflect the current needs of regional districts, as well as current market conditions, technologies and regulations.

The Ministry does not layout mandatory processes or steps; a sample process is included in the Guide. The Ministry acknowledges that regional districts may choose to approach their planning process and document submissions differently. The process described in the Guide is largely consistent with the process that has been used by regional districts in the past. The process is illustrated below in a figure copied from the Guide.



In Step 1, the regional district will set the scope, notify interested parties, establish advisory committees, and identify the planning and consultation processes that will support the remainder of the process.

In Step 2, the regional district will gather background information and implement the consultation process to establish principles, goals and targets, and identify options for waste management.

In Step 3, options for managing waste will be evaluated and the regional district will consult with interested parties (including the general public), and determine the preferred approaches.

In Step 4, the plan will be prepared and adopted; this includes submission of the final plan for the minister’s approval.

The separation of the process into four distinct steps is not required; however, regional districts should be able to demonstrate that they have undertaken a comprehensive process. Unlike the past, regional districts will not be requested to “check in” with the Ministry when moving from one step to the next. This means that distinct Stage 1, Stage 2 and Stage 3 reports are no longer required.

Consultation is not shown as a separate step in the planning process because it will happen during all steps.

The Ministry has provided a template for a SWMP, sample strategies, and a detailed description of the roles and responsibilities for various parties involved in SWMP development.

RDKS Comments on Ministry Guide

The Ministry invited comments from regional districts during the development of the Guide. RDKS Administration reviewed the draft Guide and provided feedback to the Regional Board and sent a letter to the Ministry. The RDKS offered the following comments on the Guide:

- The Ministry should confirm that it will continue to provide direct support and oversight for solid waste management planning;
- The Ministry should provide clarity on subjective references to “adequate” communication and stakeholder consultation;
- Stakeholder engagement strategies should be at the discretion of regional districts who best understand their constituents and local systems, services and opportunities;
- The Ministry should confirm if it will continue to provide guidance and legislation for producers of materials covered by the Recycling Regulation;

- The Ministry should clarify the guiding principles to ensure that the goals align with regional district capacities and local opportunities, and should confirm that it will provide guidance, legislation and enforcement.
- The RDKS is concerned with the Ministry’s proposed timelines and schedules for SWMP revisions, since the RDKS’s focus will be on ensuring current facilities and services are cost effective and running efficiently.

The RDKS used the opportunity to inform the Ministry that it intended to develop a new SWMP following completion of the facilities, programs and services in the 1995 SWMP. The RDKS also informed the Ministry that it believed it was appropriate that the development of the new SWMP be supported by the existing Solid Waste Plan Monitoring Advisory Committee (PMAC) and that it did not require the establishment of additional committees. The RDKS informed the Ministry that the new SWMP would reflect the Board’s preferences, and would reflect the RDKS’s priorities, financial resources, and capacity. As a result, the focus would be on ensuring current facilities and services are cost effective and run efficiently; competing region wide priorities meant that solid waste services would no longer be a priority.

Proposed Process & Next Steps

The following process is proposed:

Steps	Actions	Timeframe
Step 1	<ul style="list-style-type: none"> • RDKS Board passes a resolution to initiate the planning process • Set the scope • Notify interested parties • Supplement PMAC membership if possible to strive for balance and representation (PMAC to be used as joint public and technical advisory committee for the SWMP development process) • Develop the overall consultation processes • Set the project budget 	Spring -Fall 2017
Step 2	<ul style="list-style-type: none"> • Assemble background information about the plan area (including current waste management practices) • Establish principles, goals and targets • Identify options for waste management • Begin the consultation process 	Spring – Winter 2017
Step 3	<ul style="list-style-type: none"> • Combine options to develop complete strategies • Evaluate strategies in terms of effectiveness and affordability • Continue to follow the consultation process 	Winter 2017 – Summer 2018
Step 4	<ul style="list-style-type: none"> • Draft the SWMP • Publish SWMP for final consultation • Revise the SWMP as required based on input and submit for Ministry approval • Board adoption of approved SWMP 	Summer 2018 – Winter 2018

A technical memo will be developed for each step of the process. Each memo will include excerpts from the Guide that describe the Ministry's preferences and recommendations, followed by draft content relevant to the RDKS. For example, the Step 1 memo will include a draft resolution for the Board, a definition of the SWMP area and scope of work, a list of all interested parties, a draft letter of notification and terms of reference for the advisory committee. The draft content in the memos will be reviewed and revised by RDKS staff, PMAC, and the RDKS Board prior to use.

***Appendix 2 – Step 1 Memo – Proposed Approach to Solid Waste Management
Plan Review Process***

memo

To: Regional District of Kitimat-Stikine

From: Sarah Wilmot

Date: January 30, 2018

Re: Step 1 Memo – Proposed Approach to Solid Waste Management Plan Review Process

1 Introduction

The Regional District of Kitimat-Stikine (RDKS) is preparing to develop a new Solid Waste Management Plan (SWMP). On January 20, 2017, the Regional District Board authorized “the preparation work to conduct a Solid Waste Management Plan review following the commissioning of the new solid waste facilities in the Hazelton and Highway 37 North Service Area; and, that Administration report back to the Board later in 2017 with a recommended process to conduct the review.” Administration has drafted a recommended process, documented in this memo. The draft process will be presented first to the Plan Monitoring Advisory Committee (PMAC) for their review and input in August, and then to the Board for approval in September or October.

2 Draft Recommended Process

The draft process is outlined in Table 1. The draft process draws on the document “A Guide to Solid Waste Management Planning” published by the Ministry of Environment in 2016. The Guide describes a four-step process, which the RDKS has adapted to meet its needs. The dates in Table 1 are draft and subject to Board approval.

Table 1. Outline and Timeframe of Proposed Process

Step	Action	Timeframe
Initiation	<ul style="list-style-type: none">Regional District Board passes a resolution to initiate the preparatory work for the SWMP; develop a recommended planning process	January 2017 (complete)
Step 1	<ul style="list-style-type: none">Define the area covered by the planAssemble background information about the plan area (including current waste management practices)Set the scope of workDevelop the overall consultation planSet the project budgetPresent draft approach to PMAC; receive and incorporate feedback	Fall and early winter 2017

	<ul style="list-style-type: none"> Seek a resolution from the Regional District Board to initiate development of the SWMP following the recommended approach 	
Step 2	<ul style="list-style-type: none"> Notify interested parties of the upcoming process and invite them to join advisory committee Formally establish Public and Technical Advisory Committee Begin to implement the consultation plan Identify strengths of current system and opportunities for improvement Establish principles, goals and targets Develop options for waste management 	Winter and spring 2018
Step 3	<ul style="list-style-type: none"> Combine options to develop strategies Evaluate strategies in terms of effectiveness and affordability Follow the consultation plan 	Summer and fall 2018
Step 4	<ul style="list-style-type: none"> Draft the plan Publish plan for consultation Revise the plan and submit for Ministry approval Board adoption of approved plan 	Winter 2018/19

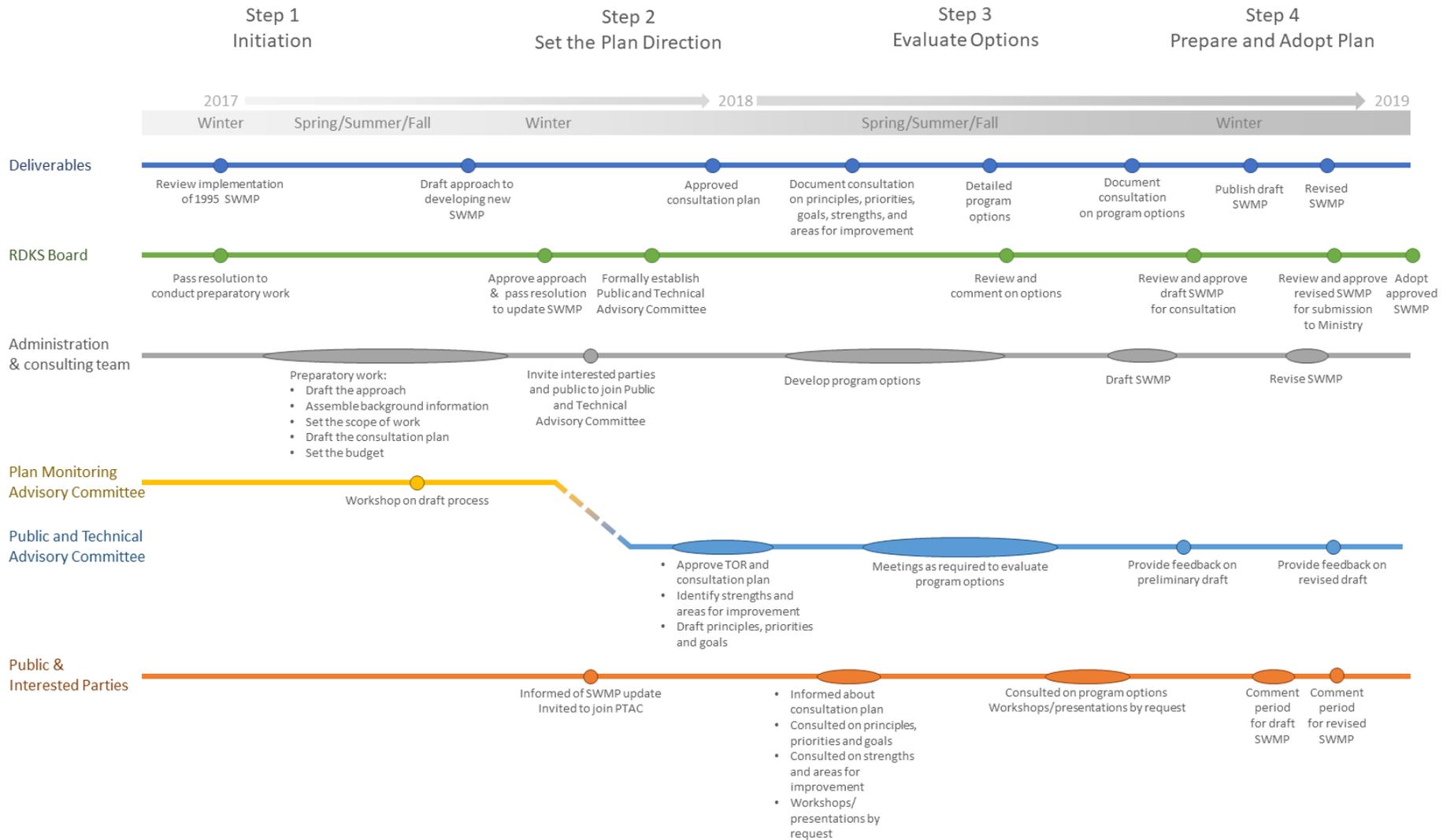
The draft process includes obtaining the Board’s approval twice before beginning development of the SWMP; this is different from the Guide, which calls for only one Board resolution. The RDKS already obtained Board authorization to prepare for SWMP development, and will seek authorization again to proceed with developing the SWMP following the proposed process. The approach taken by the RDKS gives the Board more direct opportunity to review and comment on the proposed process before substantive work and consultation are completed.

The proposed process also moves the compilation of background information on the plan area and current waste management system to Step 1, rather than the beginning of Step 2. The RDKS believes the background information will inform the scope of work and will help interested parties decide on their preferred level of involvement. Furthermore, much of that information was compiled when an assessment was completed of the RDKS’s progress towards completing its current SWMP. That assessment was presented to the Board in January 2017.

The amount of time allocated to each step may change as required. The timeframes indicated in Table 1 are estimates based on experiences in other jurisdictions and the RDKS’s experience with consultation in its own jurisdiction.

Figure 1 (following page) illustrates the entire draft process.

Step 1 Memo – Proposed Approach to Solid Waste Management Plan Review Process
 January 30, 2018



Note that timing is approximate; additional time can be allocated to any tasks as required.

Figure 1. Overall draft process

3 Step 1 Details

The following sections of this memo include draft content for Step 1; content for subsequent steps will be written after the draft process is approved, and as the SWMP development process unfolds.

For each element of Step 1, excerpts have been taken directly from the Guide and placed in a grey text box for easy identification. The text following each excerpt explains how that element applies in the RDKS

3.1 Define the Area covered by the Plan

The plan area typically includes a single regional district

The SWMP will include the entire regional district.

The RDKS has established two service areas within its boundaries: the Terrace Service Area and the Hazelton and Highway 37 North Service Area. The Terrace Service Area is established by Bylaw 658 and includes the City of Terrace and all of Electoral Areas C and E. The Hazelton and Highway 37 North Service Area is established by Bylaw 657, and includes the District of New Hazelton, the Village of Hazelton, the District of Stewart, and Electoral Areas A, B and D. Service plans are being developed for each service area to specify the services provided and cost recovery model.

The District of Kitimat is not included in a service area because the District of Kitimat currently provides its own waste collection and disposal services. The RDKS previously invited the District of Kitimat to use regional facilities, and will continue to extend that offer. In 2016, the District of Kitimat developed its own Waste Management Plan, which calls for moving to alternate weeks of garbage and recycling collection, weekly collection of organic waste from residential households, and using either the composting facility at the Forceman Ridge Waste Management Facility, or siting and constructing an in-vessel composting facility in the District. The plan also calls for ongoing use of the Kitimat Landfill through 2020 and possibly beyond.

Electoral Area F is also not included in a service area, because the RDKS does not provide waste services there. The Dease Lake Landfill in Electoral Area F is currently owned by and operated by the BC Ministry of Transportation and Infrastructure. Landfill operations are contracted.

Despite these two areas of the RDKS not being covered by a service plan, the District of Kitimat and Electoral F will be invited to participate in the SWMP development process.

3.2 Assemble Background Information

The background information in the plan provides an overview of the regional district. This information could include:

- A map of the region showing participating municipalities, First Nations and adjacent regional districts
- Pertinent information from official community plans, regional growth strategies and other regional documents (e.g., relating to air shed management or emergency debris management)
- Population statistics (current and projected for the next 10–20 years)
- Economic base (major drivers of the economy, especially as they relate to waste generation)
- Topography, including any physical constraints affecting waste management
- Climate adaptation and mitigation considerations for the region, especially as it relates to waste management

This information could be useful as a brief introduction for the purpose of consulting with interested parties (including the public). A summary of this information may be written into the plan itself.

The ministry recommends regional districts conduct a comprehensive review of their system, including programs by both public and private sector operators, and include information on:

- The sources, composition and quantities of municipal solid waste generated within the planning area and / or transported into the planning area for management²⁵
- Any materials that are not typical municipal solid waste that may be handled at municipal solid management waste facilities in the region²⁶
- How “reduce” and “reuse” is addressed by the current system
- Collection pathways for recycling, recovery and residual management
- The existing and planned solid waste management capacity, including remaining available capacity within the system and projected needs of the region
- Product stewardship programs within the region
- Education programs, including those supporting behavioural change

This review also provides an opportunity to look at what is or is not working well:

- What are the strengths of the existing system (what is working well, should be retained / enhanced)?
- What are the areas for improvement in the existing system (what is not working well, needs improvement or a new approach)?
- Has the existing plan been implemented as expected?
- Is the region on track to meet the targets it set previously?
- Are there information gaps to be filled?

Appendix A contains a draft of the background information on the RDKS, including all of the items listed above. This information provides a foundation for the plan development process. The draft report will

be presented to the Public and Technical Advisory Committee (PTAC)¹ to provide a common understanding of the existing solid waste management activities in the RDKS (the RDKS recognizes that PTAC members who have served on PMAC already have an excellent understanding of the system). Once finalized, the report will also be made public to support consultation during the plan development process.

3.3 Set the Scope of Work

The regional district should determine what aspects of the existing solid waste management plan will be changed (or not). Any aspects of the solid waste management system that will remain unchanged (e.g., the landfill will remain the same) may be out of scope for strategy options and discussion purposes. Information on items that will remain unchanged should still be referenced in the plan to provide opportunity for comment on the whole system during the public consultation process.

A wide range of new facilities were built under the previous SWMP, including engineered landfills, transfer stations and a sophisticated in-vessel composting system. New programs and policies to support the facilities were also developed and implemented (including curbside collection programs and disposal restrictions). The new SWMP will focus on monitoring and improving the operational efficiency of all RDKS facilities, programs and services. This is intended to ensure staff and operations contractors know how to operate the facilities to the standard expected by Administration, maintaining staffing levels, providing staff with ongoing professional development, and confirming that staff are placed in roles that match their skills and abilities. The RDKS also intends to focus on maintaining and improving relationships with large generators. The RDKS plans to hire qualified professionals to conduct waste audits at regular intervals to identify and measure the waste that remains in the disposal stream from residential and commercial sources. This information will be used to design programs to target those waste streams. The RDKS does not expect the new SWMP to call for major changes to current policies and infrastructure.

Table 2 lists all the actions, programs and policies from the 1995 SWMP and indicates the status of each (complete, incomplete or ongoing) and whether or not Administration recommends that each item be included in the scope of the new SWMP or not.

Table 2. 1995 SWMP Status

1995 Plan Section	Action, Program or Policy	Status	In scope of new SWMP?
2.3.2 Reduction and reuse programs, including promotion and education			
	RDKS shall formally encourage and insist that the Senior government develop and implement programs and policies which will encourage the reduction and reuse of waste materials.	Ongoing	Yes, propose to keep text or make minor modifications
	RDKS shall direct staff to develop and disseminate educational and promotional	Ongoing	Yes, propose to keep text or make minor modifications

¹ See Section 3.7 for more information about the planned structure and role of the advisory committee.

1995 Plan Section	Action, Program or Policy	Status	In scope of new SWMP?
	material to the public and to businesses on effective ways to reduce waste.		
	RDKS shall set tipping fees at regional landfill facilities to at least partially cover the costs of developing, operating, closing and monitoring the landfills.	Ongoing	Yes, propose to keep text or make minor modifications
	RDKS shall implement certain material bans at specific municipal solid waste landfills in the Regional District.	Ongoing	Yes, propose to keep text or make minor modifications
	For all areas serviced by a formal collection service, RDKS and its member municipalities shall, through the advice of the Plan Monitoring Advisory Committee, set limits on curbside waste at a specific number of specific volume cans or bags.	Complete	Keep (in case serviced areas expand) and add “continue to” to reflect policies already in effect.
	RDKS shall work with the local school districts to promote and encourage curriculum changes with respect to waste management.	Ongoing	Yes, propose to keep text or make minor modifications
	RDKS shall establish in-house reduction and reuse programs	Complete, ongoing	Yes, propose to keep text or make minor modifications
	The above program will be encouraged in other government offices and private and public organizations within the RDKS through the education program.	Complete, ongoing	Yes, propose to keep text or make minor modifications
	RDKS shall require segregation of certain materials at all landfills in the Regional District.	Ongoing at RDKS landfills, not complete at non-RDKS landfills	Yes, but confirm capacity/willingness of other landfill owners and operators to implement segregation. If it is not feasible, reword to apply to RDKS landfills only.
	RDKS shall encourage the participation of local recycling and environmental groups, such as KUTE and the Three Rivers Recycling Society, in reduction and reuse education and promotion through grants and other funding support.	Complete, no longer active.	Could discuss potential role of RDKS in helping those groups get funding from product stewardship agencies instead
	RDKS shall explore and encourage opportunities for private sector and non-profit society involvement in solid waste management.	Ongoing	Yes, propose to keep text or make minor modifications

1995 Plan Section	Action, Program or Policy	Status	In scope of new SWMP?
	RDKS may assist in advertising and would encourage participation in materials and waste exchanges available to industry	Ongoing	Yes, propose to keep text or make minor modifications
2.3.3 Recycling			
	RDKS shall include education and promotion as high priorities to encourage participation in the regional recycling program	Ongoing	Yes, propose to keep text or make minor modifications; need to expand scope to include businesses affected by disposal restrictions.
	RDKS shall develop an in-house procurement program for recycled content products	Ongoing	Yes, propose to keep text or make minor modifications
	Member municipalities and other private and public organizations will be encouraged to develop procurement programs similar to that of the Regional District.	Ongoing	Yes, propose to keep text or make minor modifications
	RDKS shall encourage its member municipalities to develop bylaws requiring new commercial, institutional and multi-unit and multi-family developments (greater than four units in one building) to include adequate space for integrated waste management.	Not completed	Yes, for discussion with member municipalities, particularly planning departments.
	RDKS shall make every effort to recycle as many materials as possible, to the extent that economics does not prevent their collection and processing	Ongoing	Yes, propose to keep text or make minor modifications.
	RDKS shall continually search for new and better markets for materials	Ongoing	Yes, propose to keep text or make minor modifications, need to reflect new context with Recycle BC for some recyclables.
	The RDKS shall develop a drop-off depot system for recyclables	Ongoing	Yes, requires updating to reflect new context with Recycle BC
	RDKS shall encourage the private and non-profit sectors to pick-up office paper from commercial establishments and deliver this material to an appropriate recycling facility	Ongoing	Yes, propose to keep text or make minor modifications
	Under bylaw, RDKS may develop a reserve fund to help finance any capital expenditures required to expand or upgrade the central recycling facility.	Complete	Not necessary with current system

1995 Plan Section	Action, Program or Policy	Status	In scope of new SWMP?
	RDKS will encourage parks and/or resorts to include on-site drop-off facilities for recyclable materials, to be delivered to the regional recycling facility	Ongoing	Yes, propose to keep text or make minor modifications
	RDKS will continue to investigate the possibility of coordinating with other regional districts for joint processing and shipment of recyclable materials.	Not undertaken	Yes, but likely not necessary now that Recycle BC is operating and DYP Recycling has the contract for commercial cardboard.
	RDKS may assist in advertising alternative recycling opportunities, operated by private enterprise or other groups, that are not a part of the regional waste management program.	Ongoing	No, Recycle BC provides its partners with its own advertising.
	Collection and recycling of difficult wastes will be reserved for private enterprise. (Difficult waste includes auto hulks, tires, batteries, etc.).	Ongoing	Yes. RDKS may also provide supplementary service if necessary.
	Member municipalities of RDKS will not be discouraged from implementing a recycling program which involves more sophisticated technology than what the Regional District is utilizing, as long as the effective diversion rate is at least that obtained by the regional system.	Ongoing	Yes, propose to keep text or make minor modifications
	RDKS shall investigate the feasibility of, and may subsequently implement, a more sophisticated recycling system, if this is deemed necessary to attain the projected waste diversion targets.	Ongoing	Yes, propose to keep text or make minor modifications
2.3.4 Composting			
	RDKS shall include education and promotion as a high priority to encourage participation in the regional composting program	Ongoing	Yes, propose to keep text or make minor modifications
	RDKS shall develop an in-house procurement program	Ongoing	Yes, propose to keep text or make minor modifications
	RDKS composting programs will target as many organic materials as economically possible, while minimizing odour problems. Materials which will be targeted include residential food waste (in backyard bins); yard waste including leaves, trimmings, brush and limited quantities	Ongoing	Yes, propose to keep text or make minor modifications

1995 Plan Section	Action, Program or Policy	Status	In scope of new SWMP?
	of grass; wood waste from demolition and renovation projects; and land clearing debris.		
	RDKS may provide, to most interested residents, backyard composting bins at a subsidized cost.	Ongoing	Yes, propose to keep text or make minor modifications
	RDKS may establish and maintain a compost demonstration garden staffed by qualified individuals	Ongoing	Yes, revise to reference new garden at Thornhill Transfer Station
	On establishing a compost garden, RDKS may establish a composting hotline to respond to enquiries about operation of home composting bins and other local waste management issues	Not undertaken	Yes, reword to reflect current approach (i.e. not limited to hotline)
	RDKS will establish a yard waste composting program accessible to residents and businesses in the Regional District. The program will involve windrow technology at several locations. Large pieces such as stumps will undergo volume reduction, e.g. in a chipper/hammermill contracted to RDKS, which will be transported between sites. The program will be strictly on a drop-off basis at each windrow site, with (initially) no charge for materials. The final compost product will be utilized in Regional District operations and sold at low cost to buyers. Municipalities which own landfills will be encouraged to develop similar composting facilities on their sites	Ongoing as other landfills may also develop composting facilities in the future.	Yes, reword to reflect current approach.
	Member municipalities of RDKS will not be discouraged from implementing a composting program which involves more sophisticated technology than what the Regional District is utilizing, as long as the effective diversion rate is at least that obtained by the regional system.	Complete	Yes, likely not needed but can keep in case a municipality wants to move faster than the RDKS.
	In the event that revenues from recycling paper and cardboard products decrease substantially for a sustained period of time, the RDKS reserves the option of composting these materials as an alternative to stockpiling them until favourable market conditions return.	Not undertaken	Yes, not necessary with current arrangement although can keep to maintain option

1995 Plan Section	Action, Program or Policy	Status	In scope of new SWMP?
	RDKS shall investigate the feasibility of, and may subsequently implement, a more sophisticated composting technology, if this is deemed necessary to attain the projected waste diversion targets	Complete	New SWMP will reference new composting facility, but no action items related to feasibility studies are required
2.3.5 Energy Recovery			
	RDKS shall not, at this time, consider energy recovery as a component of its waste management system	Complete	Yes, propose to keep text or make minor modifications
	RDKS reserves the right to review the economic and environmental viability of incineration in each Plan review (every five years).	Ongoing	Yes, propose to keep text or make minor modifications
	Private sector proposals for incineration, energy recovery or co-generation within RDKS boundaries shall be presented to RDKS for approval	Ongoing	Yes, propose to keep text or make minor modifications
2.3.6 Residuals management			
	Existing permitted landfills will remain in operation as long as capacity, environmental protection and economics allow. Regional District, Municipal and/or First Nations landfills will continue to be operated by the operational certificate holder(s) until these landfills are closed.	Ongoing	Yes, propose to keep text or make minor modifications
	Subject to hydrogeological assessments and expansion potential being favourable and an inter-Band agreement being set-up, a single First Nations landfill, located near Laxgalts'ap (Greenville) (a proposed new landfill site) or Gitlaxt'aamiks(New Aiyansh) (an existing landfill) could service all of the Nass Valley	Complete	No, no longer necessary
	Landfill action plans (including upgrades) for all existing municipal waste landfills in the RDKS are presented in Appendix A.	Partially complete	Yes, include updated commitments
	Any new landfills in the RDKS shall be designed, constructed, operated and closed in accordance with the BC Landfill Criteria for Municipal Solid Waste or justified exemptions.	Underway	Yes, to cover any other new landfills developed over the life of the plan

In addition to considering which items from the 1995 SWMP should carry forward into the new SWMP, it is important to think about the current facilities and programs, and identify which items are or are not part of the scope. Table 3 summarizes the current facilities and programs and indicates which elements of each facility or program are in and out of scope.

Table 3. Current Facilities and Programs In/Out of Scope

Facilities and Programs	In scope of SWMP?
Thornhill Transfer Station	No; no substantial changes are planned at the facility until it has been in operation for a longer period of time.
Forceman Ridge Waste Management Facility	Yes; the following aspects of the facility are in scope: <ul style="list-style-type: none"> • LFG utilization/carbon pricing • Acceptance of organics from Kitimat • Acceptance of garbage from Kitimat
Disposal restrictions in Terrace Service Area	No; no substantial changes are planned to the restrictions until they have been in place for a longer period of time.
Terrace yard waste composting facility	No changes are planned to the facility at this time; interested parties will be asked to identify any concerns with ongoing operation the facility with yard waste as the only feedstock. The RDKS is open to receiving the yard waste at the Forceman Ridge Waste Management Facility.
City of Terrace curbside collection programs	No; no substantial changes are planned to the program until it has been in operation for a longer period of time.
RDKS Terrace area curbside collection programs	No; no substantial changes are planned to the program until it has been in operation for a longer period of time.
Kitimat landfill	Yes; Kitimat is exploring options for solid waste management, including partial or full use of the Forceman Ridge Waste Management Facility
Kitimat disposal restrictions	Yes, disposal restrictions in Kitimat should be consistent with disposal restrictions in the Terrace Service Area since the same diversion opportunities exist in both places.
Kitimat organics management	Yes, the RDKS and Kitimat will discuss the potential for Kitimat to use the Forceman Ridge Waste Management Facility composting infrastructure
Kitimat curbside collection programs	Yes, particularly if the RDKS and Kitimat reach agreement on accessing the composting facility.
Hazelton Waste Management Facility	No; no substantial changes are planned at the facility until it has been in operation for a longer period of time.
Kitwanga Transfer Station	No; no substantial changes are planned at the facility until it has been in operation for a longer period of time.
Stewart Transfer Station	No; no substantial changes are planned at the facility until it has been in operation for a longer period of time.
Meziadin Landfill	No; no substantial changes are planned at the facility until the new systems have been in operation for a longer period of time.

Facilities and Programs	In scope of SWMP?
Iskut Landfill	No; no substantial changes are planned at the facility until the new systems have been in operation for a longer period of time.
Dease Landfill	No, this facility is owned by and operated under contract to the Ministry of Transportation and Infrastructure.
Telegraph Creek Landfill replacement	This facility is not in scope, but the SWMP may address options for siting a new facility (transfer station or landfill, depending on results of ongoing investigations).
Collection of garbage and/or recycling in electoral areas A, B, D and the portions of electoral area C that are not already serviced	The RDKS will consult residents of these areas on their willingness to pay for curbside collection services.

The scope of the SWMP will also include the cost recovery models for each service area. This includes the funding mix (currently set at an even split between user fees and taxes in the Terrace Service Area, and expected to be approximately 80 percent tax and 20 per cent user fees in the Hazelton and Highway 37 North Service Area) and the approaches to take when revenue projections fall short or exceed projections.

The SWMP is also expected to include specific steps to increase the diversion rate for residential routes or commercial generators that do not achieve the local average diversion rate. A variety of tools will be explored and the SWMP will include those with the highest level of effectiveness and greatest support. Since the new Plan is intended to focus on optimizing operations and making efficient use of services and infrastructure, the new SWMP include actions and strategies related to enforcing desired behaviour and providing oversight.

3.4 Design the Consultation Process

The EMA requires regional districts to provide for a “comprehensive” public review and consultation respecting all aspects of the development, amendment and final content of a plan and for the minister to be satisfied there has been “adequate” public review and consultation. The approach to consultation will vary by regional district. At a minimum, the regional district should be making use of online tools (online information and questionnaires for feedback) and local media to seek input, as well as including notification to the public through regular mail-outs, such as invoices or newsletters, and notification in local newspapers and media. Note that not all British Columbians have access to or use the internet, so a variety of notification and feedback methods should be provided.

In designing the public review and consultation process, regional districts should aim for the following outcomes:

- The public and other interested parties are aware of the solid waste management planning process and of all opportunities to provide input
- The consultation process is transparent, planning documents are publicly available (including online) and the rationale for decisions is clear
- Through documentation of the consultation process, regional districts can show how they have met legislative requirements

Appendix B provides a draft consultation strategy that describes the types of consultation tools that will be used in the different stages of SWMP development. The draft consultation strategy will be presented to the PTAC for review and refinement, prior to being presented to the RDKS board. The Ministry requires that the PTAC be involved in the design of the consultation strategy and that the Board approve the consultation strategy prior to implementation.

3.5 Set the budget

Regional district staff will need to develop a budget for the preparation of the solid waste management plan, including support to the advisory committees and the consultation process.

Regional districts may contact the provincial ministry responsible for community services to identify any grants that may be available to support the development of solid waste management plans. Federal funding may also be available.

The budget for undertaking the plan review should include the following line items:

- Costs of travel to meetings for PTAC members and for RDKS administration to travel to member municipalities and First Nations for presentations and workshops
- External consultants and service providers
- Advertising and promotion through local media as well as website
- Printing promotional material as required.

In addition to the hard costs above, the RDKS must be prepared to devote a substantial amount of staff time to the SWMP development process. The time commitment will vary, but the RDKS should expect that on average, half of a full-time staff position will be spent on this project over its duration. This amount could be higher if RDKS staff take on a larger role with respect to information

gathering and plan-writing. If the RDKS is not able to allocate that much staff time to the SWMP, the project may take longer to complete. Administration will review priorities and staff capacity with the Board before confirming the time frame to initiate and execute the plan.

3.6 Notify Interested Parties

Notifications, with a copy of the regional district resolution, should be sent to all interested parties. This initial notification states that the plan is being updated. It should include information such as a contact name / information for the planning team, preliminary information on why the plan is being updated, and any major directions set by the Board regarding the scope of work. Regional districts should also publicize this notice, including in the local media and online.

List of groups to be directly notified includes but is not limited to the following:

- Ministry of Environment and Climate Change Strategy Regional Director
- Other provincial agencies (e.g., local health board, ministries responsible for community services and aboriginal affairs)
- Any regional district that could be impacted by the plan
- Member municipalities
- First Nations within or adjacent to the plan area
- Owners of private waste management facilities and those responsible for materials management and storage (e.g., haulers, recycling facility owners/operators (including collection facilities), product stewardship producers and agencies, waste and recycling sector associations)
- Members of previous public and technical advisory committees (or existing monitoring committee)
- Public and private commercial or institutional organizations that create large amounts of municipal solid waste or non-typical municipal solid waste (e.g., hospitals)
- Organizations with a known interest in waste management (e.g., local environmental organizations)
- Other community organizations (e.g., chambers of commerce)

Once the Board has approved the draft process, the RDKS can notify interested parties that a new SWMP is being developed. Interested parties may request additional information such as the background information, assessment of the current system, and scope of work. The purpose of providing this notification is to raise awareness about the upcoming work, and to provide an opportunity for interested parties to participate in the plan development process. The RDKS may choose to combine the notification with the invitation to participate on the advisory committee (see Section 3.7.3).

A draft notification is provided below:

The Regional District of Kitimat-Stikine hereby notifies [name of interested party] that a new and updated solid waste management plan (SWMP) will be developed to replace the 1995 SWMP. The 1995 SWMP provided the RDKS with a clear mandate for the past 22 years; now that the plan has been implemented, it is time to develop a new SWMP. The new SWMP is anticipated to focus on monitoring

and improving the operational efficiency of all RDKS facilities, programs and services. The RDKS does not expect the new SWMP to call for major changes to current policies and programs. This is consistent with direction received from the Ministry of Environment and Climate Change Strategy (formerly the Ministry of Environment).

The RDKS will provide you with project updates throughout the review process, which is expected to last until the end of 2018. If your organization is interested in playing an active role by participating in the joint Public and Technical Advisory Committee, or if you would like to receive more information about the SWMP development process, please contact Nicki Veikle at (250) 615-6100.

The preliminary list of interested parties that should receive this notice is provided in Table 4. This list should be reviewed by the PMAC, which may identify additional interested parties who should be notified. The RDKS will compile and maintain contact information for each of the interested parties.

Table 4. List of Interested Parties

Category	Organization
Provincial agencies	Ministry of Environment & Climate Change Strategy
	Ministry of Transportation & Infrastructure
	Ministry of Municipal Affairs & Housing
	Ministry of Indigenous Relations & Reconciliation
	Ministry of Agriculture
	Ministry of Jobs, Tourism and Skills Training and Responsible for Labour
	Ministry of Energy, Mines & Petroleum Resources
	Ministry of Health
	Ministry of Forests, Lands, Natural Resource Operations & Rural Development
	Agricultural Land Commission
Federal agencies	Fisheries and Oceans Canada, Coast Guard
	Ministry of Crown-Indigenous Relations and Northern Affairs
	Ministry of Environment and Climate Change
Other agencies	Northern Health Authority
	Hazelton Community Health
Neighbouring Regional Districts	Bulkley Nechako Regional District
	Skeena Queen Charlotte Regional District
Member municipalities	District of Stewart
	Village of Hazelton
	District of New Hazelton
	City of Terrace
	District of Kitimat
First Nations within or adjacent to the plan area	Gingolx Nisga'a Village
	Gitanmaax Band
	Gitanyow Band
	Gitlaxt'aamiks Nisga'a Village
	Gitsegukla Band
	Gitwangak Band

Category	Organization
	Gitwinksihlkw Nisga’a Village
	Gitxsan Government Commission
	Glen Vowell Band
	Hagwilget Village Council
	Iskut Band
	Kispiox Band
	Kitasoo Band Council
	Kitselas Band
	Kitsumkalum Band
	Laxgalts’ap Nisga’a Village Government
	Morictown Band
	Nisga’a Lisims Government
	Tahltan Band
	Haisla Nation
Owners/operators of private waste management facilities	Geier Waste Services
	Waste Management Inc.
	Do Your Part Recycling
	ABC Recycling
	Cooper’s Used Auto Parts
	Allen’s Scrap and Salvage
	Troll Zone
	Hazelton Bottle Depot
Stewardship Organizations and their local service providers	Beverage containers
	Beer containers
	Electronics
	Cell phones
	Small appliances & power tools
	Outdoor power equipment
	Lighting products
	Household batteries
	Lead-Acid Batteries
	Paints, flammables and alarms
	Used Oil & Antifreeze
	Tires
	Thermostats
	Medication
	Packaging and Printed Paper
Health Service Providers	Kitimat General Hospital
	Wrinch Memorial Hospital
	Mills Memorial Hospital
	Stewart Health Centre
	Stikine Health Centre
	BC Ambulance Service
	Paramedicare Program

Category	Organization
Industrial Camps	Bruce Jack Mine
	Red Chris Mine
	Avanti Mines
	Chevron
	Shell Canada
Educational Institutions	School District No. 92
	School District No. 82
	School District No. 87
	Northwest Community College (all campuses)
	University of Northern British Columbia – Terrace
	UNBC Wilp Wilxo'oskwhl Nisga'a
Grocery Stores	Super A Deli
	Kluachon Centre Store
	Bell 2 Lodge Store
	Bob's Mercantile Ltd
	Harbour Light General Store
	Gitanmaax Market
	Red Apple Store
	McDonald's Store
	Kitwanga General Store
	Skeena Trading Centre
	Save On Foods Terrace
	Safeway Terrace
	Walmart Terrace
	Real Canadian Wholesale Terrace
Department Stores/Major Retailers	Wal-Mart
	Canadian Tire
	Real Canadian Wholesale Club
	Kondolas Furniture
	Beertema Furniture
	The Brick
Chambers of Commerce	Terrace & District Chamber of Commerce
	Stewart/Hyder Chamber of Commerce
	Kitimat Chamber of Commerce
Environmental groups	KUTE
	Skeena Watershed Conservation Coalition - Hazelton, BC
	Lakelse Watershed Stewardship Society - Terrace, BC
	Douglas Channel Watch- Kitimat, BC
	Steelhead Society of BC
Community Associations	Kitwanga Community Association
	Jackpine Flats Community Association
	Kispiox Valley Community Association
	Lakeslse Lake Community Association
	Rosswood Community Association
	South Hazelton Community Association

Category	Organization
	Two Mile Community Association
Current Plan Monitoring Advisory Committee	If not listed elsewhere

3.7 Establish the Advisory Committee

Using advisory committees to assist with the planning process helps to ensure that diverse views are represented. Some regional districts appoint both a public advisory committee and a technical advisory committee; however, others find it more efficient and practical to combine these into a single committee (public and technical advisory committee). Committee membership should be balanced between technical and non-technical members, and between industry / private sector and public members.¹⁸ Ideally, these committees would continue to meet after a plan is implemented (as the plan monitoring advisory committee) and should already be in place when amendments and updates occur

An engagement strategy for First Nations should be developed as part of the consultation process to outline an approach for sharing information and inviting participation in the preparation of or review of plan consultation documents

3.7.1 Structure and Membership

The RDKS intends to use a joint Public and Technical Advisory Committee (PTAC), rather than separate committees for public and technical stakeholders. A single committee provides more opportunities for learning and sharing ideas between members of the committee, and will facilitate the development of a single set of recommendations for presentation to the Regional Board. Having a single committee is also simpler to manage.

The RDKS has been working with PMAC to track implementation of the current SWMP since 2008.² Members of the PMAC will be asked to transition to the new PTAC.³ The transition to a PTAC and the addition of new members will occur once the Board passes a resolution to begin the SWMP development; this is expected in late 2017 or early 2018, depending on the implementation of the Hazelton and Highway 37 North Service Plan. The PTAC could hold its first meeting in March 2018. Solicitation of PTAC members will not occur until the Board reviews and approves the approach to developing the SWMP.

PTAC membership will be solicited from the organizations listed in Table 4 and the general public. Roles that are filled by current PMAC members are listed in

² The committee was active from 1995-2004 and went on hiatus before resuming in 2008.

³ Once the new SWMP is approved, the RDKS will form a new PMAC, which may include former PMAC members as well as members of the PTAC who became involved during the SWMP development process.

Table 5. The organizations they represent will be asked to reaffirm their appointment to the PTAC.

Draft

Table 5. Current PMAC Membership

Category	Specific to the RDKS
Provincial agencies	
	Ministry of Environment
Board Liaisons (elected officials)	
	Terrace Area
	Hazelton Highway 37 North Area
Regional District	
	Environmental Services Coordinator
	Works and Services Manager
Municipal Representatives	
	District of New Hazelton
	City of Terrace
	District of Kitimat
	District of Stewart
	Village of Hazelton
First Nations	
	Gitksan Government Commission (2 representatives)
Environmental Groups	
	Kitimat Understanding the Environment (KUTE)
General Public/Community Associations	
	Individuals representing the public at large

Membership solicitation efforts for the PTAC will focus on obtaining representation from organizations that are not currently represented on PMAC. New members will help to represent the geographic, social, and economic interests of the region and will provide a balance of technical and non-technical perspectives. Draft text for the invitations is provided below. An updated version of the PMAC application form will be used to screen applicants.

3.7.2 Scope of Work

The RDKS anticipates that the new SWMP will focus on optimizing the operations of the waste management system, including monitoring facilities and systems, providing RDKS staff and contractors with professional development and training, and maintaining and improving relationships with large generators. The PTAC's work will focus on evaluating and providing feedback on specific options for implementing each measure. Two examples are provided on the next page.

1. Monitoring and encouraging residential compliance with disposal restrictions and curbside collection requirements. PTAC would be asked to provide feedback on options such as:
 - 1.1. Conduct waste characterizations studies at the transfer station and identify routes that are not compliant with disposal restrictions

- 1.1.1. Target identified routes with education programs and other incentives
 - 1.1.1.1. Check waste containers at the curb on target routes and enter all compliant households into a lottery for a prize
 - 1.1.1.2. Check waste containers at the curb on target routes and leave “oops” stickers on non-compliant containers
 - 1.1.1.3. Check waste containers at the curb on target routes and do not collect non-compliant containers
- 1.1.2. Develop region-wide education programs based on results of waste characterization study.
- 1.2. Conduct random curb-side checks of waste containers throughout the service area
 - 1.2.1. Enter all compliant households into a lottery for a prize
 - 1.2.2. Leave “oops” stickers on non-compliant containers
 - 1.2.3. Do not collect non-compliant containers
2. Refinement of cost recovery model. PTAC would be asked to provide feedback on alternatives if the tipping fee revenue deviates from projections by a certain amount, such as:
 - 2.1. If tipping fee revenue exceeds projections by 10%:
 - 2.1.1. Decrease tax rate for following year
 - 2.1.2. Decrease tipping fee prices for following year
 - 2.2. If tipping fee revenue is less than 90% of projections
 - 2.2.1. Increase tax rate for following year
 - 2.2.2. Increase tipping fee rate for following year

Since the RDKS does not intend to implement any major new programs or infrastructure, the PTAC will likely not be asked to provide feedback on new processing technologies or waste-to-energy systems.

3.7.3 Invitation to Interested Parties

The invitation may be combined with the notification in the previous section; all communication should be sent after the RDKS Board approves the proposed approach to developing the SWMP. The invitation could include the draft terms of reference (see Section 3.7.5).

The following is draft text that will need to be customized for each category of organization. Additional customization will be needed for organizations that are already represented on the PMAC and are being asked to transition to the PTAC. Those organizations will be told that the PMAC is transitioning to a PTAC, and will be asked to reaffirm their representative’s participation on the PTAC, or appoint an alternate representative.

Dear [name of interested party],

As you know, the Regional District of Kitimat-Stikine will soon be developing a new solid waste management plan (SWMP). We are seeking representatives from businesses, institutions, and regulatory agencies to play a role in creating the new SWMP. Representatives will be part of a joint public and technical advisory committee (PTAC) that balances technical and non-technical perspectives and reflects the Regional District’s varied geographic, social, and economic interests.

The PTAC will be asked to provide input on the consultation framework and its implementation, the guiding principles that shape the SWMP, solid waste management services and programs, and the terms

of reference for any supporting studies. PTAC members will also be asked to comment on the reports resulting from each planning step, and on the draft SWMP. PTAC members will not be responsible for drafting the plan, and final approval of the SWMP is the responsibility of the Board.

PTAC members will commit to attending meetings on a regular basis (usually every 2 – 3 months) review information provided before each meeting, and provide feedback at the meetings. The meetings can be attended in person or by conference call and are expected to be held mainly in Terrace. This formal process is expected to take 18-24 months.

The Regional District expects the new SWMP to confirm the importance of and implement programs to support the following: continued monitoring of new and upgraded solid waste management facilities and services, improved operational efficiencies, ongoing professional development for staff, and maintaining and improving relationships with large generators. The Regional District does not currently expect to develop new programs or implement any major changes to policies.

The PTAC will be strengthened by the addition of a representative from your sector and we look forward to hearing from you regarding your possible participation. If you or an alternate from your organization can participate please contact us through email at wasteplan@rdks.bc.ca, phone at 250-615-6100, or drop by the office at 300-4545 Lazelle Avenue, Terrace, B.C.

Information regarding this process will be posted to our website at www.rdks.bc.ca/wasteplan.

We look forward to hearing from you no later than XXX, 2017.

Yours truly,

3.7.4 Invitation to the General Public

An invitation to the public should be published in local newspapers, and on RDKS and member municipality websites. The invitation may also be posted at community centers, libraries, pools, halls, and other community gathering places. A short version and a full version are provided below; the short version can be used in print media and the full version can be posted online.

Short version (print use):

The Regional District of Kitimat-Stikine will soon be developing a new solid waste management plan (SWMP) that focuses on operating the recently established facilities, programs and services as efficiently as possible. We are looking for members of the public to join our Public and Technical Advisory Committee (PTAC) to give us input on the new SWMP.

- *18-24 month commitment*
- *Meetings usually every 2-3 months (can attend in person or by phone)*
- *Need to review information provided before each meeting, and provide feedback to the RDKS*
- *Represent the geographic, social, and economic interests of the region.*

More information, including an application form is available at www.rdks.bc.ca, or at the Regional District office at 300-4545 Lazelle Avenue, Terrace. Applications must be received by (date TBD).

Full version (online use):

The Regional District of Kitimat-Stikine is looking for members of the public to work together with technical experts on the development of a new Solid Waste Management Plan (SWMP). Participants will form a Public and Technical Advisory Committee (PTAC). The PTAC is intended to balance technical and non-technical perspectives and to represent the geographic, social, and economic interests of the region.

The process is expected to take 18-24 months and the PTAC will meet on a regular basis, usually every 2-3 months. Meetings may be attended in person or by phone; meetings will most often occur at the RDKS office in Terrace, but may also be held at other locations around the region. PTAC members will need to review information provided before each meeting and provide feedback to the RDKS.

Under the previous SWMP, the Regional District built and/or upgraded several waste management facilities around the region, established disposal restrictions, and started offering new services. To give the new system time to become fully established, the new SWMP is not expected to call for major changes. The new SWMP will focus on making sure the facilities and programs are working as planned, which will involve establishing monitoring programs, improving operational efficiency, maintaining staffing levels, providing staff with ongoing professional development, and maintaining and improving relationships with large generators.

The PTAC will provide the RDKS with recommendations related to the design and implementation of the consultation process, the guiding principles for the SWMP, terms of reference for any supporting studies, and will provide feedback on potential programs and services that the RDKS could implement. The PTAC will also provide comments on reports from each planning step and the draft plan. All final decisions will be made by the RDKS Board. Draft terms of reference for the committee are available here ([provide a link to PDF](#)). The PTAC will review and adopt the terms of reference at its first meeting.

If you are interested in helping develop the SWMP, please complete an application form. Forms are available at www.rdks.bc.ca, or can be picked up from the RDKS office at 300-4545 Lazelle Avenue, Terrace. Completed applications should be sent to wasteplan@rdks.bc.ca, or returned to the RDKS office. Applications must be received by (date TBD).

Thank you for your interest!

3.7.5 Terms of Reference

The PTAC will require terms of reference to define its role and responsibilities. Draft terms of reference are provided in this section; these should be vetted by the RDKS Board before PTAC members are solicited. The draft terms of reference can be included with the invitation sent to interested parties and should be posted online.

The terms of reference need to be reviewed and adopted by the PTAC at its first meeting. Any changes will require approval by the RDKS Board before adoption.

Name

Regional District of Kitimat-Stikine (RDKS) Public and Technical Advisory Committee (PTAC)

Purpose and Scope

The purpose of the PTAC is to provide input, from a variety of perspectives, on the development the solid waste management plan (SWMP). Input from the committee will be sought on:

- Reports and technical memoranda developed as part of the planning process
- Guiding principles, goals and targets
- The design and implementation of the consultation processes
- Strengths and weaknesses of the current system
- Identification, development and evaluation of options for the proposed plan
- The results of public consultation
- The draft plan

Since the RDKS will continue to operate under its 1995 SWMP while the new SWMP is being developed, the scope for the PTAC also includes reviewing information related to implementation of the 1995 SWMP and providing input on that information.

Committee members will be expected to:

- Review information provided by staff and consultants and provide comments and suggestions
- Report back about the progress of the SWMP development to their own organizations or constituent groups and share their organizations' concerns or interests with the committee
- Recommend proposed programs and policies that are in the best interests of all residents of the region, balancing both community and industry needs and technical requirements
- Participate in public consultation (for example, promote opportunities for public input, attend open houses)

There may be opportunities for some members to participate in smaller ad-hoc committees dealing with specific issues or tasks.

Authority

The committee makes recommendations to the RDKS Board. The Board is the final decision-making authority.

Membership

The committee shall consist of members representing a diversity and balance of backgrounds, interests and geographical locations within the RDKS. Membership shall include:

- Two representatives from the RDKS Board
- Up to 10 members representing a diversity of community interests, which could include representatives from the following groups:
 - Private sector waste management service providers
 - Non-profit groups with an interest in solid waste management (e.g., reuse/thrift organization)

- Large institutional solid waste generators
- Large commercial waste generators
- Business associations
- Members at large for the community, including First Nations (community associations, youth, seniors)
- Members representing a variety of government agencies, which may include:
 - Council-appointed staff from member municipalities
 - Council-appointed staff from First Nations
 - Staff from provincial agencies (e.g., Ministry of Environment, local health authority)
 - Staff from federal agencies
- Three RDKS staff members (Manager of Works and Services, Environmental Services Coordinator, and Solid Waste Services Coordinator)

Voting Structure

The following members of PTAC are non-voting members:

- Representatives from provincial and federal agencies

RDKS staff will be allocated one vote; the vote will be cast by the Manager Works and Services, or his delegate.

All other members each get one vote.

Members are encouraged to work collaboratively and to be committed to reaching consensus where possible. Any members unable to agree with a decision may have their objections noted in the minutes.

Term

The committee will serve until the SWMP is approved by the RDKS Board.

Members who miss three committee meetings during the term of the committee may have their membership revoked at the Board's discretion.

A member who is unable to fulfil his or her duties should inform the RDKS in writing of his or her resignation, so that an alternate member can be sought.

Roles and Responsibilities

- The Chair and Vice-chair will be elected from amongst the voting members at the first meeting. The role of Chair and Vice-chair will remain constant throughout the plan development process.
- RDKS staff will prepare agendas in consultation with the Chair and Vice-chair.
- RDKS staff and/or consultants are responsible for preparing the reports for each meeting.
- Agendas and accompanying reports will be circulated by email at least one week before the meeting date, and will be posted on the RDKS website prior to the meeting date.
- The Chair is responsible for reviewing the agenda with RDKS staff prior to each meeting and understanding the objectives for each meeting.
- RDKS staff are responsible for taking minutes. Draft minutes will be approved by the committee at the next meeting, and then forwarded to the RDKS Board for information.

- Regular communications between the RDKS and PTAC members between meetings will be by email or other accepted form of communication.

Meeting Conduct

- The committee will meet every other month, or at the call of the Chair. Meetings will take place in the RDKS boardroom unless otherwise specified. It is preferable for members to attend in person, although the RDKS can assist with arrangements for those needing to participate by phone.
- All committee members are equal and have equal opportunity to contribute at meetings, and must respect the opinions of others.
- Members must declare any real or perceived conflict of interest. The member involved should excuse themselves from proceedings that relate to the conflict unless explicitly requested (by a majority vote) to speak. Any subsequent information provided by the individual will clearly be identified in the minutes as coming from a source perceived to be in a conflict of interest.
- Members of the public may observe meetings but will not have voting rights or speaking rights unless invited to speak by the Chair.

Quorum

Quorum shall be a minimum of 50% plus one voting members.

Reporting

The committee reports to the RDKS Board. Meeting minutes are provided to the RDKS Board. The RDKS Board members who serve on the committee are expected to provide regular updates to the Board.

Resources and budget

RDKS provides the meeting space and equipment; if a meeting is scheduled over a mealtime, the RDKS will provide light refreshments.

Participation in the committee is voluntary and the RDKS does not offer remuneration for members' time. Travel assistance is provided for members following the RDKS travel guidelines.

Deliverables

The committee will provide its comments and suggestions during each meeting; members are not expected to generate individual written comments. A member who misses a meeting may submit his or her input by email within 3 business days of the meeting.

Review

Once approved, the terms of reference will remain in place until the SWMP is approved by the RDKS Board. Any changes to the terms of reference must be approved by the Board.

3.8 Present Draft Approach to PMAC

The PMAC will meet in August and will have an opportunity to review this document and provide feedback on the planned approach.

Once the PTAC is formally established, it will be given an opportunity to review the approach and consultation plan in detail and provide input and suggest changes to strengthen the approach and consultation plan.

3.9 Draft Board Resolution

The plan process begins when a regional district Board passes a resolution to develop or update a solid waste management plan. Oversight of this process may then pass to the appropriate committee of the Board (and staff).

Once the Board approves the approach documented in this memo, the Board will be asked to pass a second resolution to undertake the development of the new SWMP. A draft resolution for the Regional Board is provided below:

“That the Regional District of Kitimat-Stikine begin the process of updating the solid waste management plan for the entire regional district (including all member municipalities), and direct staff to begin developing a new solid waste management plan, based on a technical review of current and potential waste management policies and programs and broad consultation.”

3.10 Proceed with SWMP Development

Once the Board resolution is passed, RDKS staff will begin recruiting PTAC members and the plan development process will begin.

Draft

Appendix A Current System Report

Provided as a separate document.

Draft

Appendix B Draft Consultation Strategy

A detailed consultation strategy is available as a standalone document. A summary is provided here for reference.

B.1 Introduction

The Regional District of Kitimat-Stikine (RDKS) is preparing to develop a new Solid Waste Management Plan (SWMP). Consultation with identified “interested parties” (organizations, agencies and individuals with a special interest in waste management) and the general public will be a key component of developing the new SWMP. The consultation strategy describes the activities that the RDKS intends to undertake.

The proposed consultation strategy reflects the levels of influence that interested parties and the general public have over the SWMP.

- The RDKS is committed to **collaborating** with a Public and Technical Advisory Committee (PTAC), which will be formed from the existing Plan Monitoring Advisory Committee (PMAC) and new members recruited from interested parties and the general public.
- Interested parties who are not on PTAC may be **involved** through workshops offered by the RDKS, or may choose to be **consulted** or **informed** through other strategies that require less commitment.
- Members of the general public may be **involved** through PTAC, or can be **consulted** or **informed** depending on their personal preferences and time available.

The following subsections describe the proposed consultation activities associated with each level of influence. Within each subsection, the activities are listed in chronological order.

PTAC’s input on the draft consultation plan will be sought at its first meeting. A final consultation plan will be developed after that meeting; the final plan will be presented to the Board for approval to proceed.

B.2 Collaborating

- PMAC Meeting to review consultation strategy and revised overall process for SWMP development
- Board workshop to review overall process for SWMP development and consultation strategy
- Board meeting to pass a resolution to proceed with SWMP development following draft process
- Works and Services meet with other departments to discuss their involvement and confirm their support
- Establish internal review and approval procedures
- Form PTAC (send letters to interested parties, post ads/notices for the general public)
- PTAC Meeting 1 – Establishment
- PTAC Facility Tour (Optional)
- PTAC Meeting 2 – Survey Results, Guiding Principles and Goals, Waste Reduction and Diversion Options
- PTAC Meeting 3 – Residual Management Options & Other Waste Management Issues
- PTAC Meeting 4 – Identifying Preferred Options
- PTAC Meeting 5 – Financing of Preferred Options

- PTAC Meeting 6 – Review and Evaluate Strategies from Preferred Options
- Board Workshop
- PTAC Meeting 7 – Review draft Plan and Community Consultation Program
- PTAC Meeting 8 – Review Final Plan
- Board Workshop to Review Final Draft Plan (in conjunction with Board Meeting)
- Board Approval of Final Draft Plan

B.3 Involving

- Addressed Mail #1 – sent to interested parties to alert them that the SWMP development process has started, to provide details on the survey, and to offer a presentation/workshop on the current system, strengths, areas for improvement, principles, goals)
- Presentations/Workshops for interested parties
- Addressed Mail #2 – sent to interested parties to alert them that the draft SWMP is ready for review, to provide details on the survey, and to offer a presentation/workshop on the draft SWMP
- Presentations/Workshops

B.4 Consulting

- Survey on Strengths, Areas for Improvement, Principles, Goals
- Survey on Draft Plan
- Review by Regional Representative of the Ministry of Environment and Climate Change Strategy

B.5 Informing

- Establish brand
- Set up and maintain website and email address
- Mailer #1 – Community Awareness of SWMP and Upcoming Survey
- Ad #1 – Community Awareness of SWMP and Upcoming Survey
- News Release #1 - Community Awareness of SWMP and Upcoming Survey
- Open Houses round #1 (optional, focused on strengths, areas for improvement, principles, and goals)
- Mailer #2 – Community Awareness of Draft Plan and Survey/Open Houses
- Ad #2 – Community Awareness of Draft Plan and Survey/Open Houses
- News Release #2 – Community Awareness of Draft Plan and Survey/Open Houses
- Open Houses round #2 (required, focused on draft plan)

B.6 First Nations Consultation

The Ministry Guide encourage development of a specific First Nations engagement strategy. Since the RDKS contributes to the costs of waste management facilities that are owned by First Nations (to cover the cost of off-reserve individuals using the facilities) and receives contributions from First Nations to cover the cost of their use of RDKS facilities, the RDKS communicates regularly with each First Nation community on matters related to level of service and contributions. This communication is generally in the form of letters, phone calls and face-to-face meetings between RDKS administration, community leaders and Operations and Maintenance staff. First Nations are consulted with in much the same way as member municipalities, and this approach is expected to continue throughout the plan development

process. First Nations representatives participate on PMAC, and each band will be invited to join PTAC. The RDKS will offer presentations to any bands that do not appoint a representative to PTAC.

B.7 Documentation

Throughout the plan review process, RDKS staff will document the steps taken to engage interested parties and the general public. This will include retaining copies of all related correspondence, news releases, media coverage, advertisements, and social media posts. The RDKS will also retain copies of presentations, handouts, blank surveys and display boards. All completed surveys will be compiled and anonymized. All other forms of feedback received (emails, letters, notes from phone calls or other conversations) will be retained. This documentation will form the core of the consultation summary report, which will be submitted to the Ministry along with the final plan. The documentation will also be used to generate interim reports, which will record feedback received and be used to share the results publicly. The interim reports will be issued at the completion of each phase.

Draft

Appendix 3 – Draft Background Information and Assessment of the Current Solid Waste System

Regional District of Kitimat-Stikine

Background Information and Assessment of the Current Solid Waste System – 2018 Update

Rev. 1.1

January 4, 2019

Prepared By:

Sarah Wilmot Environmental Planning, in collaboration with the Regional District of Kitimat-Stikine



List of Acronyms

Acronym	Meaning
C&D	Construction and demolition waste
CO	Conservation Officer
DLC	Demolition and land clearing waste
DO	Drop off (self-hauled waste)
EPR	Extended Producer Responsibility
HDPE	High-Density Polyethylene
ICI	Institutional, Commercial and Industrial
LF	Landfill
LFG	Landfill gas
MF	Multi-family residential
MOTI	Ministry of Transportation and Highways
RIG	Revelstoke Iron Grizzly
RDKS	Regional District of Kitimat-Stikine
SF	Single family residential
SWMP	Solid Waste Management Plan
TS	Transfer Station

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1 Introduction

The Regional District of Kitimat-Stikine (RDKS) is preparing to develop a new Solid Waste Management Plan (SWMP; “the Plan”) to replace the SWMP that was approved in 1995. The process to develop the new Plan will generally follow the four-step process outlined in “A Guide to Solid Waste Management Planning”, published by the Ministry of Environment in 2016.

This document provides background information on the area covered by the plan, including

- A map of the region showing participating municipalities, First Nations and adjacent regional districts;
- Pertinent information from official community plans, regional growth strategies and other regional documents (e.g., relating to airshed management or emergency debris management);
- Population statistics (current and projected for the next 10 to 20 years);
- A description of the economic base of the area;
- A description of the topography, including any physical constraints affecting waste management, and
- Climate adaptation and mitigation considerations for the region, especially as it relates to waste management.

This document also describes the current waste management system, including:

- The sources, composition and quantities of municipal solid waste generated within the planning area;
- Materials that are not typical municipal solid waste that are handled at municipal solid waste management facilities in the region;
- How the principles of “reduce” and “reuse” are addressed by the current system;
- Collection systems for recycling, recovery and residual management;
- The existing and planned solid waste management capacity, including remaining available disposal capacity and projected needs of the region;
- Product stewardship programs active in the region, and
- Education programs, including those supporting behaviour change.

Implementation of the 1995 plan was documented and presented to the Regional District Board of Directors in January 2017.

This document was first prepared and presented to the Plan Monitoring Advisory Committee (PMAC), the committee that advised on implementation of the 1995 SWMP, in August 2017. It was reviewed and revised in late 2018 with up to date numbers and to reflect the implementation of the Hazelton and Highway 37 North Servicing Plan.

2 Background Information

2.1 Plan Area

The 1995 Solid Waste Management Plan applies to the entire RDKS. The RDKS is located in northwestern BC and covers 104,464.61 square kilometers¹. The boundaries are shown on Figure 1. The RDKS is bounded by the Stikine region to the north and east, the Bulkley-Nechako Regional District to the east, Alaska and the Skeen-Queen Charlotte Regional District to the west, and the Central Coast Regional District to the south.

Municipalities within the RDKS are: City of Terrace, District of Kitimat, District of New Hazelton, the Village of Hazelton, and the District of Stewart. Electoral Areas within the RDKS are: Electoral Areas A, B, C, D, E and F. The RDKS also includes the Nass Valley, which is governed by the Nisga'a Lisims Government.

The RDKS has defined two service areas within its boundaries: the Terrace Service Area and the Hazelton and Highway 37 North Service Area. The Terrace Service Area includes the City of Terrace and all of Electoral Areas C and E. The Hazelton and Highway 37 North Service Area includes the District of New Hazelton, the Village of Hazelton, the District of Stewart, and Electoral Areas A, B and D. Electoral Area F and the District of Kitimat are not currently included in any Service Area, as the RDKS does not provide waste services in those areas.

¹ Data from Statistics Canada, based on the 2016 census, accessed April 12, 2017 from <http://www12.statcan.gc.ca/census-recensement/2016/as-sa/fogs-spg/Facts-cd-eng.cfm?LANG=Eng&GK=CD&GC=5949>



Figure 1. Regional District of Kitimat-Stikine

2.2 Topography

The main topographic challenge affecting waste management is the distance separating communities.

2.3 Population

The total population of the RDKS in 2016 was 37,367². The overall population density in the RDKS is 0.4 persons per square kilometre. The population distribution is shown in Table 1.

Table 1. RDKS Population Breakdown

Area	Area Type	2016 Population ³	% of Total RDKS population
Kitimat-Stikine	RD	37,367	100%
Hazelton	VL	313	1%
Kitimat	DM	8,131	22%
New Hazelton	DM	580	2%
Nisga'a	NL	1,880	5%
Stewart	DM	401	1%
Terrace	CY	11,643	31%
Indian Reserves	IR	5,635	15%
Kitimat-Stikine A	RDA	20	0%
Kitimat-Stikine B	RDA	1,473	4%
Kitimat-Stikine C (Part 1)	RDA	2,834	8%
Kitimat-Stikine C (Part 2)	RDA	5	0%
Kitimat-Stikine D	RDA	99	0%
Kitimat-Stikine E	RDA	3,993	11%
Kitimat-Stikine F	RDA	360	1%

Area Types:

- CY = City
- DM = District Municipality
- NL = Nisga'a Land
- IR = Indian Reserve
- RD = Regional District
- RDA = Regional District Electoral Area
- VL = Village

Population projections by BC Statistics for the whole RDKS indicate that the population is expected to grow to about 38,442 people (a 3% increase) by 2025 (five years following the expected adoption of the new SWMP), and to about 39,241 (a 5% increase) by 2030 (10 years after the anticipated plan

² Data from Statistics Canada, based on the 2016 census, accessed April 12, 2017 from <http://www12.statcan.gc.ca/census-recensement/2016/as-sa/fogs-spg/Facts-cd-eng.cfm?LANG=Eng&GK=CD&GC=5949>

³ Data from BC Statistics, based on the 2016 census, accessed April 12, 2017 from <http://www.bcstats.gov.bc.ca/StatisticsBySubject/Census/2016Census/PopulationHousing/MunicipalitiesByRegionalDistrict.aspx>

adoption).⁴ These population forecasts may not take into account the latest announcements regarding the development of a natural gas processing and exporting facility in Kitimat.

For the purposes of waste management planning, it is important to know where the growth will happen. The Official Community Plan (OCP) for each municipality or village provides a population projection. The bulk of the growth projected for the RDKS will occur in the City of Terrace. The OCP for Stewart also indicates that some growth is expected. Growth in the District of Kitimat is highly dependent on external forces. No growth is projected for Hazelton or New Hazelton. The RDKS projects that modest growth may occur in the Thornhill area (Electoral Area E) of the RDKS if major industrial development occurs in the region. Detailed growth projection information for each area (excerpted from the relevant OCPs) are provided below.

2.3.1 City of Terrace

The City of Terrace conducted a population projection study after its most recent OCP. That study conservatively projects a growth of nearly 1,000 people by 2023, which is about one third of the total growth projected for the RDKS in that timeframe⁵. Less conservative estimates range from 5,300 to 12,100 new people by 2023, both of which exceed the total projected growth for the whole regional district. Projections for Terrace do not extend to 2038.

Table 2. Terrace Population Projections

	Low Growth	Medium Growth	High Growth
2016 (actual)	11,643	11,643	11,643
2025	12,635	17,831	26,279

2.3.2 District of Stewart

The District of Stewart also presents three population projections in its OCP.⁶ The District of Stewart is expected to grow by between 99 and 794 people by 2024 (note that projections for 2025 were not include in the OCP). A projection for Stewart is also available from BC Statistics, because the boundaries of Stewart align closely with the boundaries of the Snow Country Local Health Area, and BC Statistics provides projections for Local Health Areas.

⁴ Data from BC Statistics, accessed November 6, 2018 from <https://www.bcstats.gov.bc.ca/apps/PopulationProjections.aspx> (select Regional District as the region type)

⁵ Data from City of Terrace Population Survey and Projections, accessed November 6, 2018 from <http://www.terrace.ca/sites/default/files/docs/business-development/cityofterrace-populationsurveyandprojections.pdf>

⁶ Data from District of Stewart OCP, accessed at [http://districtofstewart.com/docs/2014_OCP_Final_-_Nov_2014_\(with_signatures\).pdf](http://districtofstewart.com/docs/2014_OCP_Final_-_Nov_2014_(with_signatures).pdf)

Table 3. Stewart Population Projections.

	BC Stats (Snow Country Local Health Area)	Low growth	High growth
2016 (Actual)	401		
2024	500	570	1195
Absolute change	99	169	794
% change	25%	42%	198%

2.3.3 District of Kitimat

The population of Kitimat is difficult to project because it is so closely linked to the growth and decline of export-oriented industries affected by global markets and provincial resource policy decisions. Projections in Kitimat’s OCP range from growing to 13,621 (from the 2016 population of just over 8,000) to declining to 5,079 people by 2026.⁷ The mean projection shows the population remaining stable. Whether Kitimat experiences population growth, stability or decline is contingent on economic conditions which are impacted by factors such as the global economy, housing conditions elsewhere and changes in government policy. A recent announcement of approval for the liquified natural gas terminal in Kitimat means that temporary residents are expected in the region, and may peak at or near 10,000 during construction.

2.3.4 District of New Hazelton

The District of New Hazelton does not provide population projections in its OCP.⁸ It notes that the population decreased between 2001 and 2006, and increased by about the same amount between 2006 and 2011. According to population estimates from BC Statistics, the population dropped slightly again between 2011 and 2016⁹ (note that BC Statistics does not provide projections). It therefore seems likely that the population will remain relatively stable for the next 10 years.

2.3.5 Village of Hazelton

The Village of Hazelton also does not provide population projections or any commentary on its population trends in its OCP. Population estimates from BC Statistics for 2001 to 2016 show a population decline from 354 to 257¹⁰ (note that BC Statistics data varies from 2016 census data, which reported a population of 313 for the Village of Hazelton). The population of Hazelton may continue to decline over the next 10 years.

⁷ Data from the District of Kitimat OCP, accessed at <https://www.kitimat.ca/en/business-and-development/resources/Documents/Official-Community-Plan.pdf>

⁸ Data from the District of New Hazelton OCP, accessed at http://newhazelton.ca/images/uploads/BL_332_Official_Community_Plan.pdf

⁹ Data from BC Statistics, accessed at <http://www.bcstats.gov.bc.ca/Files/285cd56c-9be1-4c5e-a153-3deeffa2ac94/BCDevelopmentRegionRegionalDistrictandMunicipalPopulationEstimates2011-2015.xls>

¹⁰ Data from BC Statistics. 2001-2011 data accessed at: <http://www.bcstats.gov.bc.ca/Files/0379a32f-cec8-438d-83e0-6724b2a2a272/BCDevelopmentRegionRegionalDistrictandMunicipalPopulationEstimates2001-2011.xls>, 2011 to 2016 data is at <http://www.bcstats.gov.bc.ca/Files/285cd56c-9be1-4c5e-a153-3deeffa2ac94/BCDevelopmentRegionRegionalDistrictandMunicipalPopulationEstimates2011-2015.xls>

2.3.6 Thornhill

The draft OCP for Thornhill (Electoral Area E) includes two population projections: the first is for a business as usual scenario, and the second considers the implications of major industrial development.¹¹ Under the business as usual scenario, minimal growth is expected in the area (20 additional people by 2036). Under the growth scenario, an additional 419 people are expected by 2036.

2.4 Economic base

According to 2016 Census data¹², the main industries (by labour force) for the region were (in order): health care and social assistance, retail trade, construction, accommodation and food services, manufacturing, educational services, and public administration. Those seven categories account for nearly 70% of the employment. The main economic activities within the RDKS include mining, forestry, energy, fishing, and transportation. The area is home to several mills and multiple hydro projects. The economic activities in the RDKS mean there are a number of industrial work camps in the area. These camps consist of buildings used for residential accommodations and support for industrial construction project workers. Camp residents are provided with individual sleeping units, individual or communal bathroom facilities, and meals provided in communal dining areas. The domestic waste from these camps is not substantially different from typical municipal solid waste, and is accepted at designated solid management waste facilities in the region. New mining, forestry, oil and gas and/or energy developments in the region may result in a significant increase in waste from industrial work camps and construction.

2.5 Emergency Debris Management

The RDKS's 2013 Emergency Plan identifies a number of potential causes of emergency situations and the responses that should be taken. The majority of the potential causes do not specifically address issues related to solid waste. An animal epidemic is the only situation which specifically mentions waste, and the Emergency Plan notes that "the threat of an animal epidemic is fairly low given the number of agricultural producers within the area." If an epidemic occurs, the Ministry of Agriculture and the BC Centre for Disease Control would need to coordinate disposal of infected animals with the RDKS Works and Services department. Other emergency situations such as dam failures or earthquakes could result in the generation of large quantities of demolition waste, but clean up after the situation ends is not within the scope of the Emergency Plan. Future revisions of the Emergency Plan could expand on the disposal of debris generated by floods and fires (e.g. residential and commercial property demolition).

The Emergency Plan defines specific roles that would be activated during emergency situations. This includes the role of Environmental Branch Coordinator (EBC). That person would be responsible for coordinating local response to hazardous spills, waste disposal and water system failure, and liaising with regional and provincial environment officials and the private sector. During an emergency situation, the EBC will determine the status and availability of waste storage and disposal facilities in the area.

¹¹ Data from the Thornhill OCP, accessed at https://www.rdks.bc.ca/sites/default/files/full_thornhill_ocp_-_master_copy_-_march_2018.pdf

¹² Data from the 2016 National Census, as cited by the Province of British Columbia
<http://www.britishcolumbia.ca/invest/communities/british-columbia/north-coast/kitimat-stikine/>

3 Characteristics of Waste Generated in the RDKS

Waste management services in the RDKS are separated into the Terrace Service Area and the Hazelton and Highway 37 North Service Area. The two service areas differ in terms of the disposal and diversion services and infrastructure, and in terms of the type and amount of information available about the waste. The majority of waste in the Terrace Service Area flows through disposal or diversion facilities that are equipped with weigh scales, and a waste characterization study was conducted in 2017 that examined garbage from both the residential and Industrial, Commercial and Institutional (ICI) sectors. None of the waste management facilities in the Hazelton and Highway 37 North Service Area are equipped with weigh scales, and a waste characterization study has not been conducted. Therefore, information on waste composition and sources is presented separately by service area in Sections 3.2 and 3.3.

Section 3.1 presents information about the quantity of waste disposed and diverted across the entire Regional District.

3.1 Quantity of Waste

Table 4 contains the best available information on waste disposal and diversion for the entire RDKS. Some diversion figures are known with a relatively high degree of certainty and can be isolated for a specific service area (e.g. ICI cardboard recycling and residential curbside recycling), whereas other diversion numbers are estimates and/or are available only for the RDKS as a whole (e.g. extended producer responsibility (EPR) programs report by regional district). The total diversion number is believed to be an underestimate because of the lack of available information about the quantity of recycling undertaken by the private sector (e.g. scrap metal dealers and retailers who backhaul their recyclables to the Lower Mainland).

The quantities listed below are for 2017, the last complete year before this report was compiled. An estimate for 2018 is provided for some figures, based on data through October, assuming average monthly quantities for November and December.

Table 4. Waste Flows (2017)

Waste Stream	2017 Tonnes	Notes	Source
Disposal			
Forceman Ridge Landfill	6903	Estimate for 2018: 8724	Scale data
Rosswood landfill	50		Estimate (no scale at facility)
Kitimat landfill	6250		Estimate (no scale at facility)
Iskut landfill	150		Estimate (no scale at facility)
Meziadin landfill	2800	Includes municipal type waste from large industrial sources	Estimate (no scale at facility)
Hazelton Waste Management Facility	3100		Estimate (no scale at facility)
Stewart landfill	300		Estimate (no scale at facility)

Telegraph Creek landfill	150		Estimate (no scale at facility)
New Aiyansh landfill	1200		Estimate (no scale at facility)
Dease Lake landfill	100		Estimate (no scale at facility)
Total Tonnes Disposed	21,003		
Diversions			
City of Terrace composting	500		Estimate (no scale at facility)
Forceman Ridge composting	1402	Estimate for 2018: 1682	Scale data
RDKS residential curbside recycling (not covered by EPR program)	212	Net of contamination. Estimate for 2018: 194	Reported by Do Your Part Recycling (processor)
RDKS recycling depots in Hazelton and Highway 37 North Service Area (not covered by EPR program)	4.54	Actuals for 2018: 48.49	Facilities were only in place for the last two months of 2017.
Backyard composting	13		Based on 75 units sold by the RDKS, and 31 sold by municipal governments; assuming 125kg/unit/year
Local ICI cardboard recycling	848	Estimate for 2018: 751	Based on invoicing and reporting by Do Your Part Recycling.
ICI recycling (backhaul to lower mainland)	Unknown		
Private sector scrap metal and C&D material recycling	Unknown		
EPR programs (based on data reported by EPR agencies)	3,023		
Alarms	0		https://www.productcare.org/wp-content/uploads/2018/07/FINALE-AlarmRecycle-2017-Annual-report.pdf
Batteries (consumer)	5		http://www.call2recycle.ca/download/21576/ Based on 620 tonnes collected in BC, assuming average per capita contribution in the RDKS
Beer containers	195		http://envirobeerbc.com/wp-content/uploads/2018/06/BRCCC-Annual-Report-to-the-Director-NonFinancial-Calendar-Year-2017_plus-KPMG.pdf
Beverage containers	579		https://www.return-it.ca/ar2017/pdf/AnnualReport.pdf

Electronics	142	Based on 3.8 kg per capita provincial average because RDKS-specific data is not available	http://epra.ca/wp-content/uploads/2018/06/EPRA_Annual_Report_ENG_2017_Final.pdf
Lead-acid batteries	171		http://www.canadianbatteryassociation.ca/images/2017_CBA_Annual_Report_BC.pdf
Lighting equipment	30,119 lighting units	No conversion factor to tonnes published	https://www.productcare.org/wp-content/uploads/2018/06/BC-Lights-2017-Annual-Report.pdf
Major appliances	162		https://www.marrbc.ca/documents/MARR-Annual-Report-2017.pdf
Medication	0.7	Based on 0.018 kg per capita provincial average because RDKS-specific data is not available; 2016 data is most recent available.	http://www.healthsteward.ca/news/bc-news-release-may-2017
Packaging and printed paper	670	Covers City of Terrace, Border Town Recycling depot (Stewart), Do Your Part Recycling depot (Terrace), Kitimat Bottle Depot and Hazelton Bottle Depot	https://recyclebc.ca/wp-content/uploads/2018/06/RecycleBCAR2017-June292018.pdf
Paint, aerosols, solvents, pesticides	135 tubskids	No conversion factor to tonnes published; tubskids are 4'x4'x3' plastic boxes	https://www.productcare.org/wp-content/uploads/2018/06/2017-BC-Paint-HHW-Annual-Report-FINAL-to-Website.pdf
Small appliances	38	Based on 1.0 kg per capita provincial average because RDKS-specific data is not available	https://www.electrorecycle.ca/wp-content/uploads/2018/06/CESA-2017-Annual-Report-to-Members-Final.pdf

Thermostats	Not available in tonnes	46 mercury-containing thermostats, 1 electronic thermostat and 1 loose vessel (which had been clipped out of a thermostat)	https://www.hrai.ca/uploads/userfiles/files/2017 Annual Report for the Province of British Columbia.pdf
Tires	538		http://www.tsbc.ca/pdf/TSBC-AnnualReport2017.pdf
Used Oil and Antifreeze	470 73,796 29 24	tonnes of oil (528,221 litres) filters (no weight conversion available) tonnes of containers tonnes of antifreeze (20,793 litres)	http://bcusedoil.com/wp-content/uploads/2018/06/BCUOMA_AR_2017.pdf
Total Tonnes Diverted	6,003		
Total Generation (disposal + diversion)	27,006		
Diversion Rate (diversion ÷ generation)	22%		

Note that data was not available from the following EPR programs: cell phones, electrical outdoor power equipment, and medications.

In 2017, the RDKS disposed of an estimated 27,000 tonnes of municipal solid waste, and accounted for just over 6,000 tonnes of diversion. These two figures result in a calculated diversion rate of 22%.

The BC Ministry of Environment and Climate Change Strategy has moved towards setting goals in terms of disposal per capita, rather than diversion rate, because of the widespread difficulty in measuring all diversion. According to the Ministry, the average British Columbian disposed of 472 kg of waste in 2016. The provincial government has set a goal of lowering the municipal solid waste disposal rate to 350 kg per person by 2020. The per capita disposal rate in the RDKS in 2017 was 562 kg, including waste from industrial camps. This is significantly lower than the disposal rate of 769 kg per capita on record with the BC Ministry of Environment and Climate Change Strategy (2016 data).

In contrast to the remainder of the RDKS, the Terrace Service Area disposed of 424 kg per capita in 2017. This number is based on residential and ICI waste, small loads of DLC waste, and controlled waste that was generated inside the service area. An assumption could be made that the difference between the disposal rate in the Terrace Service Area and the rest of the RDKS is due to the disposal restrictions and diversion programs in the Terrace Service Area; however, a look at the diversion data shows that the diversion rate in the Terrace Service Area was similar to the diversion rate in the whole RDKS. The next assumption could be that the difference is due to the waste from industrial camps, which increases the quantity disposed but does not contribute to the population; however, only 123 tonnes of industrial

refuse and 253 tonnes of industrial DLC were disposed in 2017. Subtracting those amounts from the total disposed yields a per capita disposal rate of 552 kg per capita, which is still substantially higher than the disposal rate in the Terrace Service Area. This appears to indicate that the lower disposal rate in the Terrace Service Area is due to reduced waste generation, not increased diversion.

3.2 Terrace Service Area Details

3.2.1 Waste Composition

The RDKS conducted a large-scale waste composition study at the Thornhill Transfer Station in 2017. The study examined representative samples from the residential and ICI sectors and waste that is dropped off by generators.

The residential and ICI sectors were similar to each other and together account for 86% of the waste arriving at the transfer station. Paper and compostable organics each made up nearly 20% of the overall waste, followed by compostable organics (19.5%), and plastic (15.3%). It is important to note that every one of these waste categories is restricted from disposal.

Residential waste from the City of Terrace and from the RDKS collection routes were similar, although residential garbage from the City contained more organics than the residential garbage from the RDKS collection area (24.3% vs 19.6%). Waste dropped off by generators was dominated by non-compostable organics (i.e. dimensional lumber), building materials, glass and bulky objects (i.e. furniture, carpet). This is illustrated in the following chart.

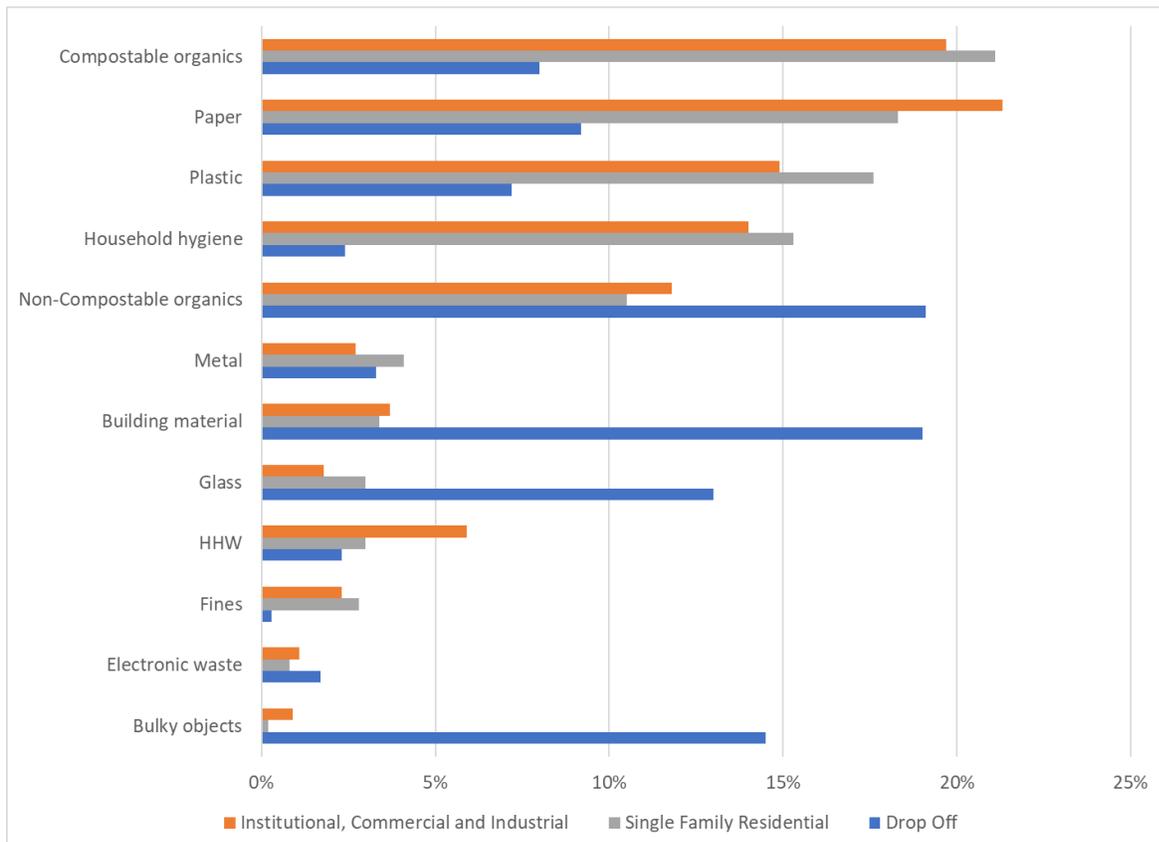


Figure 2. Thornhill Waste composition 2017

Figure 3 shows that 67% of the material brought to the Thornhill Transfer Station is restricted from disposal and could be managed by the composting and recycling systems, indicating a need for more uptake of the existing diversion systems.

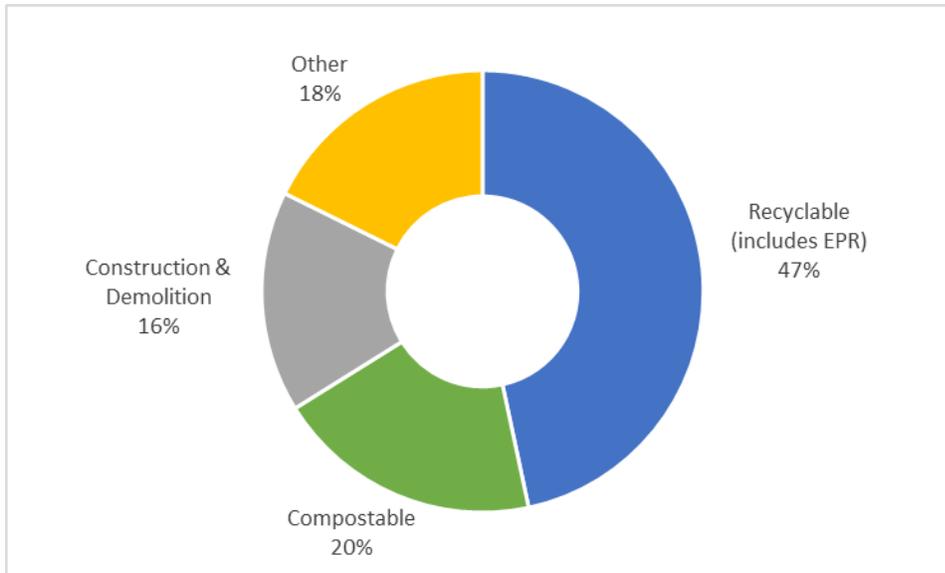


Figure 3. Waste categories by optimal management technique

3.2.2 Waste Handling

Nearly one third of the waste is composted or recycled in the Terrace Service Area. While this is higher than the diversion rate for the RDKS overall, the diversion rate is still substantially lower than it could be, given the disposal restrictions in place and the diversion opportunities available.

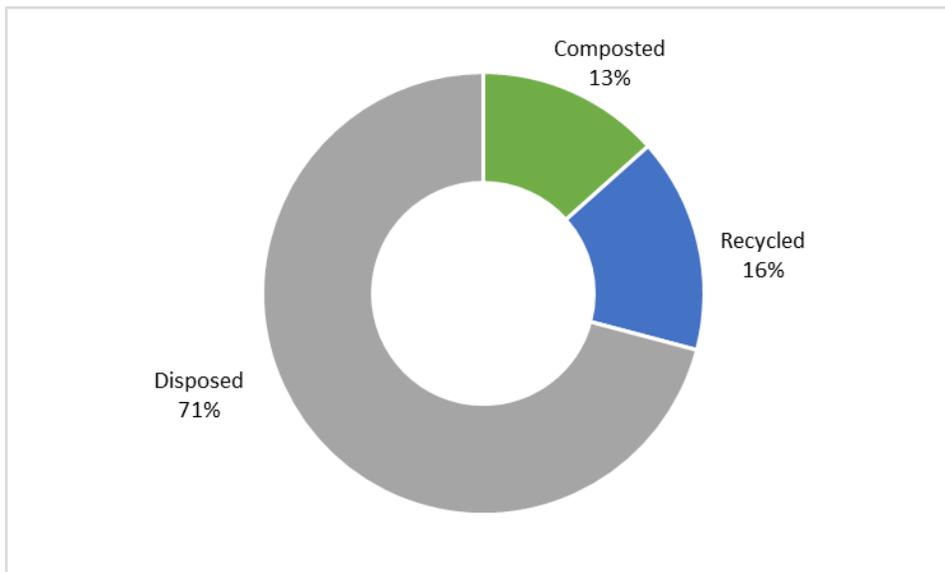


Figure 4. Diversion in the Terrace Service Area

3.2.3 Waste Generators

Approximately 50% of the total waste (garbage, recycling and organics) is generated by the ICI sector. The other 50% is divided between the residential and construction and demolition (C&D) sectors, and materials that are dropped off by generators (i.e. self-hauled) for which no sector is reported.

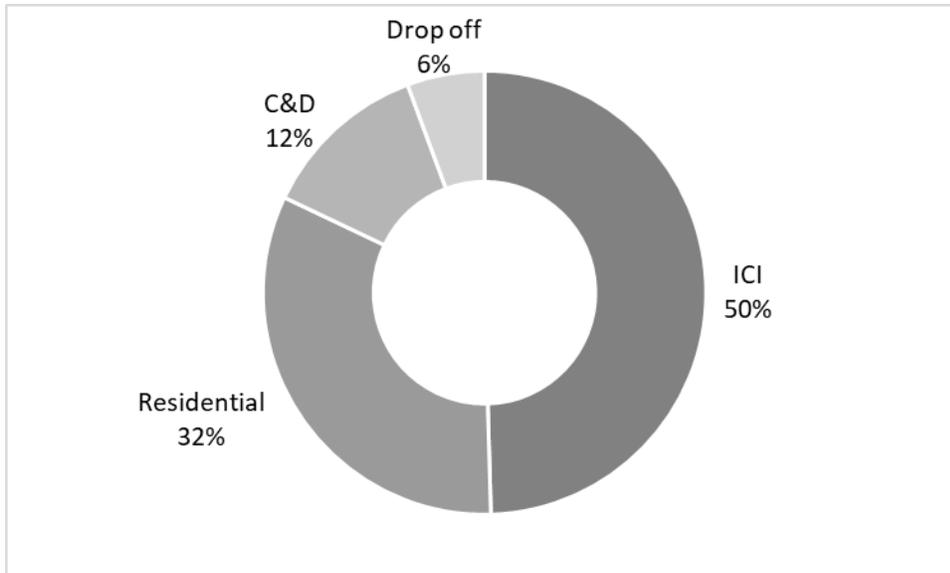


Figure 5. Waste generation by sector in the Terrace Service Area

A similar pattern exists for waste disposal, although effective diversion programs for the residential sector mean that although that sector generates 32% of the waste, it is responsible for only 26% of the disposal. The DLC sector has a proportionally higher disposal rate.

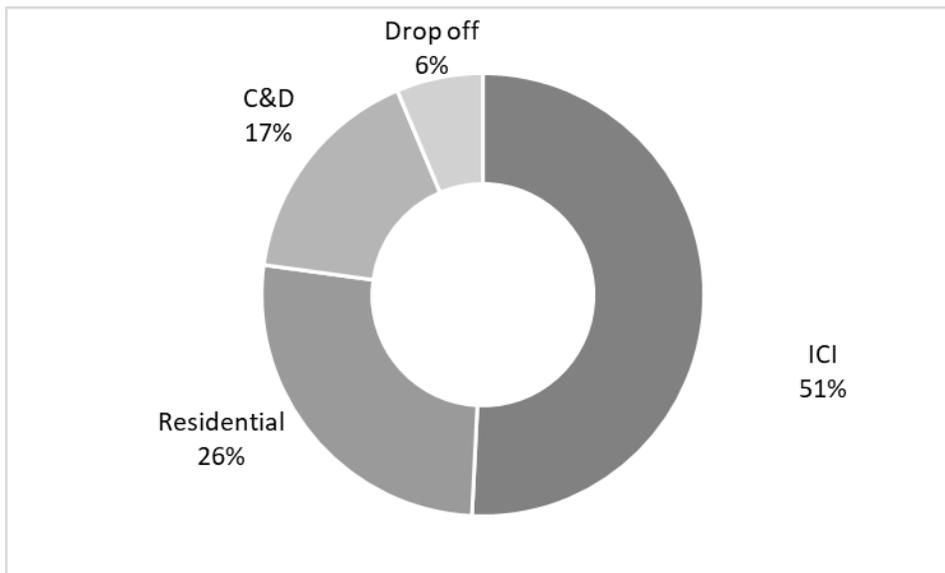


Figure 6. Waste disposal by sector in the Terrace Service Area

It is also possible to calculate the diversion rate by sector. The residential sector has the highest diversion rate at 43%. The diversion rate for the ICI sector is 27%, and the diversion rate for materials

dropped off the transfer station by the generator is 21%. C&D materials have the lowest diversion rate, at 5%. The proportion of waste that is disposed, recycled and composted for each waste source is illustrated in Figure 7.

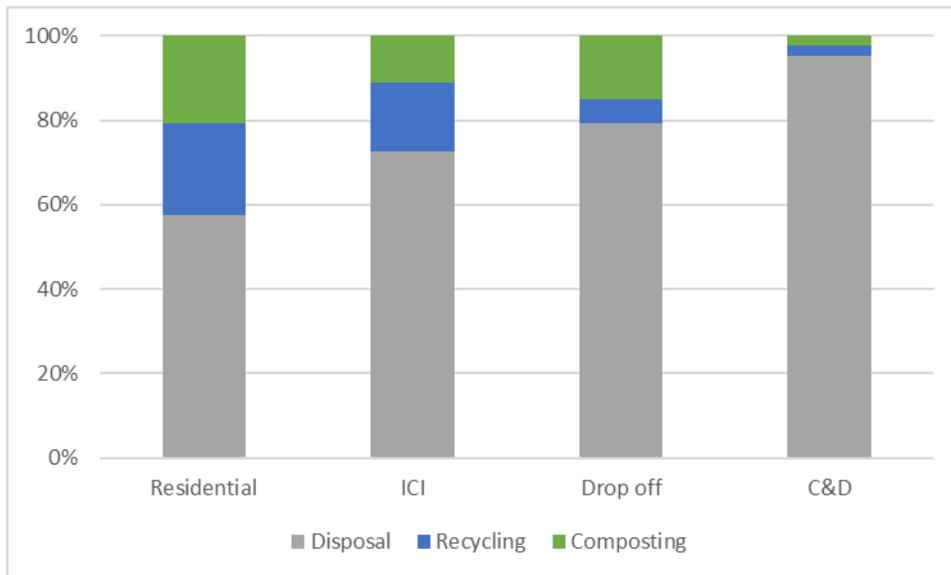
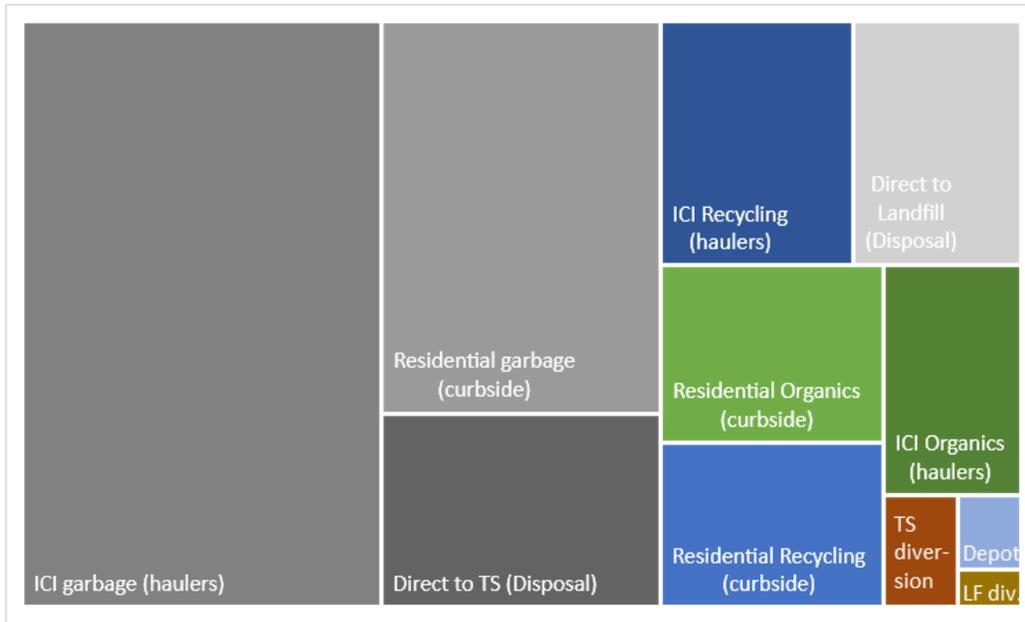


Figure 7. Diversion Rates by Sector

The curbside recycling and organics programs for the residential sector contribute almost equally to the sector’s diversion rate. The residential recycling depot collects a much smaller portion of the diverted waste, although the cost of the depot is covered by Recycle BC. The ICI sector achieves more of its diversion through recycling than through organics diversion. Drop off diversion is achieved by segregating yard and garden waste, metal, white goods and propane tanks at the transfer station. C&D diversion is achieved by segregating clean wood at the transfer station and by using some contaminated soil onsite at the landfill.

The following figure illustrates how many tonnes each waste service handles. The size of each box is proportional to the quantity of waste managed by each service.



Note: TS means transfer station and LF means landfill

Figure 8. Share of waste among services

This information can also be visualized as flows from sources to destinations. In this case, the sources are the sectors and the destinations are recycling, composting and landfilling.

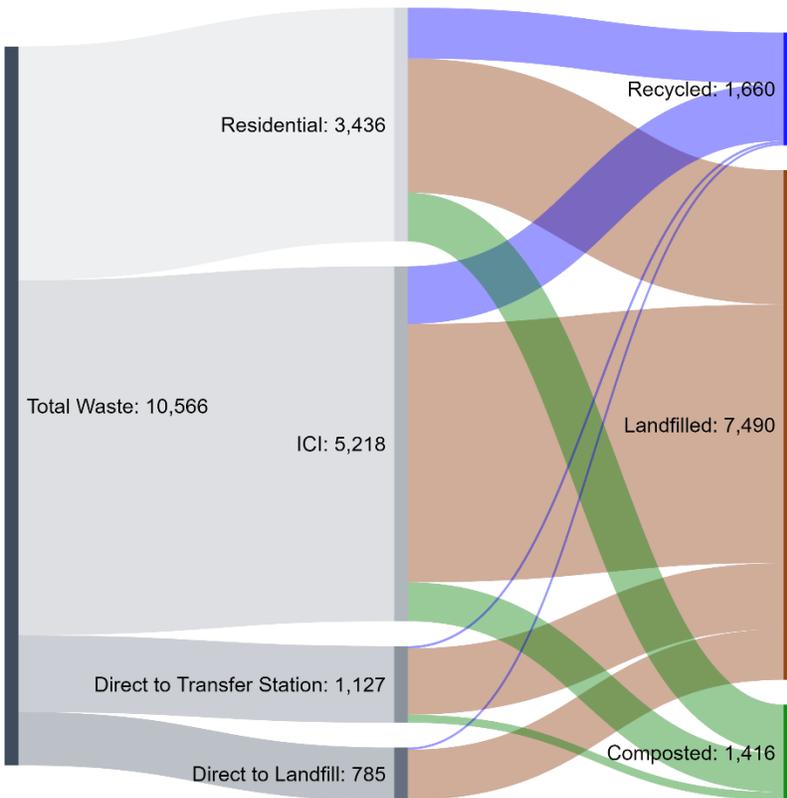


Figure 9. Material flows in the Terrace Service Area (all numbers are tonnes)

3.3 Hazelton and Highway 37 North Service Area

The information presented for this service area is largely estimates based on surveys of airspace consumption and year-to-year comparisons of the amount of waste received.

3.3.1 Waste Composition

A waste composition study has not been conducted in the Hazelton and Highway 37 North Service Area. There are currently no disposal restrictions on organic materials nor are there centralized composting facilities within the service area. In comparison to the Terrace Service Area, fewer households receive curbside collection of recyclables, and there is no disposal restriction on ICI cardboard. Therefore, it is anticipated that there are more organics/compostables and recyclables in the waste stream.

3.3.2 Waste Sources

The RDKS has begun recording the source sector for each incoming load in the Hazelton and Highway 37 North Service Area. This information can be used in the future to identify the sectors that require additional support with waste diversion and reduction. Since there is less ICI activity in the Hazelton and Highway 37 North Service Area, it is anticipated that a higher proportion of the waste would be generated by the residential sector.

3.4 Comparison to Other Jurisdictions

Per capita disposal rates from a number of other regional districts in British Columbia were collected and compared to the disposal rate in the RDKS. Metro Vancouver and the Capital Regional District were selected because they have long-established diversion programs and plentiful resources for implementation. The Cowichan Valley Regional District was included because it is semi-rural and has had success in implementing effective diversion programs (largely due to limited and expensive landfill disposal options). Bulkley Nechako, Fraser-Fort George and Thompson-Nicola regional districts were chosen based on their distance from recycling markets (similar to the RDKS) and relatively low populations. The results show that there is not a strong correlation between population and disposal rate (i.e. regional districts with small populations can also have low disposal rates).

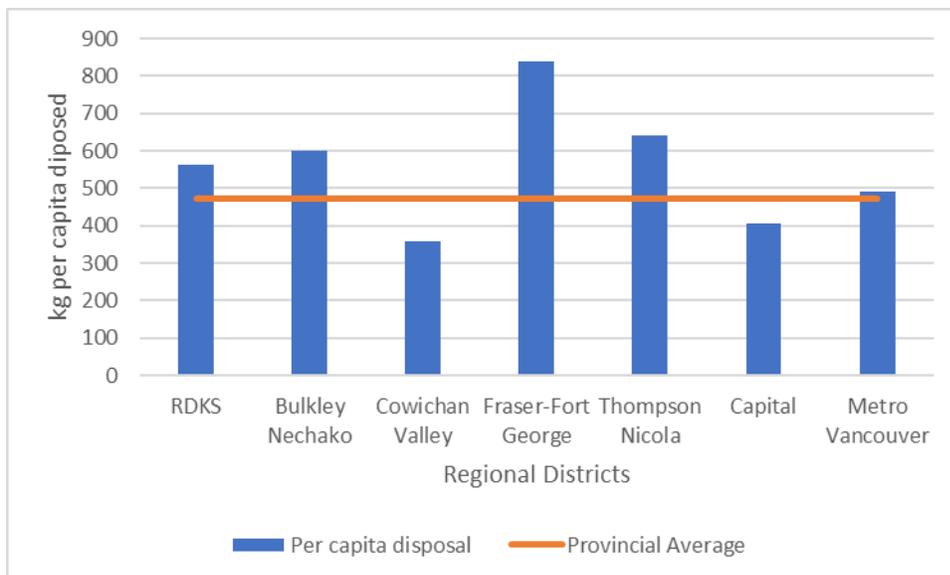


Figure 10. Per Capita Disposal Rates in other BC Regional Districts

4 Waste Management System

Waste is generated at a source (e.g. homes and businesses), and travels via various methods to either an intermediate processing facility (e.g. transfer station, composting facility, recycling facility) or directly to its final destination (e.g. landfill, recycling markets). These activities are regulated by bylaws and are supported by communication and education initiatives. The process of waste moving from its source to its final destination is referred to as the “waste flow”, and all of the components of the waste flow are the “waste management system”. Figure 11 illustrates the waste management system in the RDKS.

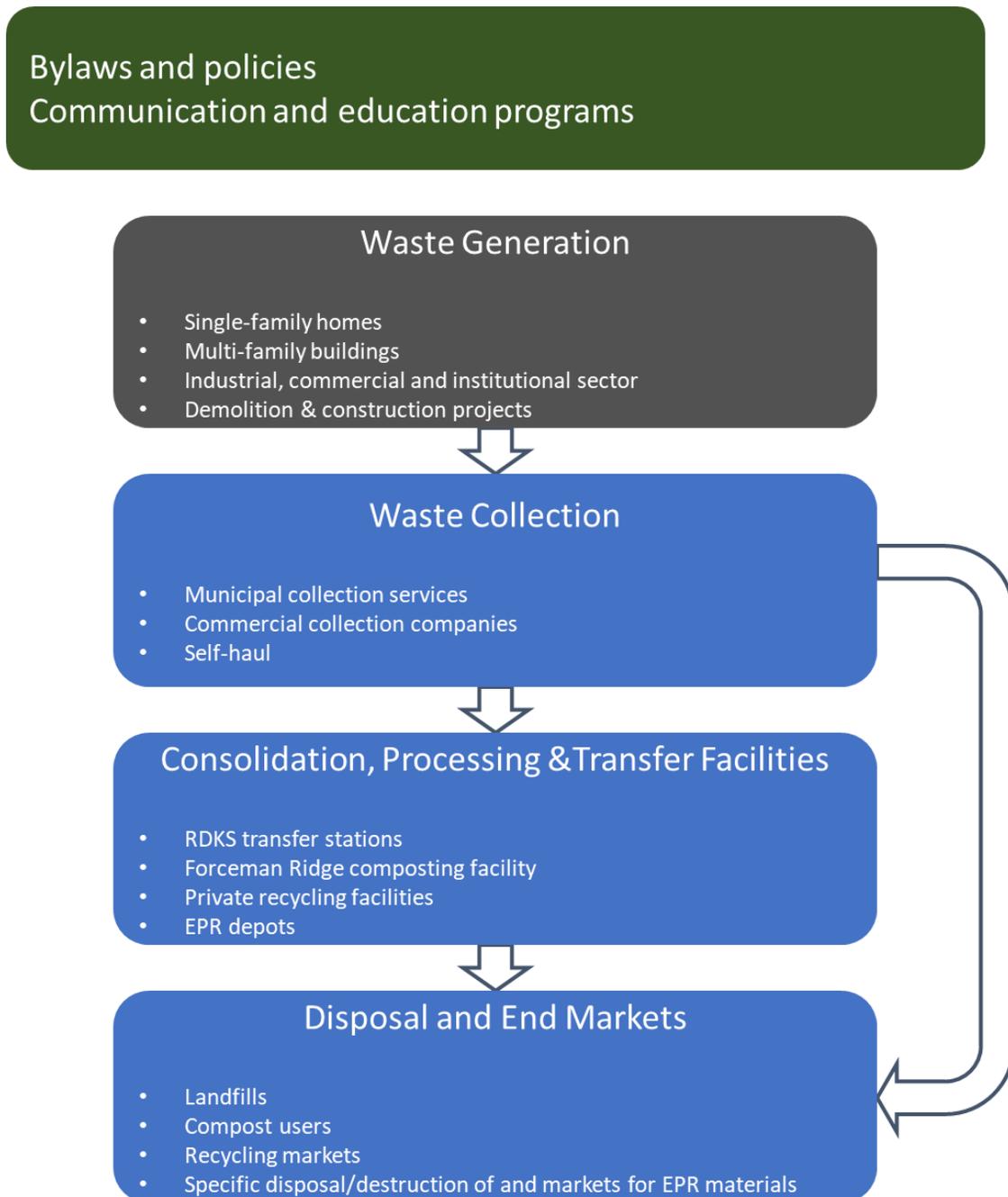


Figure 11. RDKS Waste Management System

The components of the waste management system can also be organized according to the “waste management hierarchy”, which emphasizes the importance of reduction, reuse and recycling before managing the remaining waste by recovering energy (optional) and disposing of the residuals. Figure 12 illustrates the waste management hierarchy. The following section describes each elements of the hierarchy in the RDKS.

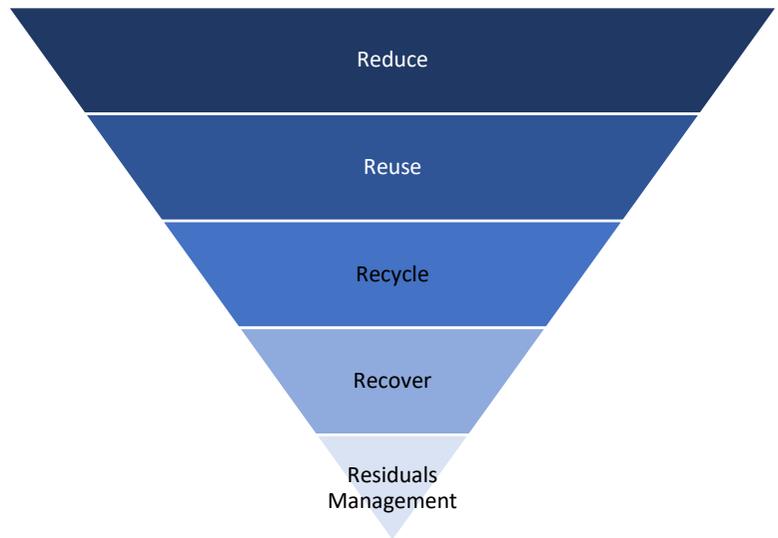


Figure 12. Waste Management Hierarchy

4.1 Reduction and Reuse

Local governments benefit from reducing waste generation and increasing material reuse because those measures result in less waste that needs to be managed by garbage and recycling programs.

The RDKS uses outreach and education programs to encourage waste reduction. Tipping fees on garbage (currently implemented only in the Terrace Service Area) also encourage waste reduction. Tipping fees were implemented for all users in the Terrace Service Area in 2016, and are intended to be implemented for large loads in the Hazelton and Highway 37 North Service Area in the future.

The RDKS supports reuse by waiving tipping fees on unsuitable donations received by thrift stores and by allowing the Salvation Army to store surplus materials and unsellable textile donations in a semi-trailer at the transfer station for no cost (the Salvation Army manages the trailer and sends materials for recycling when the trailer is full).

4.2 Recycling

4.2.1 Residential

The RDKS offers curbside recycling collection to residents outside the City of Terrace and within the Terrace Service Area (Electoral Areas C and E). The City of Terrace and District of New Hazelton also offer curbside recycling collection. All curbside collection programs operate every other week. The curbside program in the City of Terrace is partially funded by Recycle BC¹³, the stewardship organization responsible for managing residential printed paper and packaging (including cardboard, plastic and metal containers). See Section 4.2.3 for more information about product stewardship/EPR programs.

Private companies offer subscription-based collection of residential recycling in areas that are not serviced by local government collection programs. These companies include Geier Waste Services and Waste Management.

There are also depots located throughout the RDKS that accept paper, cardboard, plastic and metal containers from residents. These include the bottle depots in New Hazelton and Kitimat and Do Your Part Recycling in Terrace. Those three depots receive a financial subsidy from Recycle BC, and residents may drop off recyclables for no charge. The RDKS has established a recycling depot at the Kitwanga

¹³ Formerly called Multi-Material BC, or MMBC.

Transfer Station and accepts cardboard for recycling at the Hazelton Waste Management Facility, with the goal of eventually securing support from Recycle BC for those services. In December 2018, Border Town Recycling in Stewart ceased operation and the RDKS established a Recycle BC depot at the Stewart landfill (the site of the future transfer station).

4.2.2 Institutional, Commercial and Industrial Sector

The District of Stewart collects cardboard from commercial generators and currently stores it in their public works yard prior to pick-up and delivery to Do-Your-Part recycling depot in Terrace. The RDKS currently pays for the hauling and recycling of ICI cardboard from Stewart. This program is funded through taxation.

The “Kitimat Understanding the Environment” or KUTE depot in Kitimat accepts cardboard and paper from Kitimat industrial projects and camps.

Throughout the rest of the RDKS, collection of recyclables from ICI properties is managed privately. Owners or operators of ICI facilities are responsible for making sure that their garbage does not contain any materials that are restricted from disposal, such as cardboard and paper. They may choose to bring those recyclables to designated facilities themselves, or they may contract out the collection of those materials. Collection services are offered by Geier Waste Services, Waste Management and Do Your Part Recycling. Do Your Part Recycling is the only designated recycling facility for ICI paper and cardboard in the RDKS.

Some businesses choose to backhaul recyclable materials to their central distribution centers located outside the RDKS, rather than recycling locally. This is typically done by large retailers, and no data is available on backhauled quantities.

4.2.3 Extended Producer Responsibility

EPR is an environmental policy approach in which producers are made responsible for managing their products throughout their entire whole life cycle, from selection of materials and design to end-of-life management. Under an EPR scheme, the economic and physical responsibility for products is shifted from local governments to producers. This provides a financial incentive for producers to create products that can be disposed of (or reused/recycled) responsibly.

The Recycling Regulation, under BC’s *Environmental Management Act*, sets out the requirements for EPR programs in BC. The regulation requires producers of designated products to develop a program for their end-of-life collection and management, and to consult stakeholders (including local governments) when developing their plans.

The range of products managed through EPR programs has expanded significantly in the last decade, and now includes standard household recyclables (e.g. paper, cardboard, metal, plastic, and glass) as well as more hazardous materials (e.g. batteries, paint, solvents). EPR materials may be collected curbside and/or at depots and through take-back programs in stores and other strategic locations. “Round-up” events are also a common approach to collecting EPR materials (i.e., household hazardous waste) in less densely populated areas, such as some areas of the RDKS.

Table 5 lists the number of depots operated under contract to each stewardship agency and their locations. Table 4 (Section 3.1) includes the quantity of EPR materials collected in the RDKS, as reported by product stewardship agencies.

Table 5. EPR Depot Locations

Stewardship Agency	Materials managed	Number of Depot Location		
		Terrace	Kitimat	Highway 37 North Service Area
BCUOMA	Used oil, oil containers, oil filters	3	1	1
BCUOMA	Antifreeze	1	0	0
Encorp	Beverage containers	1	1	1
Canadian Battery Association	Lead acid batteries	5	1	1
Call2Recycle/CWTA	Rechargeable batteries and cell phones	10	2	3
EPRA (operated by Encorp)	Electronics: computers, televisions, audio-visual, medical equipment, office equipment	2 (1 retail location accepts residential quantities only)	1	2
LightRecycle	Lamps and lighting equipment	3 (1 is for commercial only)	1	1
OPEIC	Outdoor power equipment	2	0	0
CESA	Small appliances and electrical equipment	1	1	2
AlarmRecycle	Smoke and carbon monoxide detectors	1	1	0
Thermostat Recovery Program	Thermostats	3	0	0
ProductCare (regeneration)	Paint	1	1	2
ProductCare (regeneration)	Solvents, flammable liquids, gasoline and pesticides	1	1	0
Health Products Stewardship Association	Pharmaceuticals	6	3	0
BC Tire Stewardship	Tires	10	2	2
Recycle BC	Residential packaging and printed paper	1 (plus curbside program in Terrace)	1	2

The RDKS is a member of the BC Product Stewardship Council, a body that advocates on behalf of local government for effective EPR programs. RDKS staff also regularly engage in discussions with stewardship agencies to discuss how access to their programs can be improved in the RDKS.

4.2.4 Consolidation, Processing and Marketing of Recyclables

Do Your Part Recycling operates a facility to consolidate, process and transfer recyclables from both the residential and ICI sectors. Do Your Part Recycling receives recyclables from residential curbside

collection programs operated by the City of Terrace (through the Recycle BC program) and the RDKS, private collection from residential and ICI properties, and self-hauled recyclables from residential and ICI customers. Materials covered by the Recycle BC program are kept separate from other materials.

4.3 Composting

This section focuses on the Terrace Service Area since there are no composting facilities or accompanying organics collection programs in the Hazelton and Highway 37 North Service Area.

4.3.1 Collection of Organics

The RDKS offers curbside organics collection to residents in the Terrace Service Area who live outside the City of Terrace. The City of Terrace offers curbside organics collection to its residential waste collection customers. Both systems collect mixed organics every week. The City of Terrace also operates a separate collection system for clean yard waste; that collection service is offered weekly from spring to fall.

Collection of organic waste from ICI properties and multi-family buildings is managed privately. Owners or operators of ICI facilities and multi-family buildings are responsible for ensuring their garbage does not contain organics. Private collection contractors collect source-separated organics. For properties that generate very small quantities of organic waste, the preferred solution may be for employees to take their organics home with them and place them in their curbside collection container.

The organic materials collected include cooked and uncooked foods, food soiled paper and yard and garden waste. Organics are marshalled at the Thornhill Transfer Station and hauled to the composting facility at Forceman Ridge.

4.3.2 Composting at the Forceman Ridge Waste Management Facility

The composting facility at the Forceman Ridge Waste Management Facility uses the in-vessel Gore™ cover system. It is capable of processing 4,000 tonnes of organic material per year and producing a Class A finished product. Active piles are housed inside a MegaDome™ structure, and additional curing bays are located outside.

The facility processes organic waste from residential customers in the City of Terrace and RDKS rural collection service area, the ICI sector in the Terrace Service Area, and some industrial work camps. When the organics are received at the facility, they are mixed with materials such as wood chips and branches to achieve ideal ratios of carbon to nitrogen. As each compost heap is built, it is blanketed with a Gore™ cover to keep in moisture, odor and heat. Probes send temperature and moisture information from the compost heap to a computer system that controls airflow in the heaps. Facility operators adjust and turn piles periodically. It takes about 8 weeks to create the finished product.

The Class A compost produced will initially be used in the closure process of the Thornhill Landfill. Eventually it will be used as closure cover for the landfill at the Forceman Ridge Waste Management Facility. Some compost may also be made available to the community for use on community gardens or parks.

4.3.3 City of Terrace Yard Waste Composting

The City of Terrace operates a yard waste composting facility at its public works yard. This facility composts yard waste only (e.g. grass clippings, leaves, smaller twigs,) in windrows that are turned

periodically with machinery. The yard waste is collected from residential properties weekly on a seasonal basis; yard waste must be placed in kraft paper bags and bundles. Since the feedstock is not closely monitored, the quality of the compost is unknown and it is not recommended for use on edible produce. This compost is used by the City in parks and recreation sites and other purposes, and can also be used by the public on lawns.

4.3.4 District of Kitimat Yard Waste Composting

Yard waste (e.g. grass clippings, leaves, smaller twigs,) can be dropped-off at the District of Kitimat landfill for composting. Yard waste is shaped into windrows and turned periodically using machinery. Since the feedstock is not closely monitored, the quality of the compost is unknown and it is not recommended for use on edible produce. Compost can be used by the public on lawns, and by the District of Kitimat as cover for capping Phase 1 of the landfill.

4.4 Recovery

There are no energy recovery facilities in the RDKS.

4.5 Residuals Management

4.5.1 Municipal Waste Collection

The City of Terrace, District of Stewart, Village of Hazelton, and District of New Hazelton provide their residents with curbside collection of garbage.¹⁴ The RDKS provides curbside collection of garbage for residents in most portions of Electoral Areas C and E. Collection in Terrace, Electoral Areas C and E and the District of New Hazelton is biweekly (alternating with recycling). Collection in the District of Stewart and Village of Hazelton is weekly. Most First Nations communities also provide curbside collection of garbage to their residents.

The City of Terrace adopted an automated collection system in 2016. All households are now equipped with 3 carts: one each for garbage, recycling and organics. The garbage and recycling carts have the capacity of 240 liters while the organics carts are 120 liters.

All other programs use manual collection.

4.5.2 Transfer Stations

Once the 1995 SWMP is fully implemented, there will be one transfer station in the Terrace Service Area (Thornhill) and two RDKS transfer stations in the Hazelton and Highway 37 North Service Area (Stewart and Kitwanga). The Stewart Transfer Station is not yet constructed; it is expected to start operations in 2019. A transfer station is also being considered as an option for Telegraph Creek, located in the Hazelton and Highway 37 North Service Area.

The Thornhill Transfer Station opened in November 2016 adjacent to the former Thornhill Landfill. The Thornhill Transfer Station replaces both the Terrace Landfill and the Thornhill Landfill. The Terrace Landfill is no longer accepting waste and the closure design is pending. The Thornhill Landfill is now capped with clay, and vegetation of the surface will be completed over the next year. The Thornhill Transfer Station accepts garbage, construction and demolition waste (loads of 5m³ or less), land clearing waste (loads of 5m³ or less), scrap metal, organic materials, and animal carcasses (loads of 50kg or less).

¹⁴ Collection in the District of Stewart will be changing as the Districts joins the Hazelton and Highway 37 North Service Area.

Large loads of garbage are directed to the tipping building, while large loads of organic materials are directed to the lidded organics bin. The transfer station also includes an area called the Z-wall, which is the public drop off area for depositing smaller quantities of garbage, organics, metal and white goods, clean wood waste, and demolition material. The facility is equipped with weigh scales and charges tipping fees for all loads other than residential collection vehicles operated by the City of Terrace and the RDKS's collection contractor. Garbage, construction and demolition waste, land clearing waste and animal carcasses are all charged \$110.00 per tonne. Metal is charged \$55.00 per tonne and organic materials are charged \$99.00 per tonne. There is a minimum charge of \$10 per load for small loads; over 91kg, the regular rate per tonne applies. Waste is hauled from the transfer station to the Forceman Ridge Waste Management Facility. Consolidating loads at Thornhill the transfer station reduces travel time and traffic to the Forceman Ridge Waste Management Facility by 90%.

The Kitwanga Transfer Station, established in 2017, accepts garbage, loads of 30m³ or less of construction and demolition waste and land clearing waste, scrap metal, cardboard and paper products originating from commercial premises, packaging and paper products from residential premises, and tires. Garbage, construction and demolition waste, and land clearing waste are transferred to the Hazelton Waste Management Facility. No tipping fees are charged at this time, although volume-based fees may be introduced in the future.

The Stewart Transfer Station will accept garbage, loads of 30m³ or less of construction and demolition waste and land clearing waste, and scrap metal. Tipping fees will likely be introduced, although the following types of loads will be exempt: garbage from residential premises, loads of 5m³ or less of garbage or cardboard and paper products from commercial premises, and loads of 5m³ or less of construction and demolition waste or land clearing waste. Tipping fees will be volume-based. Waste materials collected at the transfer station will be transferred to the Meziadin Landfill for disposal. A Recycling Diversion Center for collection of EPR materials will continue to be operated at the Stewart Transfer Station.

Telegraph Creek is currently working to determine the optimal method for waste management in the community. If a transfer station is built, waste will be sent to the Dease Lake landfill.

4.5.3 Landfills

With the implementation of the 1995 SWMP, there are five active landfills in the RDKS that are owned by the RDKS, and three landfills owned by other entities.

The five landfills owned by the RDKS are the Forceman Ridge Waste Management Facility, the Hazelton Waste Management Facility, the Iskut Landfill, the Meziadin Landfill and the Rosswood Landfill. Each landfill is intended to serve the residents in the immediate geographic area.

Each site is subject to the provincial Landfill Criteria for Municipal Solid Waste as well as site-specific stipulations set forth in its Operational Certificate issued by BC Ministry of Environment. These include common requirements such as an electrified wildlife exclusion fence to keep bears and other animals from gaining access to the site, and daily, weekly and monthly tasks related to care and control of the site, signage requirements and more.

The RDKS oversees each of its waste management facilities and contracts the operations of each site.

Landfills not owned or operated by the RDKS include the District of Kitimat landfill, the Dease Lake Landfill and the New Aiyansh Landfill. If Telegraph Creek chooses to build a new landfill, that facility will also not be owned by the RDKS.

4.5.3.1 Forceman Ridge Waste Management Facility Landfill

The Forceman Ridge Waste Management Facility opened as a regional waste management facility in November 2016. It serves as the primary location for waste processing and disposal in the Terrace area. The site was selected after exhaustive investigations to ensure the facility could co-exist well with the surrounding environment.

The site is only accessible to contracted operations personnel, RDKS personnel, septage haulers and haulers with loads that have been approved through the Controlled Waste application and permitting process.

The Forceman Ridge Waste Management Facility consists of a compost facility, septage receiving facility, an engineered landfill, and a 5-stage leachate collection and treatment system (including a phytoremediation area).

The engineered landfill is lined with bentonite clay and a geo-synthetic High-Density Polyethylene (HDPE) composite liner with integrated leachate detection systems. This robust system was built as a direct result of stakeholder engagement and feedback, and increases environmental protection compared to simpler systems.

Rather than using soil or gravel for daily cover, an alternative daily cover system called the Revelstoke Iron Grizzly (RIG) (large steel plates) is used. This saves air space, extends the life of the landfill, reduces bird attraction and wind-blown litter, and limits exposure to precipitation (which reduces leachate generation). The landfill will be filled in phases and was designed to last a minimum of 100 years.

4.5.3.2 Rosswood Landfill

The Rosswood Landfill is located north of Terrace on the Kalum Lake Road and serves the residents of the Rosswood community (defined as the area within a 28.0 km radius from the site). A 25-year Operation Plan was completed in 1999. This landfill uses natural attenuation. This landfill falls within the Terrace Service Area, and as such is covered by the Kitimat-Stikine Terrace Area Waste Management Facility Regulation Bylaw. The facility accepts garbage, loads of 5m³ or less of construction and demolition waste and land clearing waste, metal, and loads of 50 kg or less of animal carcasses. No tipping fees are charged at this facility, and disposal restrictions are not currently enforced as there are no viable alternatives. The site has an estimated lifespan of 20 years or more under current practices.

4.5.3.3 Hazelton Waste Management Facility

Phase 2 of the Hazelton Landfill is was completed in 2017, and includes a 4-stage leachate collection and treatment system, with phytoremediation area. The facility receives refuse from the Hazelton community and materials from the Kitwanga Transfer Station. The landfill is unlined as the soils on site meet current landfill criteria.

4.5.3.4 Iskut Landfill

The Iskut Landfill is relatively small, and services both on-reserve and off-reserve residents of the Iskut area. It is a natural attenuation site. The site is fenced and is accessible only when a site attendant is present.

4.5.3.5 Meziadin Landfill

The Meziadin Landfill was sited as a result of the 1995 SWMP. It was commissioned in 2001 and designed to accommodate the waste from the District of Stewart. The current cell is equipped with leachate collection and treatment. In addition, the same alternative daily cover system (RIG plates) used at the Forceman Ridge Waste Management was introduced in 2017.

The Meziadin Landfill also receives waste from some industrial camps, conditional on the segregation of organics, paper and cardboard. Tipping fees are charged to these industrial users. Tipping fees will also be introduced at the Meziadin landfill for other users, with the same rate and exemptions as the other facilities in the Hazelton and Highway 37 North Service Area. These fees are expected to be implemented in 2019.

4.5.3.6 District of Kitimat Landfill

The District of Kitimat owns its own landfill and contracts landfill operations. The Kitimat Landfill is located approximately 5km north of the city, between Highway 37 and Hirsch Creek. The site is subject to an Operation Certificate issued by BC Ministry of Environment. It is not lined, and has no leachate collection or treatment systems. The site is fenced and is covered intermittently. The landfill is expected to reach capacity in 2047, if Kitimat experiences a relatively slow rate of growth and the current diversion rate is maintained.

The landfill accepts most materials for burial. Automobile bodies, scrap metal (including white goods), propane tanks, car tires and automotive batteries are collected separately at the landfill for recycling. Untampered wood is also collected separately and is eventually burned. Yard waste can be dropped off at the landfill for composting.

The District of Kitimat does not charge tipping fees on self-hauled residential waste. Modest tipping fees are charged on commercial loads. Those fees are volume based (e.g. a load between 15 and 30 cubic yards will be charged \$50.00).

4.5.3.7 Dease Lake Landfill

The Dease Lake Landfill is owned by the Ministry of Transportation and Infrastructure (MOTI) and operated by a private contractor, with support from the local highway contractor. The Dease Lake Landfill receives waste from the surrounding community and may receive waste from Telegraph Creek if a transfer station is built.

The Dease Lake landfill is fenced and gated, but is not lined. A development and fill plan is required.

4.5.3.8 Telegraph Creek Landfill

This landfill is expected to close and be replaced by another landfill or a transfer station. Residents continue to dispose of waste at the Telegraph Creek Landfill.

4.5.3.9 New Aiyansh Landfill

The New Aiyansh landfill serves the Nass Valley First Nations communities, as well as some off-reserve residents of RDKS. The RDKS contributes cost sharing funding to the Nisga'a Lisims government for off-reserve users.

4.5.4 Controlled Waste

A Controlled Waste Protocol has been developed to manage the disposal of controlled waste (materials which require special handling and disposal practices to avoid health hazards, nuisances or environmental pollution). The protocol is in effect in the Terrace Service Area and the Hazelton and Highway 37 North Service Area in 2017.

A Controlled Waste Permit Application must be submitted to RDKS Solid Waste Services personnel for approval and issuance of a Controlled Waste permit prior to disposal of Controlled Waste. The permit may include terms and conditions to ensure compliance with the bylaws, the Operational Certificate for the relevant landfill, and any other applicable law or permit. Once a Controlled Waste Permit is issued, an appointment for disposal must be made a minimum of twenty-four hours prior to the disposal. The applicable Controlled Waste Permit must be presented to facility operators upon arrival at the Waste Management Facility. Controlled Waste must be inspected and accepted by site personnel prior to being deposited, and loads of Controlled Waste must be of one type only and from no more than one source unless the Controlled Waste Permit specifies otherwise. Controlled Waste must be kept separate from any other type of Solid Waste.

Controlled Wastes are accepted at the Forceman Ridge Waste Management Facility Landfill, the Meziadin Landfill and the Hazelton Waste Management Facility. A sub-set of Controlled Wastes is accepted at the Iskut Landfill, Stewart Landfill (future transfer station), and Kitwanga Transfer Station. No controlled wastes are accepted the Rosswood Landfill or Thornhill Transfer Station.

4.5.5 Prohibited Waste

The following materials are not accepted for disposal in the Terrace Service Area:

1. Class “A” Prohibited Waste:
 - a. Hazardous Waste;
 - b. Radioactive waste;
 - c. Slaughter Waste;
 - d. Waste that is on fire or smoldering, or any waste material capable of starting fires, and highly flammable material;
 - e. Explosive or highly combustible materials;
 - f. Other Sewage Waste.
2. Class “B” Prohibited Waste:
 - a. Auto hulks;
 - b. Broken concrete 300 millimetres in diameter or greater;
 - c. Broken Asphalt 300 millimetres in diameter or greater.
3. Class “C” Prohibited Waste:
 - a. Extended Producer Responsibility Materials;
 - b. Tires, whether or not they fall within the definition of “Extended Producer Responsibility materials”;
 - c. Cardboard and Paper Products, whether or not they fall within the definition of “Extended Producer Responsibility Materials”.

The following materials are not accepted for disposal in the Hazelton and Highway 37 North Service Area:

4. Class “A” Prohibited Waste:
 - a. Hazardous Waste;
 - b. Radioactive waste;
 - c. Slaughter Waste;
 - d. Waste that is on fire or smoldering, or any waste material capable of starting fires, and highly flammable material;
 - e. Explosive or highly combustible materials;
 - f. Other Sewage Waste;
 - g. Waste that is not Municipal Solid Waste.
5. Class “B” Prohibited Waste:
 - a. Auto hulks;
 - b. Broken concrete 300 millimetres in diameter or greater;
 - c. Broken Asphalt 300 millimetres in diameter or greater.
6. Class “C” Prohibited Waste:
 - a. Extended Producer Responsibility Materials unless classified as a Restricted Waste;
 - b. Organic Materials that originate from Industrial Work Camps or from outside the Service Area;
 - c. Tires that do not fall within the definition of “Extended Producer Responsibility Materials”.

The District of Kitimat Landfill does not allow the following wastes to be buried

1. Explosives;
2. Raw sewage;
3. Highly flammable materials;
4. Dead animals;
5. Hot ashes;
6. Herbicides;
7. Pesticides;
8. Poisons;
9. Waste oil (excluding cooking oil);
10. Toxic wastes;
11. Car tires;
12. Batteries; and
13. Cardboard originating from a Commercial Premises or Residential Premises.

There are no disposal restrictions at the Dease Lake Landfill or the New Aiyansh Landfill.

4.5.6 Illegal Dumping Prevention and Clean Up

The provincially-run BC Conservation Officer Service (CO Service) is mandated to enforce and manage illegal dumping. Various prevention programs are used to deter this behavior ranging from ‘shaming’ programs, workshops, use of cameras and enforcement. The CO Service is responsible for a number of

programs over large geographic areas and often note that insufficient personnel are a barrier to addressing illegal dumping.

The RDKS is currently participating in a Terrace area inter-agency working group to identify solutions and mitigations. In addition to the RDKS, the group includes the BC CO Service, MOTI, the local MOTI Contractor (Nechako Northcoast), Natural Resource Officers, and the Kitsumkalum Resource Officer. The RCMP have also been invited to participate.

The RDKS recognizes efforts made by individuals and groups who clean up litter along roadways or illegal dumping sites. The RDKS reimburses tipping fees for disposal of illegally dumped waste material collected by non-profit organizations. Groups must make a request to the Board in advance of the collection event. The RDKS will also provide bag tags for disposal of illegally dumped material to individuals that provide photos of the site(s) before and after clean up.

4.6 Education and Outreach

Education and outreach play a key role in waste reduction, diversion, and proper disposal of residual waste. The RDKS has made a wide range of waste management information available on its website, including information sheets on each solid waste facility, composting information, how-to guides for ICI recycling and organics collection, and links to various waste management planning initiatives. Staff have been and will continue to be available to provide hands-on guidance, training and conduct community-wide workshops.

The RDKS and its member municipalities also provide information on collection schedules.

The RDKS launched and manages a smart phone app and website plug-in (Recycle Coach app of the “MyWaste™” platform) to provide local information about the recycling program and drop-off locations. Through the app, residents can receive reminders about their collection schedules. The app is also capable of sending out ‘pushed information’ for more immediate or urgent news such as a broken-down collection vehicle, weather-influenced road conditions that affect regular scheduling, reminders of statutory holidays that affect schedules, or special diversion events. Member municipalities can arrange to share addressing information with the RDKS to have their communities included. The service is currently provided to customers in the rural part of the Terrace Service Area, the City of Terrace and the District of New Hazelton.

4.7 Bylaws

This section describes the current regional and municipal bylaws related to solid waste management.

4.7.1 Regional District of Kitimat-Stikine

Hazeltons and Stewart Area Solid Waste and Recyclable Material Management Service Establishing Bylaw No. 657, 2015

This bylaw establishes the Hazeltons and Stewart Area Solid Waste and Recyclable Material Management Service.

Kitimat-Stikine Terrace Area Solid Waste and Recyclable Material Management Service Establishment Bylaw No. 658, 2015

This bylaw establishes the service of solid waste and recyclable material management for Electoral Areas C and E of the Regional District of Kitimat-Stikine and the City of Terrace.

Kitimat-Stikine Bylaw No. 330 and Bylaw No. 581 Repeal Bylaw No. 659, 2015

This bylaw repeals the Garbage Disposal Local Service Establishment Bylaw No. 330, 1992 and Solid Waste and Recyclable Material Management Service Establishment Amendment Bylaw No. 581, 2010, because they were replaced by the Terrace Area Solid Waste and Recyclable Material Management Service Establishing Bylaw No. 658, 2015, and Hazeltons and Stewart Area Solid Waste and Recyclable Material Management Service Establishing Bylaw No. 657, 2015. This bylaw simply repeals the older bylaws.

Kitimat-Stikine Terrace Area Cardboard and Paper Products Disposal Regulation and Fee Establishment Bylaw No. 670, 2016

This bylaw bans the disposal of cardboard and paper products at the Thornhill Landfill and City of Terrace Landfill, and establishes fees for depositing cardboard and paper products at designated disposal sites. This bylaw was enacted to allow cardboard and paper products from the ICI sector to be directed to a Designated Recycling Facility prior to the effective date of Bylaw 671. Once Bylaw 671 was effective, Bylaw 670 was no longer necessary.

Kitimat-Stikine Terrace Area Waste Management Facility Regulation Bylaw No. 671, 2016

This bylaw outlines the operations of waste management facilities in the Terrace Service Area, including facility use regulations, acceptable types of waste, and payment terms for use of the facilities.

Kitimat-Stikine Terrace Area Solid Waste and Recycling Collection Service Rates and Regulations Bylaw No. 674, 2016

This bylaw describes the collection service provided by the RDKS in the Terrace Service Area, including the types of properties included in the service, collection frequency, types of materials collected, handling of waste and containers, the container assistance program, the medical waste exemption programs, and the cost.

Kitimat-Stikine Terrace Area Waste Management Facility Regulation Amendment Bylaw No. 682, 2016

This bylaw amends bylaw 671 by prohibiting anything other than cardboard and paper products being taken to the Designated Recycling Facility (Schedule H) and adding a penalty for doing so (Schedule G). The amendment also replaces the tipping fee schedule with one based on weight (rather than volume) for the Forceman Ridge Waste Management Facility.

Kitimat-Stikine Hazelton and Highway 37 North Area Waste Management Facility Regulation Bylaw No. 688, 2017

This bylaw will establish the fees and regulations for the deposit of waste at the Regional District's Hazelton and Highway 37 North Area Waste Management Facilities. These facilities include the Hazelton Waste Management Facility, the Iskut Landfill, the Kitwanga Transfer Station, the Meziadin Landfill, and the Stewart Transfer Station. This bylaw is similar to Bylaw 671, in that it regulates facility access, acceptable types of waste, and payment terms for use of the facilities. This bylaw received three readings by the RDKS Board in March 2017, and is awaiting approval by the Ministry of Environment before it can be adopted by the RDKS Board.

4.7.2 City of Terrace

City of Terrace Bylaw No. 2130 – 2017 Bylaw of the City of Terrace to Establish and Maintain a System for Collection and Disposal of Solid Waste

This bylaw describes the collection service provided by the City of Terrace to residential properties,

including refuse, recycling, organics, and yard waste. The bylaw describes the carts that the City provided to each eligible residential unit (240 litre refuse cart, a 240 litre recycling cart, and a 120 litre organics cart), how carts are to be positioned and how wastes are to be prepared, frequency of collection, the medical waste exemption program, charges, penalties, and the responsibilities of owners of commercial and multi-family premises.

4.7.3 District of Kitimat

Kitimat Municipal Code Part 7 Division 2: Refuse Control

This section of Kitimat's Municipal Code covers the collection service provided by the District of Kitimat and use of the District of Kitimat's disposal site, including fees and prohibited materials.

4.7.4 Village of Hazelton

Garbage Collection Regulation and Rates Bylaw No. 433, 2006

This bylaw describes the collection service provided by the Village of Hazelton. The service is provided weekly to residential and non-residential properties.

Garbage Collection Regulation and Rates Amendment Bylaw No. 465, 2014

This bylaw amends the rates charged for garbage collection.

4.7.5 District of New Hazelton

District of New Hazelton Bylaw No. 329, 2016

This bylaw describes the garbage and recycling collection service provided by the District of New Hazelton to residential properties within its boundaries. The bylaw specifies collection frequency, types of materials collected, handling of waste and containers, and the cost.

4.7.6 District of Stewart

District of Stewart Solid Waste Bylaw No. 875, 2015

This bylaw establishes the solid waste collection service in the District of Stewart and regulates, prohibits and imposes requirements in relation to that service. Collection is provided to single family dwellings/duplexes, multi-family dwellings and businesses. The bylaw also describes how the salvaging program works at the landfill.

4.8 Provincial Policies and Legislation

Solid waste management is regulated by the Province of British Columbia. Some legislation assigns responsibility for different aspects of waste management to other entities (e.g. regional districts and product stewardship organizations). Regulations describe how waste management facilities are required to operate. The legislation and regulations are described below.

4.8.1 Environmental Management Act

The *Environmental Management Act* is the key piece of legislation that governs the management of waste in British Columbia. The act provides the authority for waste to be introduced into the environment in a manner that protects human health and the environment (e.g. landfilling with appropriate controls). The act enables the use of permits, regulations and codes of practice to authorize discharges to the environment and enforcement options to encourage compliance.

4.8.2 Recycling Regulation

This regulation is the foundation for British Columbia's EPR programs. It requires producers of designated products to develop programs for the end-of-life collection, recovery and management of materials, and to consult stakeholders when developing those programs. The list of designated products currently includes most beverage containers, most household hazardous waste, and household goods powered by electricity and batteries.

4.8.3 Open Burning Smoke Control Regulation

The intent of the regulation is to reduce smoke emissions and impacts without requiring an Air Emission Permit. This regulation applies to fires that may be lit for purposes such as land clearing, silviculture, forestry, wildlife habitat enhancement, and domestic range improvement. The regulation outlines when and how open burning can occur. This regulation is currently under review.

4.8.4 Organic Matter Recycling Regulation

This regulation governs the production of compost, the quality of compost and the land application of certain types of organic matter (including compost). It provides guidance for compost producers on process requirements to protect the quality of soil and drinking water. This regulation is currently under review.

4.8.5 Landfill Criteria for Municipal Solid Waste

Lateral and vertical expansions of existing landfills and new landfills designed and constructed for the disposal of MSW are subject to the Landfill Criteria for Municipal Solid Waste. These criteria are currently under review.

The criteria are supplemented by the Guidelines for Environmental Monitoring at Municipal Solid Waste Landfills. The guidelines are intended to assist landfill owners and operators design and implement an environmental monitoring program for groundwater and surface water as required by the Landfill Criteria for Municipal Solid Waste.

4.8.6 Landfill Gas Management Regulation

The Landfill Gas Management Regulation applies to all regulated landfill sites that:

- Have 100,000 tonnes or more of municipal solid waste in place, or
- Receive 10,000 or more tonnes of municipal solid waste for disposal into the landfill site in any calendar year after 2008.

This regulation requires owners of applicable landfills to conduct an initial landfill gas (LFG) generation assessment. Based on the outcome of that assessment, a landfill gas management design plan may be required for the landfill site. Once the design plan is accepted by the Province, the owner of the landfill is required to install the appropriate landfill gas management facilities.

5 External trends affecting solid waste management

5.1 Expanded Extended Producer Responsibility Programs

The Canada-Wide Action Plan for Extended Producer Responsibility was published in 1999. The plan included two phases for increasing the number of products covered by EPR programs. The products covered by Phase 1 are now all covered by EPR programs in BC. The products in Phase 2 are not yet covered by EPR programs in BC. Phase 2 products include construction and demolition materials, furniture, textiles, and carpet. The BC government service plan¹⁵ had a target of having 95% of the sub-categories of materials in the action plan covered by industry-led recycling programs by 2017/2018. While the target was not achieved in the specified timeframe, the RDKS should remain aware of the potential for those material streams to be covered by EPR programs. EPR programs could provide funding to the RDKS for managing those products, or could result in a significant decrease in the quantity of material brought to RDKS facilities (which in turn would reduce tipping fee revenue in the Terrace Service Area). A study conducted for Metro Vancouver on the economic and environmental impacts of EPR programs¹⁶ was unable to comment on the most likely funding mechanisms for EPR programs for Phase 2 products, and to date the Ministry of Environment has not released any details on the plans for Phase 2 products.

5.2 Markets for Recyclables

The RDKS is relatively well protected from market risk associated with selling recyclables. The RDKS pays for the processing and marketing of recyclables collected from residential properties in Electoral Area C, and the net cost of those services will rise if market prices drop. The RDKS pays the recycling processor a rate per tonne of cardboard and paper received from the ICI sector, and receives 50% of the revenue from the sale of the material; if the market drops, the share of revenue will decline, and the processor may seek to renegotiate the processing fee.

5.3 Rate of Growth in the RDKS

The RDKS will be home to major industrial projects over the duration of the new SWMP. Major projects may impact the quantity of waste generated (i.e., construction waste and camp-generated waste).

¹⁵ <http://www.bcbudget.gov.bc.ca/2014/sp/pdf/ministry/env.pdf>

¹⁶ <http://www.metrovancouver.org/services/solid-waste/SolidWastePublications/AssesmentEconEnvImpactsEPRPrograms-Feb2014.pdf>

6 Cost Recovery Model

Each service area operates with its own cost recovery model.

In the Terrace Service Area, the goal is for costs to be covered evenly by taxes and tipping fees. Costs are allocated as show in Table 6. Based on data from the first full year of operations, tipping fee revenue is less than anticipated.

Table 6. Terrace Service Area Refuse Function Cost Model (2017 Data)

Total Cost of the Terrace Area Refuse Function	\$2,782,000
Anticipated tipping fee revenue (50% of total)	\$1,391,000
Requisition (50% of total)	\$1,391,000
Portion of requisition allocated to participating jurisdictions based on their population	\$695,500
Portion of requisition allocated to participating jurisdictions based on the assessed value of improvements in the jurisdiction	\$695,500

The above model applies to the City of Terrace, Electoral Area C and Electoral Area E. The taxes paid by households and commercial premises in those jurisdictions include a line item for the refuse function. Kitselas and Kitsumkalum are also part of the function, and pay solely on the basis of their population; those funds are considered contributions to the tipping fee portion of the cost, rather than the requisition portion.

In the Hazelton and Highway 37 North Service Area, the goal is for costs to be primarily covered by taxes, with tipping fees used to cover the cost of managing unusually large loads of garbage. Taxes are calculated based on the population of each participating jurisdiction and on the assessed value of both land and improvements (except for First Nations, whose contribution is based on population only). Participating jurisdictions include the District of New Hazelton, the Village of Hazelton, the District of Stewart, and Electoral Areas A, B and D. Participating First Nations are: Gitsegukla, Kitwangak, Gitanyow, Gitanmaax, Hagwilget, Moricetown, Kispiox and Glen Vowel.

The 2018 requisition amount in the Hazelton and Highway 37 North Service Area is \$1.176 million, and the tipping fees are budgeted to be \$375,000. A \$1,176,825 tax requisition would result in a net residential tax rate in participating jurisdictions in the order of \$0.62/\$1000 assessed value. The total contribution from First Nations would be \$474,090.

7 Assessment

The assessment of the current system should address the following question:

- Has the existing plan been implemented as expected?
- Is the region on track to meet the targets it set previously?
- Are there information gaps to be filled?
- What are the strengths of the existing system (what is working well and should be retained / enhanced in the future)?
- What are the areas for improvement in the existing system (what is not working well and needs improvement or a new approach)?

A report completed in January 2017 and Table 2 of the Step 1 Memo both document the implementation of the 1995 SWMP. The actions of the 1995 SWMP are largely complete and/or ongoing.

The target of the 1995 SWMP was to achieve a 33% diversion rate by the year 2000. Based on available data, this was not achieved due to the time required to site and develop the Forceman Ridge Waste Management Facility and the accompanying diversion programs. Preliminary data from the new system in the Terrace Service Area indicates that the diversion rate in that area is now approaching the target.

There are information gaps to be filled, and systems are now in place to prevent those gaps in the future.

Table 7 provides a preliminary assessment of the strengths and weaknesses of the current system. The assessment was conducted in collaboration with the Plan Monitoring Advisory Committee and Administration.

Table 7. RDKS System Strengths and Weaknesses

Component	Specific Weaknesses	Specific Strengths	Overall Assessment
Data and Tracking	There is incomplete data about the amount of waste disposed and diverted.	Scales at the Thornhill Transfer Station, Forceman Ridge Waste Management Facility and the Designated Recycling Facility will provide better data in the Terrace Service Area. Annual surveys of the landfills in the Hazelton and Highway 37 North Service Area will permit the volume of waste disposed to be estimated (tonnage will be calculated using a conversion factor).	New infrastructure and programs should address historic weakness in statistical data and reporting.
Waste Reduction	The overall amount of waste thrown away has likely not decreased (although it is difficult to know for certain without better data).	Tipping fees are now being charged on all waste streams (garbage, recyclables and organics) in the Terrace Service Area, which should provide an incentive to reduce the amount of waste produced. Tipping fees may be introduced in the Hazelton and Highway 37 North Service Area on large loads.	Ongoing education and consistent application of tipping fees should contribute to waste reduction.

Engagement	Residents and businesses may be “burnt out” with engagement on solid waste	Active PMAC and good engagement during implementation of 1995 SWMP.	RDKS is committed to engagement during new plan development.
Component	Specific Weaknesses	Specific Strengths	Overall Assessment
Waste collection	Not all households receive curbside waste collection service	Good uptake of RDKS collection service in greater Terrace area. Collections and processing infrastructure has improved to meet needs.	Need to determine willingness to pay for collection in other areas of RDKS.
Waste Diversion	The calculated diversion rate is very low. There is a heavy dependence on a single recycling facility in the Terrace area; if this facility ceases operation, diversion rates would be affected.	New disposal restrictions should result in higher diversion rates. The RDKS pays the recycling processor and shares revenue, which reduces risk to the processor and should provide more stability. RDKS has installed diversion infrastructure in areas not serviced by Recycle BC.	Disposal restrictions need to be enforced consistently at the curb and at disposal facilities for disposal restrictions to be effective at increasing the diversion rate. RDKS needs to continue to lobby Recycle BC for inclusion in program.
Residuals Management	Final plans needed for Telegraph Creek and Stewart. Contractors at new facilities need to become more reliable.	Replacement of two older landfills with one state-of-the-art facility in the Terrace Service Area, and upgrades to the Hazelton Waste Management Facility represent major improvements in residuals management.	Hours of operation of all facilities should be closely monitored to ensure that open hours match the desired usage times as closely as possible. The final closure of the Thornhill, Terrace, Kitwanga, and Stewart landfills needs to be completed.
Illegal dumping	Incidence of illegal dumping have increased.	Working group has convened.	Need a comprehensive strategy
Finance		New tipping fee schedule in the Terrace Service Area targets 50% of funding to come from tipping fees.	A plan needs to be developed for the Terrace Service Area that addresses what to do if the tipping fees exceed or fall short of projections.

Appendix 4 – Draft Consultation Strategy for the Development of a Solid Waste Management Plan

Regional District of Kitimat-Stikine

DRAFT

Consultation Strategy for the Development of a Solid Waste Management Plan

Rev. 2.0

Updated February 1, 2019

Prepared By:

Sarah Wilmot in collaboration with the Regional District of Kitimat-Stikine



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Appendices

Appendix A – Draft Step 2 Survey Questions

Appendix B – Draft Step 4 Survey Questions

Summary

The Regional District of Kitimat-Stikine (RDKS) is developing a new Solid Waste Management Plan (SWMP). Consultation with identified stakeholders (including organizations, agencies and individuals with a special interest in waste management) and the public will be a key component of developing the new SWMP. This document describes the consultation strategies that the RDKS intends to use. A previous version of the document included the consultation undertaken while preparing for SWMP development, including consultation on the overall strategy, development of branding for the SWMP, engagement with internal RDKS departments, and recruitment for a Public and Technical Advisory Committee (PTAC). Completed consultation is summarized in the beginning of Section 4.

The consultation plan reflects the levels of influence that stakeholders and the public have over the SWMP.

- The RDKS is committed to **collaborating** with PTAC, which has been formed from the existing Plan Monitoring Advisory Committee (PMAC) and new members recruited from stakeholders and the public.
- Stakeholders who are not on PTAC may be **involved** through workshops offered by the RDKS, or may choose to be **consulted** or **informed** through other strategies that require less commitment.
- Members of the public may **collaborate** by joining PTAC, or can be **involved, consulted** or **informed** depending on their personal preferences and time available.

The following subsections describe the completed and planned consultation activities associated with each level of influence. Within each subsection, the activities are listed in chronological order.

Collaborating

- PMAC Meeting to review consultation strategy and revised overall process for SWMP development (complete)
- Board workshop to review overall process for SWMP development and consultation strategy (complete)
- Board meeting to pass a resolution to proceed with SWMP development following draft process (complete)
- Works and Services meet with other departments to discuss their involvement and confirm their support (complete)
- Establish internal review and approval procedures (complete)
- Form PTAC (send letters to stakeholders, post ads/notices for the public) (complete)
- PTAC Meeting 1 – Establishment (complete)
- PTAC Facility Tour (Optional)
- PTAC Meeting 2 – Review and approve consultation plan, discuss SWMP theme of efficiency
- Board workshop on current system strengths and areas for improvement
- PTAC Meeting 3 – Review survey results, discuss guiding principles and goals, review waste reduction and reuse options
- PTAC Meeting 4 – Review recycling options

- PTAC Meeting 5 – Review residual waste management at existing facilities
- PTAC Meeting 6 – Review residual waste management at new facilities and other waste management issues
- PTAC Meeting 7 – Review cost recovery options
- PTAC Meeting 8 – Develop strategies (option packages)
- Board Workshop on preferred strategies
- PTAC Meeting 9 – Review draft plan and consultation details
- PTAC Meeting 10 – Receive consultation report, review summary of planned responses/changes to draft plan as a result of consultation
- PTAC Meeting 11 – Review final plan
- Board Workshop to Review Final Draft Plan (in conjunction with Board Meeting)
- Board Approval of Final Draft Plan

Involving

- Addressed Mail #1 – sent to stakeholders to alert them that the SWMP development process has started, to provide details on the survey, and to offer a presentation/workshop on the current system, strengths, areas for improvement, principles, goals)
- Presentations/Workshops for stakeholders
- Addressed Mail #2 – sent to stakeholders to alert them that the draft SWMP is ready for review, to provide details on the survey, and to offer a presentation/workshop on the draft SWMP
- Presentations/Workshops for stakeholders

Consulting

- Survey on Strengths, Areas for Improvement, Principles, Goals
- Survey on Draft Plan
- Review by Regional Representative of the Ministry of Environment and Climate Change Strategy

Informing

- Establish brand (complete)
- Set up and maintain website and email address (complete)
- Ad #1 – Community awareness of SWMP and upcoming survey
- News Release #1 - Community awareness of SWMP and upcoming survey
- Mailer #1 – Community awareness of draft plan and survey/open houses
- Ad #2 – Community awareness of draft plan and survey/open houses
- News Release #2 – Community awareness of draft plan and survey/open houses
- Open Houses to gather feedback on draft plan

1 Background and Purpose

The Regional District of Kitimat-Stikine (RDKS) developed its first Solid Waste Management Plan in 1995. Numerous services, facilities and programs were developed as a result of the former Plan. A Plan Monitoring Advisory Committee (PMAC) advised on the implementation of the 1995 SWMP.

The RDKS has now begun development of a new SWMP. On January 20, 2017, the Regional District Board authorized “the preparation work to conduct a Solid Waste Management Plan review following the commissioning of the new solid waste facilities in the Hazelton and Highway 37 North Service Area; and, that Administration report back to the Board later in 2017 with a recommended process to conduct the review.” Administration drafted a recommended process, which is documented in the Step 1 memo (available under separate cover from the RDKS). That process was presented to the PMAC for their review and input in August 2017. Minor revisions were made to the process based on feedback from PMAC.

Administration determined that early development of a consultation strategy would support a smooth SWMP development process, and therefore requested that the preliminary high-level plan (which was included as Appendix B in the Step 1 memo) be developed in more detail. An earlier version of this consultation plan (i.e., *Consultation Strategy for the Development of a Solid Waste Management Plan, Rev. 1.1*, October 18, 2017) was the result; it was intended to be read in conjunction with the Step 1 memo and was presented to PMAC and the RDKS Board in November 2017.

Development of the new SWMP is now underway. A Public and Technical Advisory Committee (PTAC) has been established to advise on development of the new SWMP and ongoing implementation of the 1995 SWMP initiatives. The consultation strategy for implementation of the new SWMP has been fine-tuned, and will be presented to PTAC at its second meeting with a recommendation from Administration that the strategy be adopted. PTAC may suggest revisions. Any significant changes from the earlier version will be presented to the Board.

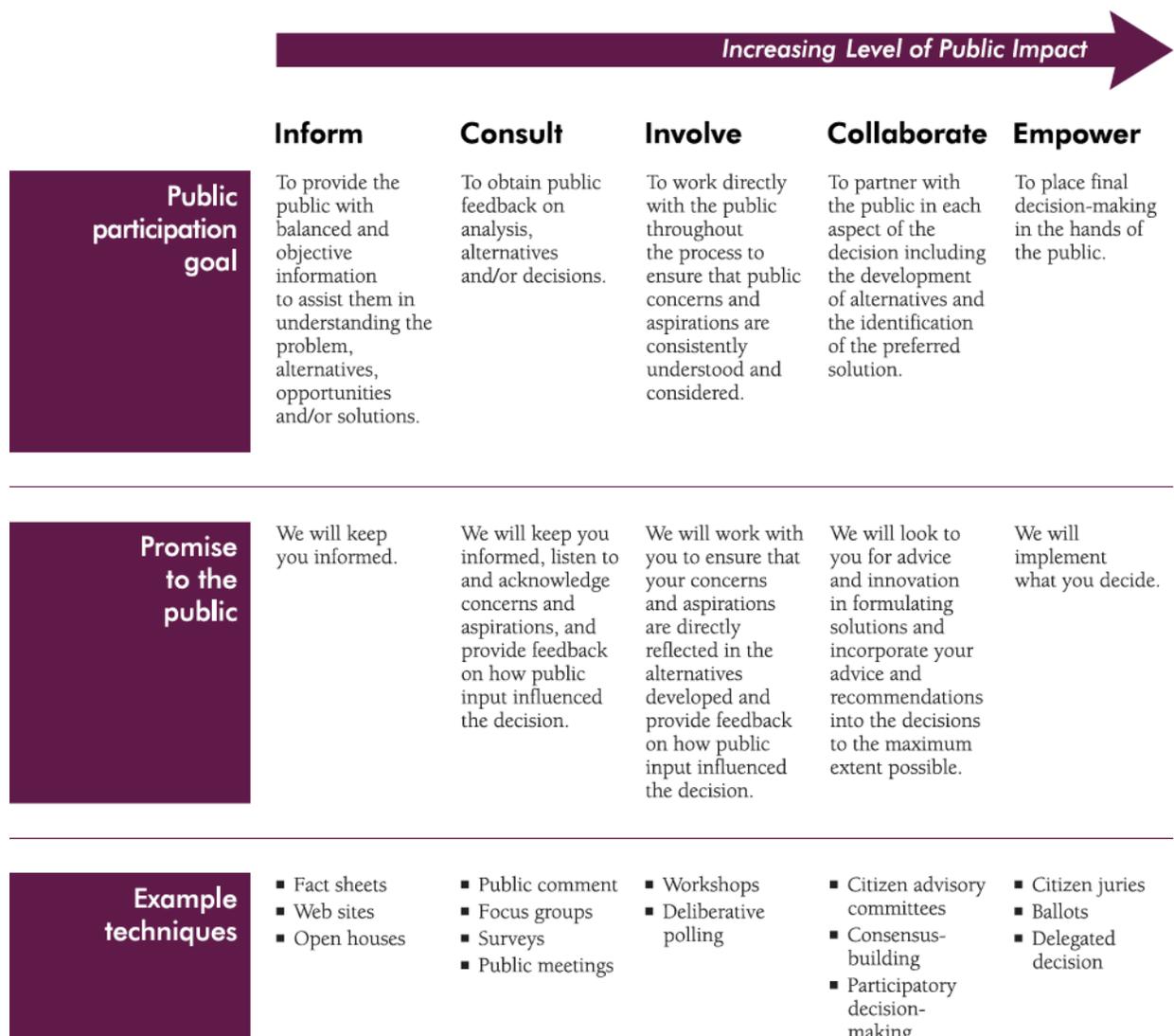
The consultation strategy is intended to be a living document that provides guidelines and samples of draft communication materials. As the SWMP process unfolds, the supporting consultation will follow the intent of the strategy, but specific tactics may be adjusted to meet the needs of the community.

2 Levels of Public Influence

For the purposes of developing a new SWMP, the RDKS has identified a large number of stakeholders, which are referred to as “interested parties” in the [Guide to Solid Waste Management Planning \(2016\)](#) by the Ministry of Environment and Climate Change Strategy. “Interested Parties” are defined in the Guide as “organizations, agencies and individuals with an interest in the planning process. This includes governments (including First Nations), private sector interests, non-government and community organizations, and the public at large”. While the public at large is included in the definition, the Guide indicates that some organizations, agencies and individuals should receive additional notifications and opportunities to be involved in the SWMP development process. Therefore, throughout this document, “stakeholders” is the term used to refer to organizations, agencies and individuals who have a higher level of interest in the process, and “public” is the term used to refer to residents and business owners who will have opportunities to be involved, but may not have the capacity to be as deeply engaged.

It is important to consider how much potential influence on the decision or action can realistically be given to stakeholders and the public. The level of influence given to stakeholders and the public depends on external factors, such as existing bylaws and provincial regulations, as well as internal factors, such as the level of control that the RDKS retains throughout the process. The resources spent on delivering a consultation strategy (time and money) should complement the level of public influence desired. A great deal of time, effort, and resources could be spent on fact sheets, open houses, and websites, but if the goal is to collaborate with the public, as opposed to inform, those resources would be better spent on recruiting, maintaining and working with a representative advisory committee.

The graphic below illustrates these ideas on the Public Participation Spectrum, a concept developed by the International Association for Public Participation. The graphic is an example only; not all levels of influence or techniques shown are applicable to the development of the SWMP. In particular, the “empower” level of impact will not be used in the SWMP process.



In the case of developing a new SWMP for the RDKS, there is a provincial requirement to **collaborate** with the PTAC. Direct invitations to participate in PTAC were sent to existing PMAC members and groups that were identified as stakeholders, including member municipalities, First Nation communities, recycling depot operators, private waste haulers, the local health authority and service providers, local industry, educational institutions, grocery and department stores, chambers of commerce, community associations, environmental groups, government agencies and neighboring regional districts. Advertisements inviting the public to join were published in four newspapers and posters were distributed around the region. Stakeholders who do not participate on the PTAC may choose to be engaged at the **involve** level through The Involved Working Group, or may choose to be engaged at the **consult or inform** level of engagement. The public can also participate at the **consult or inform** levels, depending on their personal preferences and time available.

Empower	•Not used in this planning process
Collaborate	•Stakeholders and public can join the PTAC
Involve	•Stakeholders can join the Involved Working Group and request a workshop with the RDKS
Consult	•Stakeholders and the public can provide comments and participate in surveys
Inform	•Stakeholders and the public can access and read meeting notes and presentations on the RDKS website, and can attend open houses

3 Goals and Commitments

The RDKS is committed to engaging with the public at the **inform** and **consult** levels of participation, and to engaging a select group of stakeholders at the **collaborate** level of participation. The RDKS is also committed to engaging stakeholders at the **involve** level of participation on request. These commitments will help the RDKS achieve the following goals:

- Provide information to enable stakeholders and the public to determine how their interests may be affected and decide on their desired level of involvement;
- Use a variety of methods to notify the public and stakeholders of each consultation opportunity;
- Provide time for stakeholders and the public to respond to draft documents;
- Document the proceedings and outcomes from the consultation process and make them available for public review, to demonstrate how the plan addresses input received; and
- Collaborate with member municipalities, First Nations representatives and community associations to deliver consultation.

4 Implementation

This section describes the various consultation and communication elements that will support the SWMP development process. The purpose of each consultation/communication element, its desired outcomes, and the tasks required to complete the elements are listed. Some elements repeat throughout the process, such as PTAC meetings. For those elements, the detailed tasks are not listed each time.

4.1 Step 1

Step 1 is the initiation of the SWMP development process. The consultation tasks in Step 1 are complete, and are documented in this strategy to maintain a record of consultation activities. The consultation tasks in Step 1 were:

- Define the area covered by the plan;
- Assemble background information about the plan area (including current waste management practices);
- Set the scope of work (i.e. confirm that the plan will focus on increasing efficiency and optimizing operations);
- Develop the overall consultation plan;
- Set the project budget;
- Present draft approach to PMAC; receive and incorporate feedback;
- Seek a resolution from the Regional District Board to initiate development of the SWMP following the recommended approach;
- Develop comprehensive list of stakeholders; and
- Notify stakeholders of the upcoming process and invite them to join PTAC.

4.1.1 November 2017 PMAC Meeting

Time was allocated at a regularly scheduled meeting in November 2017 to review an original version of the consultation strategy. The agenda and supporting materials were distributed before the meeting according to usual practice. RDKS Administration facilitated a group discussion to identify concerns and obtain input from PMAC.

After the meeting, the input from PMAC members was incorporated into a revised draft, which was distributed to the PMAC and presented to the RDKS Board.

4.1.2 January 2018 Board meeting

Administration prepared a Board Report summarizing the work done to develop the SWMP process and consultation strategy. The report was presented and authorization was sought to proceed with developing a new SWMP. Authorization was granted in January 2018.

4.1.3 Meet with other departments

Works and Services staff met with senior staff from the Finance and Planning departments to inform them about the SWMP development process and to discuss how they and their staff may support the SWMP. Finance and Planning leaders were given an overview of the approach and descriptions of the opportunities for their staff to contribute to the process.

4.1.4 Establish review and approval procedures

All materials produced during the SWMP process need to be carefully reviewed and approved before being distributed. Administration has established a peer review and senior review system. Materials prepared for public release will be developed by one or more members of the Administration and/or the planning consultant, and subject to peer review. The Manager of Works and Services will provide senior review. This procedure applies to materials such as letters, website copy, reports, advertisements, news releases, mailers, display boards, presentations, and surveys. Select materials (identified by the Manager, Works and Services) may also require approval by the Manager, Works and Services, and/or the Board before distribution.

4.2 Step 2

The tasks in Step 2 are:

- Notify stakeholders of the upcoming SWMP process and invite them to join the Public and Technical Advisory Committee
- Formally establish the Public and Technical Advisory Committee;
- Begin to implement the consultation plan;
- Identify strengths of current system and opportunities for improvement;
- Establish principles and goals; and
- Develop options for waste management.

4.2.1 Establish Brand

A brand was established for the new SWMP early-on in the process, so that the project had a recognizable tagline and logo from the beginning.

RDKS administration reviewed a selection of logos and taglines from other regional districts that had either recently developed SWMP or are in the process of developing their SWMP. Those samples contributed to the development of three options, which were presented to PMAC in on July 18, 2018.

PMAC members in attendance voted on their preferred brand via secret ballot; members not in attendance were given the opportunity to vote via email. The preferred brand selected by PMAC uses the existing RDKS zero-waste logo, with a new slogan of “Love this place. Reduce your waste.” This slogan was originally developed by the Squamish-Lillooet Regional



Love this place.
Reduce your waste.

District. Administration contacted staff at the SLRD to determine if the SLRD had any objections to the RDKS borrowing their slogan. SLRD staff noted that the development of their brand had required substantial resources and referred the decision to the SLRD Board. Approval from SLRD Board was granted on August 29, 2018. The brand was first used on promotional material informing the public of the SWMP and for the recruitment of PTAC.

4.2.2 Set up Website and Email Address

Administration established webpages on the RDKS website for the SWMP and PTAC; the URLs for these pages are: www.rdks.bc.ca/solidwasteplan and www.rdks.bc.ca/PTAC. The Environmental Services Coordinator is responsible for setting up and maintaining the pages. The SWMP page contains an

overview of the SWMP process, a description of how people may be involved, and contains links to supporting materials and reports. The reports section will include the description of the current waste management system, future memos that detail options for waste management, and the draft SWMP. The page will include links to any surveys or other online engagement tools that are used. The dedicated page for PTAC includes meeting agendas, presentations, reports presented to the PTAC, and meeting notes.

A project-specific email address has also been established at solidwasteplan@rdks.bc.ca. The address forwards directly to the Environmental Services Coordinator, who is responsible for the project.

A print out of the website and embedded documents will be provided upon request to residents who do not have access to the Internet.

4.2.3 Social Media

The RDKS does not plan to engage the public in dialogue/debate on social-media (e.g. Facebook and Twitter). However, the RDKS uses social media to direct the public to other sources of information (i.e. the RDKS website) regarding upcoming events and opportunities to provide input. The RDKS also intends to use the Recycle Coach app to push notifications about the SWMP development.

Each time a mailer is prepared, concurrent notifications are developed for social media and the Recycle Coach App. The notifications will alert residents to watch for the mailer and to check the RDKS website for more information about the upcoming consultation events.

4.2.4 Recruit PTAC members

Recruitment to PTAC began in September 2018 and included letters to stakeholders identified as stakeholders, distribution of posters, newspaper advertisements, and social media posts.

Stakeholders were identified through preliminary work by RDKS administration and PMAC. Current PMAC members were classified as stakeholders. The list of stakeholders was reviewed by PMAC and approved by the Manager, Works and Services. The stakeholders were organized into 16 categories, and tailored invitation letters were developed for each category. Along with the invitation to join PTAC, stakeholders were sent a flat-sheet brochure titled "Solid Waste Management Plan, Step 2 Implementation, August 2018".

An application form was developed using the PMAC application form as a reference. The application form was posted to the RDKS website for public access and a link was included in mail-out correspondence.

A draft Terms of Reference (TOR) for PTAC was developed and posted to the RDKS website for public access.

Applications were accepted by mail, fax, email and in-person. The Environmental Services Coordinator was responsible for receiving and reviewing the applications. Administration recommended membership to the Board; the Board appointed PTAC members at the Dec. 14, 2018, and Jan. 23, 2019, meetings.

Once membership was confirmed, applicants were notified of their status. Unsuccessful applicants were thanked for their interest and informed of ways they could continue to be involved in the project.

The first meeting date was set roughly one month after finalizing the membership. A meeting notification and agenda were sent out in advance. Some members participated by conference call.

The *Draft Consultation Report* (RDKS, February 2019), available under separate cover, provides a detailed description of the methods, materials and supporting documents used in the recruitment of PTAC.

4.2.5 Informational Letters

Government agencies not directly involved in solid waste management and neighboring regional districts were sent informational letters, rather than invitations to join PTAC. They also received the Step 2 Implementation brochure. A sample informational letter is included in the *Draft Consultation Report* (under separate cover).

4.2.6 PTAC Meeting 1 – Establishment

PTAC held its inaugural meeting on January 15, 2019. The agenda for the first PTAC meeting included:

- Member introductions;
- Introduction to solid waste management planning and an overview of the planning process;
- Description of the existing RDKS solid waste system;
- Group exercise to identify strengths and areas for improvement in the current system;
- The process for development of the new Solid Waste Management Plan; and
- PTAC Committee Business, including selection of the committee Chair and Vice Chair.

Administration made recommendations to PTAC to adopt the Draft PTAC Terms of Reference, adopt the proposed meeting schedule, and support solicitation of additional key members to fill select seats. PTAC tabled the adoption of the Draft Terms of Reference until the next meeting, as PTAC members thought that the recommended quorum of 50% members plus one voting member may be unachievable in the long term. If revisions to the TOR are requested, Board approval will be required.

For this and all subsequent PTAC meetings, the agenda and accompanying reports will be distributed to all PTAC members no less than one week before the meeting date. The same materials will also be posted on the RDKS website before the meeting. Meeting notes will be distributed to PTAC members within a week of the meeting date. Meeting notes will not be posted online until they have been reviewed and approved by the PTAC at their next meeting.

See the *Draft Consultation Report* (under separate cover), for a detailed description of PTAC proceedings.

4.2.7 Establish the SWMP Involved Working Group

Stakeholders who have declined participation in PTAC but wish to maintain a high level of involvement in development the SWMP will be included in a SWMP Involved Working Group. This group will enable stakeholders to stay apprised of PTAC proceedings, including distribution of agendas, reports and minutes. This group may also become involved in personalized workshops regarding topics direct affecting their interests.

4.2.8 Survey on Strengths, Areas for Improvement, Principles and Goals

A survey will be conducted early in Step 2. The survey in Step 2 serves three purposes:

- Engage the public early in the SWMP development process;
- Obtain a snapshot of opinions and ideas about current and future programs and facilities; and
- Raise awareness of the planning process (with the goal of increasing participation in later phases).

The survey will be available in paper format and online. The paper survey will be mailed via unaddressed mail to all addresses in the RDKS. It will also be available at local waste management facilities, the RDKS office, and community events where the RDKS has a presence. RDKS Administration will coordinate with member municipalities and First Nation administrations to have copies of the paper survey available at their offices and other community locations. RDKS Administration will collect paper surveys from each location when the survey closes, or more frequently if that is preferred by the host organization. Regional District Administration will enter completed paper surveys into the online survey to ensure that all results are consolidated and analyzed consistently. The paper survey will also provide the web address for the online survey, and encourage people to complete the survey online.

The survey will be printed on a double-sided sheet. The front page will provide background information to help people provide informed responses. Information will include:

- Brief overview of SWMP;
- Brief history of 1995 SWMP implementation; and
- Summary of the current system.

The online version will be hosted by an external survey provider (such as Survey Monkey). The background information provided online will also include a link to a RDKS SWMP website for those seeking more details.

Draft questions for the survey are included in Appendix B. The survey will be reviewed by PTAC at their second meeting and by the Regional District Board.

4.2.9 Ad – Community Awareness of SWMP and Upcoming Survey

An advertisement should be published in local newspapers within a few days of the survey going live and continue to run until the survey period closes. The primary purpose of the ad is to drive readers to the RDKS webpage and/or survey site. The ad should use the established brand and be large enough to draw attention. Text for the ad may be developed by RDKS Administration; final layout should be done by a graphic designer. The layout of the ads may differ between publications.

A poster version of the ad should also be produced and posted at the RDKS office, municipal offices, First Nation administration offices, waste management facilities, libraries, and community centres/pools.

4.2.10 News Release - Community Awareness of SWMP and Upcoming Survey

A news release should be issued at the same time as the ads are published. Draft text for a news release is provided below.

For Immediate Release (DATE):

The Regional District of Kitimat-Stikine is hosting a survey to get feedback on how the services and facilities for managing garbage, recycling and organics are working for residents, businesses and institutions. The survey is an opportunity to contribute to the development of a new Solid Waste Management Plan (SWMP). More opportunities will be provided over the next 2 years. The survey is open to all residents and businesses in the RDKS, its member municipalities and local First Nations communities.

The survey can be completed online; a link to the online survey can be found at www.rdks.bc.ca/solidwasteplan. Paper copies may be obtained at the RDKS office, located at 300-4545 Lazelle Avenue, as well as waste management facilities, town offices and First Nation administration offices.

The survey will close on DATE. Survey participants will be entered to win one of four \$100 VISA gift cards. Winners will be announced by APPROXIMATE DATE.

The SWMP is a provincially-mandated plan, which requires periodic updates. The last SWMP was approved in 1995, and laid the foundation for our current waste diversion and disposal systems. The work done over the next 2 years will set the direction for the management of solid waste in the RDKS for the next 5 to 10 years. The process will include extensive public consultation and continued input from a multi-stakeholder Advisory Committee. The entire process will be guided by the Ministry of Environment's "Guide to Solid Waste Management Planning," RDKS Administration, a qualified consultant, and the Regional District Board.

For more information about the SWMP, go to www.rdks.bc.ca/solidwasteplan or email solidwasteplan@rdks.bc.ca.

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For more information contact Nicki Veikle, Environmental Services Coordinator at 250-615-6100 or 1-800-663-3208, or by email at solidwasteplan@rdks.bc.ca.

4.2.11 Addressed Mail to SWMP Involved Working Group

The SWMP Involved Working Group will be sent addressed mail to provide details on the survey, and to offer a presentation/workshop on the SWMP development process and current system overview. A draft letter is provided below.

Dear XYZ,

In September 2018, the Regional District of Kitimat-Stikine sent a letter inviting your participation in the Public and Technical Advisory Committee (PTAC) for the development of a new Solid Waste Management Plan (SWMP). As we did not receive an application from you, we have added your organization to our Solid Waste Management Plan Involved Working Group. The Involved Working Group will be included on a distribution list receiving project updates, PTAC meeting minutes and reports that are written to support the SWMP development process. Additionally, the Involved Working Group may request workshops regarding issues that affect their interests or communities.

An important part of developing a new SSWMP is receiving feedback regarding how the services and facilities currently available to manage garbage, recycling and organics are working for citizens. The RDKS is hosting a survey to hear from residents, businesses and institutions. We would appreciate it if a representative from your organization could complete the survey.

If you wish to participate in a workshop regarding the SWMP, our team would be pleased to work with you. The SWMP presentation would include an overview of solid waste management planning in British Columbia and a summary of the current solid waste management system in the RDKS. Members of your organization who attend the presentation will also have an opportunity to ask questions, make suggestions for the new SWMP, and complete the survey on site. Please contact Nicki Veikle, Environmental Services Coordinator at 250-615-6100 or 1-800-663-3208 or solidwasteplan@rdks.bc.ca to make arrangements.

4.2.12 Presentations/Workshops

As described in the draft letter above, the RDKS will offer to provide presentations or workshops to stakeholders, including Municipal and First Nation Councils, stakeholder groups and community organizations. These presentations will be given on request, and presentations may be given to combined groups that are near each other and/or that share common interests. The presentation will closely follow the presentation given at the first PTAC meeting.

4.2.13 PTAC Facility Tour (Optional)

It may be useful for PTAC members to tour the facilities located in the Terrace Service Area and/or Hazelton and Highway 37 North Service Area. A tour can help people better understand how the systems work and why certain policies are in place. Some preliminary thought needs to be given to logistics before offering a tour to PTAC. If RDKS Administration decide to offer a tour, scheduling the tour can be part of the agenda for PTAC Meeting 2. The PTAC should be presented with a few options for a tour, including covering only one area, two areas in one day, or two areas on separate days. If RDKS Administration decide to offer a tour, it is up to PTAC members to decide if the tour would be useful. If a tour is conducted, staff will need to develop a separate list of tasks to ensure that all details are accounted for, including transportation and safety gear.

4.2.14 PTAC Meeting 2 – Review and approve consultation plan, discuss SWMP theme of efficiency

Meeting notification, agenda, and notes are to be distributed following the guidelines listed for PTAC Meeting 1.

At the second PTAC meeting, RDKS staff will present this draft Consultation Strategy and seek feedback from PTAC. Particular attention will be given to the survey questions. Unfinished business from the first PTAC meeting (i.e., adopting the PTAC Terms of Reference) will also be completed.

The second half of the meeting will be a presentation on the proposed theme of the SWMP: efficiency. Administration will present on the definition of efficiency and how to optimize efficiency in the context of the RDKS solid waste services. Round table discussion will follow, with PTAC members contributing additional aspects of efficiency that should be considered and indicating their level of support for efficiency to be the overarching theme of the SWMP.

4.2.15 Board Workshop

Administration will host a Solid Waste Management Workshop for the Board on Feb. 21, 2019. At this workshop, the Board will be presented with condensed versions of the presentations used at the first two PTAC meetings and provided with an opportunity to complete the survey or provide equivalent input through facilitated exercises.

4.2.16 Establish the Financial Working Group

The RDKS plans to establish a Financial Working Group that is comprised of chief financial officers and/or other senior administrators from member municipalities and the Regional District. The Financial Working Group will report directly to the Board. It will be responsible for determining the financial implications of the waste management options developed by RDKS Administration and the planning consultant. Input from the Financial Working Group will be integrated into the technical memo that will be presented to PTAC and will guide revisions to the cost recovery models.

4.2.17 PTAC Meeting 3 – Survey Results, Guiding Principles and Goals, Waste Reduction and Reuse Options

Meeting notification, agenda, and notes are to be distributed following the guidelines listed for PTAC Meeting 1.

At the third PTAC meeting, RDKS Administration will present the results of the survey. Survey results and PTAC's input will be used to develop draft guiding principles and goals for the plan. The guiding principles will be primarily based on those established by the Ministry of Environment and Climate Change Strategy, and will reflect local concerns and priorities. The goals will describe a long-term vision for solid waste management in the region. Targets will not be set until preferred actions have been identified, in Step 3.

The second half of the PTAC meeting will be a presentation on waste reduction and reuse options. Many of the topics related to waste reduction and reuse have already been identified; others may arise during Survey #1. Each waste reduction or reuse topic will include options for implementation that are based on the existing system and Administration and consultant's knowledge of waste reduction and reuse programs in place in other jurisdictions. An approach that may be used by PTAC to review the proposed options is discussion in breakout groups. An RDKS representative should be present with each group to facilitate discussion and take notes. By the end of the meeting, it should be clear which options have the most support from the group and which options are less popular.

4.2.18 PTAC Meeting 4 – Review Recycling and Composting Options

At this meeting, the focus will be on recycling and composting options. Meeting notification, agenda, and notes are to be distributed following the guidelines listed for PTAC Meeting 1.

This meeting may follow a similar format to the second half of the previous meeting, utilizing break-out groups to facilitate discussion. Groups may be formed based on their knowledge and interest in different generator categories (e.g. construction and demolition, or commercial waste) of different material types (recycling or composting).

4.2.19 PTAC Meeting 5 – Residual Waste Management at Existing RDKS Facilities

The next PTAC meeting will address topics related to residual waste management at existing RDKS facilities. Meeting notification, agenda, and notes are to be distributed following the guidelines listed for PTAC Meeting 1.

Many of the topics related to residual waste management have already been identified; others may arise during Survey #1. Each residual waste management topic will include options for implementation that are based on the existing system. Discussion on residual management options may be conducted as a roundtable, depending on the number of topics and options to discuss.

4.2.20 PTAC Meeting 6 – Residual Waste Management at New Facilities & Other Waste Management Issues

The next PTAC meeting will address topics related to residual waste management at potential new RDKS facilities, as well as other waste management issues that do not fit into the waste management hierarchy. Meeting notification, agenda, and notes are to be distributed following the guidelines listed for PTAC Meeting 1.

Residual waste management at new facilities includes the RDKS taking responsibility for facilities that are currently owned and managed by other entities. Other waste management issues may include:

- Illegal dumping;
- Waste stream management licensing and codes of practice; and
- EPR service.

Many of the topics have already been identified; others may arise during Survey #1. Discussion of residual management options may be conducted as a roundtable, depending on the number of topics and options to discuss. Options related to other waste management issues (such as strategies to manage illegal dumping, private waste management operators, and approaches to working with product stewards) may be discussed in breakout groups, facilitated by RDKS Administration. By the end of the meeting, it should be clear which options have the most support from the group and which options are less popular.

4.2.21 PTAC Meeting 7 – Review Cost Recovery Options

The cost recovery models for each service area may need adjusting to accommodate preferred options. RDKS Administration and technical consultants will estimate the cost of implementing the preferred options identified at each meeting and will estimate the impact of implementing those options in terms of achieving the goals set at Meeting 1. The impact may be expressed in terms of tonnes per year, number of people reached by a program, or other metrics.

This information will be presented to the PTAC and a discussion about the relative effectiveness/efficiency of each option will follow. By the end of this meeting, it should be apparent which options are likely to form the basis of the new SWMP.

4.2.22 Website Maintenance and Social Media

Throughout Step 2, the website should be kept up to date with meeting agendas, presentations, and minutes. Social media may be used to push notifications, such as for the survey, in Step 2.

4.3 Step 3

The tasks in Step 3 are:

- Combine options to develop strategies;
- Evaluate strategies in terms of effectiveness and affordability; and
- Follow the consultation plan.

4.3.1 PTAC Meeting 8 – Develop Strategies (Option Packages)

Depending on the preferred options identified throughout Step 2, it may be necessary to develop a number of alternative strategies. A strategy is a combination of options that work together. Each strategy will be designed to maximize achievement of a goal or to balance achievement across goals. This approach may be required if some of the preferred options conflict with each other. If the preferred options work well together, it may not be necessary to develop alternate strategies. The decision about whether alternate strategies are needed will be made by RDKS Administration with the advice of technical consultants as Step 2 nears the end. PTAC will have an opportunity to identify which strategies they recommend for inclusion in the plan, and which strategies they do not support.

A typical exercise to elicit this information from a committee is to hand each committee member 3 colour-coded cards. The green card means “I fully support this strategy being included in the draft plan”. The yellow card means “I do not fully support this strategy, but do not object to it being included in the draft plan”. The red card means “I do not agree with this strategy being in the draft plan”. For each strategy, PTAC members will be asked to raise the card that corresponds to their opinion, and the count of each colour will be recorded.

4.3.2 Board Workshop

PTAC members are required to report back to their organizations throughout the planning process and bring their organization’s input to the committee. Therefore, the RDKS Board should be well informed about the direction of the PTAC’s recommendations. However, since the RDKS board is ultimately responsible for approving the plan, it is critical that the Board fully understand the strategies being proposed.

This workshop will be organized by RDKS Administration. The workshop will present the options provided to PTAC, and indicate PTAC’s preferences and the rationale for those preferences. The Board will be given opportunities to indicate their level of agreement with those preferences and to indicate different preferences. This will provide an opportunity for the Board to influence the plan before it is drafted and released for consultation.

4.3.3 Website Maintenance and Social Media

Throughout Step 3, the website needs to be kept up to date with meeting agenda, presentations, and minutes.

It is not anticipated that social media will be used in Step 3, as there are no opportunities for the public to provide input during this part of the process. However, if public input is required during Step 3, social media posts may be used as a method of pushing notifications.

4.4 Step 4

The tasks in Step 4 are:

- Draft the plan;
- Publish the plan for consultation;
- Revise the plan and submit for Ministry approval; and
- Board adoption of approved plan.

Step 4 will include a second opportunity for public comment on the SWMP. A survey regarding the content of the draft plan will be conducted. The RDKS will also host a series of open houses to elicit public comment.

4.4.1 PTAC Meeting 9 – Review Draft Plan and Consultation Details

PTAC will have an opportunity to review and comment on the draft SWMP and the detailed consultation strategy. PTAC members will be asked for feedback on draft survey questions, the open house times and locations, and the open house materials.

4.4.2 Unaddressed Mailer – Community Awareness of Draft Plan and Survey/Open Houses

A mail-out may be used to alert residents that the SWMP has been drafted, is available for review, and is the subject of a survey and open houses. The mail-out should be issued once the draft plan is posted online, the survey is live, and the open house schedule is established. The mail-out should be distinctive and eye-catching, easy to understand, use the project branding, and be sent by addressed mail. The content for the mailer may be developed in-house and formatting managed by a graphic designer. The mailer and notifications should include:

- Brief overview of what SWMPs are and why they are written;
- High level summary of the new SWMP;
- Notification of the survey (including simple link that is easy to type) and open houses;
- URL for the RDKS SWMP webpage; and
- A phone number for anyone who has questions about the project and/or the survey.

RDKS reception staff should be trained on how to direct calls resulting from the mailer and will record all communication received, such as the number of callers, topics addressed (based on a check list), etc.

If feasible, the timing of the addressed mail-out may coincide with other RDKS communications (e.g. utility bills or other direct mailings).

4.4.3 Ad – Community Awareness of Draft Plan and Survey/Open Houses

An advertisement that uses a similar look and feel to the unaddressed mailer should be published in local papers within a few days of the survey going live. The newspaper ad should continue to run until the survey period closes and open houses have occurred. The ad should not contain as much information as the mailer; its primary function is to drive readers to the RDKS webpage, survey site and open houses. The ad should use the established branding and be large enough to draw attention. Text for the ad can be developed by RDKS Administration; final layout should be done by a graphic designer.

The layout of the ads may differ between publications. The ad should contain all open house times and dates in all publications.

A poster version of the ad should also be produced and posted at the RDKS office, and other prominent locations, such as municipal offices, First Nation administration offices, waste management facilities, libraries, grocery stores, post offices and community centers/ pools.

4.4.4 News Release – Community Awareness of Draft Plan and Survey/Open Houses

A news release should be issued at the same time as the ads are published. Draft text for a news release is provided below.

For Immediate Release (DATE):

The Regional District of Kitimat-Stikine (RDKS) is pleased to announce that a new Solid Waste Management Plan (SMWP) has been drafted and is now ready for review. Over the past XXX months, a hard-working group of representatives from around the region has formed a Public and Technical Advisory Committee (PTAC) to examine our current waste management system and compare it to other systems across the province and around the world. Based on our existing system and the range of options they have reviewed, they have made recommendations about what waste management strategies and programs should be implemented within the RDKS over the next 5 to 10 years. Now is your chance to review the work they've done and provide your feedback.

The RDKS is hosting a series of open houses throughout the region. At these events, you can review the content of the draft SWMP, ask questions of RDKS Administration, PTAC members and elected officials, and provide your input on the draft plan.

All residents and businesses within the RDKS, its member municipalities and local First Nation communities are encouraged to complete a survey on the draft plan. The survey can be completed at an open house, online, at RDKS waste management facilities, and at offices of member municipalities and First Nation administrations. A link to the online survey can be found at rdks.bc.ca/solidwasteplan. The survey will close on DATE. Anyone who completes the survey can be entered into a draw to win a \$100 VISA gift card. Winners will be announced by APPROXIMATE DATE.

The SWMP is a provincially-mandated plan, which requires periodic updates. The last SWMP was approved in 1995, and laid the foundation for our current waste diversion and disposal systems. Once adopted, the new SWMP will set the direction for the management of solid waste in the RDKS for the next 5 to 10 years. For more information about the SWMP, go to rdks.bc.ca/solidwasteplan.

-30-

For more information contact Nicki Veikle, Environmental Services Coordinator or Megan Haley, Project & Program Coordinator at 250-615-6100 or 1-800-663-3208; solidwasteplan@rdks.bc.ca.

4.4.5 Addressed Mail to SWMP Involved Working Group Mailer

The SWMP Involved Working Group will be sent addressed mail to provide details on the survey, and to offer a presentation/workshop on the SWMP development process and current system overview. A draft letter is provided below.

Dear XYZ,

The Regional District of Kitimat-Stikine (RDKS) has been developing a new Solid Waste Management Plan (SMWP) since early 2019. A draft version of the plan is now ready for review and we welcome your comments and feedback. The new plan addresses how waste will be managed for the next 5 to 10 years.

The RDKS is hosting a survey to gather feedback on the draft plan from residents, businesses and institutions. The survey is open to all residents and businesses within the RDKS, its member municipalities and First Nations communities. We would appreciate your input; please complete the survey using this link, or visit our website at www.rdks.bc.ca/solidwasteplan for a survey link.

The RDKS is also hosting a series of open houses throughout the region to present the draft plan. The closest open houses to your location will be:

- *DATE, TIME, LOCATION OF CLOSEST*
- *DATE, TIME, LOCATION OF 2ND CLOSEST*

If you are unable to attend an open house, and would like an opportunity to have the draft SWMP presented to you, one of our staff members would be pleased to work with you. Members of your organization who attend the presentation will have an opportunity to ask questions, suggest revisions, and complete the survey on site. Please contact Nicki Veikle, Environmental Services Coordinator at 250.-615-6100 or 1-800-663-3208 or solidwasteplan@rdks.bc.ca to make arrangements.

4.4.6 Presentations/Workshops

Upon request, the RDKS will provide presentations to stakeholders, including Municipal and First Nation Councils, stakeholder groups and community organizations. Presentations may be coordinated for multiple groups that are close in proximity and/or that share common interests. The presentation will follow the content of the display boards used at the open houses.

4.4.7 Survey on Draft Plan

The survey conducted in Step 4 will serve three purposes:

- Share the content of the draft SWMP;
- Show the public how their early input was used to develop the SWMP; and
- Obtain a snapshot of opinions and ideas about the draft SWMP.

The survey will be available in paper format and online. The paper survey will be mailed via unaddressed mail to all addresses in the RDKS (potentially in conjunction with the unaddressed mailer described in Section 4.4.5). It will also be available at local waste management facilities, the RDKS office, and community events where the RDKS has a presence. RDKS Administration will coordinate with member municipalities and First Nation administrations to have copies of the paper survey available at their offices and other community locations. RDKS Administration will collect paper surveys from each

location when the survey closes, or more frequently if that is preferred by the host organization. Regional District Administration will enter completed paper surveys into the online survey to ensure that all results are consolidated and analyzed consistently.

The online version of the survey can include a link to a PDF of the mailer, or the content can be copied directly into the survey.

Sample questions for the survey are provided in Appendix C. These questions are preliminary and will be revised and augmented as the Plan develops. Survey questions will be reviewed by RDKS Administration and provided to PTAC for review and comment at their ninth meeting.

4.4.8 Open Houses

The purpose of the open houses is be similar to the surveys:

- Engage the public in the SWMP development process;
- Obtain a snapshot of opinions and ideas about proposed future programs and facilities; and
- Enable dialogue about the solid waste management system.

Open houses will be scheduled throughout the regional district, with events in Terrace, and the Hazeltons, and potential events in Kitwanga, Stewart, Telegraph Creek, Dease Lake and Iskut. An open house may be held in Kitimat depending on Kitimat's level of participation in the SWMP and solid waste functions of the RDKS. Where multiple events are scheduled in an area, one should be on a weeknight (e.g. 4:00 to 8:00 pm) and one should be on a weekend (e.g. Saturday from 10:00 am to 2:00 pm).

Proposed locations include:

- Terrace
 - RDKS office (weeknight)
 - Thornhill Community Centre (weekend)
 - Terrace & District Aquatic Centre (weekend)
- Kitwanga
 - Community Centre
- Hazelton Area
 - New Hazelton Meeting Centre
- Telegraph Creek
 - Band office or school
- Dease Lake
 - School
- Iskut
 - Band office
- Stewart
 - District Hall or multipurpose hall/meeting room at the arena
- Kitimat
 - District of Kitimat office (weeknight)
 - Riverlodge Recreation Centre (weekend)

It is important to structure open house events to allow self-directed learning, opportunities to provide input (e.g. “dot exercises” to indicate preferences or priorities and/or exit surveys), and to allow attendees to participate in one-on-one discussions with members of the RDKS Administration, elected officials and PTAC members. Formal presentations and townhall-style question and answer sessions are not recommended. Individuals who have questions or concerns that cannot be addressed at the event would be provided with alternate ways of being heard, including meeting with RDKS Administration and/or elected officials, attendance at a Board meeting as a delegation, and submission of correspondence to the RDKS Board and Chair.

The display boards at the open houses should mirror the information developed for the mailer and provide more details. The survey on the draft SWMP can be provided in paper form. RDKS Administration at the event can also guide visitors through the process of completing a survey on their individual smart phones. Alternatively, survey questions may be posted next to a relevant display board; people may respond directly on the boards (using stickers or markers). RDKS representatives should be stationed at each board to ensure survey participation

4.4.9 Prepare the Consultation Summary Report

The purpose of the Consultation Summary Report is to demonstrate that adequate consultation has occurred. A Consultation Summary Report must be submitted to the Minister for review as part of the plan submission package. The report should include information on the consultation process and the SWMP development process. If there were challenges in gathering public comment (e.g., a lack of feedback), the report should document how due diligence was used to try and engage the public.

RDKS Administration will document methods used to engage stakeholders and the public. This includes retaining correspondence, news releases, media coverage, advertisements, social media posts, presentations, handouts, blank surveys and display boards. Completed surveys should be compiled and anonymized. All other forms of feedback received (emails, letters, notes from phone calls or other conversations) will be retained. Consultation data will be collected and maintained to facilitate the production of the report at the end of the planning process. A *Draft Consultation Report*, outlining engagement methods used in early in Step 2, is available under separate cover.

4.4.10 PTAC Meeting 10 – Receive Consultation Report, Review Summary of Planned Revisions to Draft Plan as a Result of Consultation

Input from workshops, open houses and surveys will be compiled and presented to PTAC. Proposed changes to the plan resulting from the input will be highlighted. PTAC’s feedback regarding the proposed changes will be noted.

4.4.11 PTAC Meeting 11 – Review Final Plan

If changes are made to the plan after Meeting 10, PTAC will have an opportunity to review the draft final plan, containing revisions from the consultation plan, prior to submission to the Ministry for approval.

4.4.12 Review by Regional Representative of the Ministry of Environment and Climate Change Strategy

A regional representative of the Ministry of Environment and Climate Change Strategy is a member of PTAC. This individual will be asked to review the plan prior to formal submission to the Ministry. This

allows ministry staff to review and provide any recommendations before the final draft is reviewed by the RDKS Board.

4.4.13 Board Workshop to Review Final Draft Plan

The Board will be presented with the final draft plan at a workshop. The workshop will highlight how input from PTAC, workshops, open houses and surveys have influenced the plan. This workshop will be the last opportunity for the Board to review the plan before it is submitted for provincial review.

If major revisions are required to the draft plan based on the results of Step 4 consultation, Ministry review, or Board workshop input, additional consultation with stakeholders and the public may be required. The format of the consultation will be determined as required.

4.4.14 Board Approval of Final Draft Plan

The final draft of the SWMP will be approved by a resolution of the Board to receive the plan and submit it to the Minister for review. A sample resolution is:

“That the Regional District of Kitimat-Stikine submit the solid waste management plan (title, date), as approved by the Board on (date), to the Minister of Environment and Climate Change Strategy for review and approval.”

4.4.15 Submit to Ministry of Environment and Climate Change Strategy for Approval

The final draft plan should then be submitted to the Minister, together with a completed checklist, corporate officer certification form and consultation summary report.

4.4.16 Website Maintenance and Social Media

Throughout Step 4, the website, social media and Recycle Coach apps will be kept up to date and used to notify people of consultation opportunities. The website should include a note when the SWMP is submitted to the Minister and the results of the Minister’s review.

5 First Nations Consultation

The Ministry Guide encourages development of a specific First Nations engagement strategy. Since the RDKS contributes to the costs of waste management facilities that are owned by First Nations (to cover the cost of off-reserve individuals using the facilities) and receives contributions from First Nations to cover the cost of their use of RDKS facilities, the RDKS communicates regularly with each First Nation community on matters related to level of service and contributions. This communication is generally in the form of letters, phone calls and face-to-face meetings between RDKS Administration and First Nations community leaders. First Nations are consulted with in much the same way as member municipalities, and this approach is expected to continue throughout the plan development process. Each band was invited to join PTAC, and all bands are included in the SWMP Involved Working Group.

Appendix A

Draft Step 2 Survey Questions

DRAFT

Paste here when ready

DRAFT

Appendix B

Draft Step 4 Survey Questions

DRAFT

First, please tell us a little bit about yourself.

Are you replying to this survey as: [pick one]

- A resident or
- A business owner

Where do you live? [pick one]

- The Terrace Service Area: Terrace, Thornhill, the greater Terrace area, Lakelse Lake, Rosswood and surrounding areas
- The Hazelton and Highway 37 North Service Area: the Hazeltons, Kispiox Valley, Moricetown, Kitwanga, Cedarvale, Stewart, Meziadin, Iskut and surrounding rural areas
- Outside a current solid waste Service Area: Kitimat, Nass Valley, Telegraph Creek, Dease Lake

Waste Management Measures

The following questions will be asked for each category of measures:

Please indicate your level of agreement with each of the following statements. (1 means you strongly disagree; 5 means you strongly agree)

Please list any other waste management measures you would like to see included in the plan

The categories are anticipated to be:

- Waste Reduction and Reuse
- Waste Diversion
- Residual Waste Management
- Regulation of Private Facilities
- Illegal Dumping
- Extended Producer Responsibility (EPR) Services
- Financing

Appendix 5 – Solid Waste Management Plan Issues Paper

memo

To: Regional District of Kitimat-Stikine
From: Sarah Wilmot
Date: August 8, 2018 V.1.3
Re: Solid Waste Management Plan – Issues Paper

The RDKS Administration anticipates the new solid waste management plan (SWMP) will focus on monitoring and improving the operational efficiency of all RDKS facilities, programs and services. A wide range of new facilities and programs were introduced under the previous SWMP, including engineered landfills, transfer stations, a sophisticated in-vessel composting system, and extensive waste separation programs. As such, the RDKS does not expect the new SWMP to call for major changes to current policies and infrastructure. Instead, the focus on efficiency will help to ensure that:

- Staff and contractors are well trained and can perform all of their duties competently, so fewer human resources are needed
- Operations are streamlined, so workload and wait times are kept low
- Clear policies and guidelines are in place, leading to less time needed to make decisions
- Priorities are established and resources are allocated accordingly

RDKS Administration has identified some significant issues or topics that should be addressed in the new SWMP. These issues are presented herein to stimulate discussion about the content of the new SWMP. By considering the issues now, the need for future plan amendments may be avoided.

The issues identified so far include:

1. Review of the cost recovery model in the Terrace Service Area
2. Review of the cost recovery model in the Hazelton and Highway 37 North Service Area
3. District of Stewart waste management solution
4. Dease Lake Landfill ownership
5. Telegraph Creek waste management solution
6. Potential participation of District of Kitimat in the Terrace Service Area
7. Limits on municipal-type solid waste (MSW) from industrial sources
8. Limits on MSW from outside of the RDKS
9. Contaminated soil handling and use
10. Recycling collection in the Hazelton and Highway 37 North Service Area
11. Single use plastic bags - solutions
12. Expansion of the list of Prohibited Wastes
13. Household hazardous waste collection
14. Access to services/facilities in other service areas
15. Landfill gas utilization/carbon credits
16. Audits of residential (curbside collection) and Industrial, Commercial and Institutional (ICI) waste

17. Enforcement strategy for residential and ICI sectors
18. Requirements for deconstruction (instead of demolition)
19. Require waste management space in new construction
20. Limits on the cost of recycling (i.e., willingness to pay for) printed paper and plastic
21. Limits on the cost of recycling (i.e., willingness to pay for) cardboard

This is a preliminary list, and additional issues may be identified by the Public and Technical Advisory Committee, stakeholders and the general public.

This memo, along with the Step 1 Memo and Current System report, are intended to be guiding documents for the development of a new SWMP.

1 Review of the Cost Recovery Model – Terrace Service Area

1.1 Key Information and questions

In the Terrace Service Area, 50% of the annual operating cost were projected to be covered by tipping fees, with the balance covered by property taxes (calculated based on population and the value of improvements) in the City of Terrace, Electoral Area C and Electoral Area E, and a population-based contribution from the Kitselas on-reserve community.¹

In 2017, the RDKS found that significantly less waste than expected was brought to the Thornhill Transfer Station and the Forceman Ridge Waste Management Facility. This led to a revenue shortfall, which was partially offset by the structure of the contract with Bear Creek Group.

The RDKS must decide how to manage this situation on an on-going basis, in the event the lower tipping fee revenue results in a deficit situation. Options include raising the tipping fee rates (to collect more revenue from the same amount of waste) or increasing the share of revenue that comes from taxes.

Issue: Should the per tonne/per cubic meter tipping fee be increased to raise additional revenue, or should the tax rate be increased?

1.2 Stakeholders

- RDKS
- Financial working committee
- Businesses and residents in the Terrace Service Area
- Kitselas

1.3 Considerations

Raising the tipping fee on all waste streams could result in waste “leaking” from the system (i.e., being sent to other waste management facilities, being dumped illegally, or burned). In this scenario, the amount of revenue from tipping fees might not increase sufficiently. Raising tipping fees on garbage while maintaining the rate for commercial cardboard and paper recycling could encourage more recycling by the commercial sector. While this would increase waste diversion, it would also reduce the quantity of waste brought in for disposal and therefore reduce revenue. The waste composition study

¹ Collection on the Kitsumkalum reserve is managed by the community. Waste is collected by a contractor, who pays tipping fees at the transfer station. The contractor is paid by the community. This arrangement means that Kitsumkalum is not part of the cost recovery model.

conducted in 2017 found that over 20% of the commercial waste brought to the Thornhill Transfer Station was paper products so a significant change in garbage tipping fees, without a parallel change in cardboard tipping fees, could drive up to 20% of the commercial waste away from the transfer station.

Raising the tax rate moves away from the “user pay” model endorsed by the RDKS and decreases the incentive to properly segregate recyclable wastes and reduce waste generation. However, it is a more reliable source of funding.

The preferred option may combine raising the tipping fee rate and raising taxes. When the cost recovery model is revised, it should take into account the actual tonnages received in 2017.

2 Review of Cost Recovery Model – Hazelton and Highway 37 North Service Area

2.1 Key Information and questions

No tipping fees are currently charged on garbage from residential and commercial sources in the Hazelton Service Area.^{2,3} Taxes, and population-based contributions from First Nations, fund the entire service. The amount of taxes owed by each incorporated area and electoral area is calculated based on the average of the percentage of the total service area population and the percentage of the total improvement value in each incorporated and electoral area, multiplied by the total requisition (e.g. the District of Hazelton has 10.4% of the population in the whole service area and 2.76% of the improvement value in the incorporated and electoral areas; the average of those two numbers is 6.56%, so the District of Hazelton owes 6.56% of the total operating costs). First Nations contributions are based only on their population share; businesses in the service area supported by both on and off reserve community members. As there is no taxation on First Nations communities, the tax portion of the contribution calculation is zero, so the population share is equal to the percentage of the population divided by two (e.g. Gitsegulka has 7.0% of the service area population and therefore pays 3.5% of the total requisition).

The District of Stewart is a participating member of the Kitimat-Stikine Hazelton and Stewart Area Solid Waste and Recyclable Material Management Service, established under Bylaw No. 657, 2015. On March 20, 2018, the District of Stewart formally requested inclusion in Kitimat-Stikine Hazelton and Highway 37 North Area Waste Management Facility Regulation Bylaw No. 688, 2017 (Waste Regulation Bylaw 688). The Regional District subsequently amended the Bylaw 688 to include Stewart.

Adoption of the Waste Regulation Bylaw 688 enables the District of Stewart to access RDKS owned facilities such as the Meziadin Landfill. It also brings Stewart into the cost recovery model for the Hazelton and Highway 37 North Service Area. The District of Stewart would like the cost recovery model to be reviewed, because it believes that First Nations communities do not contribute an equal share. First Nations governments are also unhappy with the model because they feel penalized for having larger households, as the contribution is per capita, rather than per household.

² Tipping fees on garbage may be introduced in the future; if they are, tipping fees will contribute a smaller proportion of the operating costs, compared to the Terrace Service Area.

³ Tipping fees are charged on asbestos, contaminated soils, and waste from industrial sites.

Issue: How should the cost recovery model be revised, particularly in light of Stewart joining the service?

2.2 Stakeholders

- RDKS
- RDKS Financial Working Committee
- District of Stewart
- First Nations in the Hazelton and Highway 37 North Service Area
- Other incorporated and electoral areas in the Hazelton and Highway 37 North Service Area

2.3 Considerations

Through stakeholder engagement, the RDKS has heard competing preferences with regards to cost recovery, and the cost recovery model should be reviewed.

3 District of Stewart Waste Management Solution

3.1 Key Information and questions

The District of Stewart requires a new disposal solution. The landfill has reached capacity and the cost to upgrade and expand the site is considered prohibitive. Originally, the plan was for the RDKS to build a transfer station in Stewart that would consolidate waste collected by Stewart's curbside and commercial collection programs and transfer it to the Meziadin Landfill. The RDKS offered to help Stewart apply for grants to fund the capital cost of the facility and close the Stewart Landfill; the operating costs of the transfer station would become part of the Hazelton and Highway 37 North Service Area costs, to be covered by the same cost recovery model that applied to the whole service area. An alternate concept was identified and presented to the Stewart council and community in an attempt to lower the cost to service Stewart.

The alternate concept includes the collection of residential and commercial garbage using community bins with direct haul to the Meziadin Landfill. A z-wall type transfer station would be built on the closed landfill for bulky wastes. Bulky wastes would be removed from the community periodically. Metals, appliances, tires and propane tanks would be marshaled for commercial salvaging at the transfer station. The District of Stewart has indicated interest in operating the collection/haul system and the transfer station under contract to the Regional District. Administration will be exploring this design further with Stewart.

The current recycling system will also be changing, as Border Town Recycling, which currently operates under contract to Recycle BC, will be ceasing operations. The RDKS intends to set up a kiosk at the new z-wall transfer station to collect residential packaging and printed paper, electronics, and cardboard from the residential and commercial sectors. The RDKS is currently in discussions with Recycle BC regarding a contract to manage residential packaging and printed paper at the new transfer station.

Issue: The disposal and diversion solutions for the District of Stewart needs to be finalized.

3.2 Stakeholders

- District of Stewart
- Businesses in Stewart
- Residents of Stewart

- RDKS
- Ministry of Environment
- Other communities in the Hazelton and Highway 37 Service Area

3.3 Considerations

The RDKS has been working to engage businesses and residents in Stewart to determine their preferences for waste management services. Currently, the District offers businesses a dumpster service and collects refuse and cardboard. The District also provides the residential sector with refuse collection using community bins located throughout the community and offers interested residents a no-cost subscription-based curbside collection service. Stewart also provides collection of bulky goods over a two-week period each spring. All of these services are funded through taxes. The proposed plan would see all sectors switch to using community bins, which may be viewed as less convenient for those who currently receive dumpster or curbside service. Although many residents who engaged with the RDKS indicated they are in favour of the proposed community refuse collection system, some want to maintain the option of curbside collection. It may be possible for the District to continue to manage and pay the cost of a curbside collection service and time-limited bulky item collection service independent of the Regional District system.

4 Dease Lake Landfill Ownership

4.1 Key Information and questions

The Dease Lake Landfill is currently owned by the Ministry of Transportation and Infrastructure (MOTI). It is operated by a contractor hired by the MOTI. The landfill has some recycling infrastructure, but no scales or other means of measuring the amount of garbage brought in. The Dease Lake Landfill has become the destination for waste generated in Telegraph Creek, since the Telegraph Creek landfill stopped receiving putrescible waste and a transfer station system was installed.

Issue: The MOTI would like the RDKS to take over full responsibility (including ownership) of the Dease Lake Landfill.

4.2 Stakeholders

- MOTI
- RDKS
- Community of Dease Lake
- Ministry of Environment
- All communities in the Hazelton and Highway 37 North Service Area

4.3 Considerations

If the RDKS takes over the Dease Lake Landfill, the landfill would become a facility under the Hazelton and Highway 37 North Service Area. The RDKS would need to consider how to pay for both the capital and operating costs of the site; these costs would need to be incorporated into any revisions to the cost recovery model (section 2). Bylaws 657 and 688 would need to be amended to include Electoral Area F (Dease Lake) and the Dease Lake Landfill.

The liability associated with the site should be detailed before the RDKS makes any decisions.

5 Telegraph Creek Waste Management Solution

5.1 Key Information and questions

The Telegraph Creek Landfill is owned and operated by the Tahltan Band, and the RDKS contributes to the cost of operation for the use of the facility by residents of the adjacent electoral area. The Tahltan Band is currently working with Indigenous and Northern Affairs Canada (INAC) and is pursuing the development of a transfer station, with waste being sent to the Dease Lake Landfill. The RDKS has not been deeply involved in the process, and would like to be more engaged, as off-reserve residents are also affected by the final decision. The RDKS is concerned that the operation of a transfer station may not be feasible, as hauling to the Dease Lake Landfill may be logistically difficult.

Issue: The RDKS would like to be involved in the search for a long-term disposal solution for Telegraph Creek.

5.2 Stakeholders

- Tahltan Band
- INAC (and their consultants)
- RDKS
- MOTI (if the Dease Lake Landfill remains under MOTI's ownership)
- All communities in the Hazelton and Highway 37 North Service Area

5.3 Considerations

INAC and Tahltan have already made progress on moving towards the development of a transfer station and may not be willing to re-examine other options.

The RDKS would like to know if the MOTI intends to charge tipping fees at the Dease Lake Landfill for the loads that come in from Telegraph Creek. If the RDKS is expected to pay tipping fees, the RDKS would like to be involved in deciding on the best waste management solution for Telegraph Creek.

6 Potential Participation of District of Kitimat in the Terrace Service Area

6.1 Key Information and questions

The District of Kitimat recently completed its own Waste Management Plan (Hatch, 2017). Without any increase in diversion activity, the Kitimat Landfill is expected to reach capacity by 2047. The plan compares three possible scenarios:

- Business as usual (weekly residential garbage collection, no recycling collection, continued use of Kitimat Landfill)
- Recycling and Forceman Ridge composting (alternating weeks of residential garbage and recycling collection, weekly organics collection, organics are processed at Forceman Ridge)
- Recycling and local composting (alternating weeks of residential garbage and recycling collection, weekly organics collection, organics are processed at local at a future local composting facility)

Other options may also be explored during the SWMP development process. The District could join the RDKS waste management service (i.e. become part of the Terrace Service Area cost recovery model) and participate in the Terrace Area collection program, develop a new Kitimat Transfer Station, and use the Forceman Ridge Waste Management Facility for disposal and composting. Residential collection in Kitimat is currently provided by the private sector, as it is within the Regional District; thus, a common collection contract may be considered. In addition, senior government funding could be applied for to assist with the Kitimat Landfill Closure.

Another option would be to remain outside the RDKS waste management service and access the Forceman Ridge facility as a user (i.e. pay tipping fees). The waste from Kitimat would need to comply with all disposal restrictions in place, and the “out of service area” surcharge of 25% would be applied to the tipping fee.

The RDKS Administration has advised the District of Kitimat that in order for these options to be considered, the District needs to formally request a review of the potential impacts of their use of the Forceman Ridge facility, including both the compost facility and the landfill.

6.2 Stakeholders

- District of Kitimat
- RDKS
- All other communities in the Terrace Service Area

6.3 Considerations

While the Kitimat landfill has a fairly long lifespan remaining, it is important to proactively manage a long-term disposal solution. The SWMP could be structured to allow, but not require, the District of Kitimat to use the Forceman facility. If there is any support for the idea, it would be wise to include allowance for it in the SWMP, to avoid the need for a plan amendment in the future.

Some residents may be opposed to changes to the status quo. As in the Terrace Service Area, teaching residents how to recycle and separate their organics will require a comprehensive education and promotion program.

A transition to the Forceman Ridge Landfill would also require businesses and institutions to change their waste management practices to comply with the disposal restrictions. This is a fairly major undertaking and would benefit greatly from the RDKS’s involvement, as RDKS staff have recent experience with this in the Terrace area.

There may be opposition in the Terrace area to increasing the volume of waste disposed of at the Forceman Ridge Landfill.

If Kitimat joins the Terrace Service Area, the cost recovery model will need to be reviewed.

7 Limits on Municipal-type Solid Waste from Industrial Sources

7.1 Key Information and questions

The Terrace Area Fees and Regulations Bylaw (671-16) allows for the disposal of municipal-type solid waste (MSW) from industrial sources at the Forceman Ridge Landfill. Approval by the Manager, Works

and Services is required under section 3.8 of the bylaw. The bylaw does not specify any limits on the amount that can be disposed.

One potential industrial source of municipal waste is Rio Tinto's Kitimat Operations. Rio Tinto operates its own landfill for municipal-type waste (industrial waste is shipped out of the region to specialized disposal facilities). The Rio Tinto landfill will be full in approximately four to six months. They have requested use of the Forceman Ridge Landfill. This will require them to comply with disposal restrictions, such as removing organics and recyclables from the waste stream. As an alternative to using Forceman, Rio Tinto may be able to permit their existing landfill site for continued disposal of non-putrescible material (such as construction and demolition debris).

Issue: Should a limit be placed on the amount of MSW from industrial sources that can be disposed of at RDKS facilities? If so, should the limit be by year, by landfill phase, or other parameter? If a limit is set, it should be specified in the SWMP as a regional policy; a bylaw amendment is not required.

7.2 Stakeholders

- RDKS
- Industrial generators of MSW
- All communities in the Terrace Service Area
- MOE

7.3 Considerations

The RDKS should have a policy or guideline at the administrative level that provides guidance on the maximum amount of waste from industrial sources that can be disposed of at Forceman. The content of the policy can be developed during the SWMP development process. Factors to consider include:

- Limiting the amount of MSW from industrial generators will help to ensure the longevity of the Forceman Ridge landfill
- Allowing more MSW from industrial generators will increase revenue to the function, both because of increased volumes and because of the surcharge levied on industrial generators

8 Limits on Municipal Solid Waste from Outside the RDKS

8.1 Key Information and questions

The Terrace Area Fees and Regulations Bylaw (671-16) allows for the disposal of municipal waste from outside the Terrace Service Area at the Forceman Ridge Landfill. However, the bylaw does not currently refer to disposal of waste from outside of the Regional District. The 1995 SWMP allowed the RDKS to look for opportunities to cooperate with other adjacent regional districts to reduce costs through economies of scale. The kind of cooperation enabled by the 1995 SWMP included sharing of landfill space, if appropriate agreements could be reached. The two regional districts identified as being most likely to cooperate with the RDKS were Skeena-Queen Charlotte and Bulkley Nechako.

The new SWMP should also address the issue of disposing of MSW from other regional districts, as well as processing compostables and recyclables from other regional districts within the RDKS.

Issue: Should the SWMP allow MSW from neighbouring Regional Districts, which meets the disposal restrictions outlined in the relevant disposal bylaws, to be disposed of at RDKS facilities? If so, should

this be allowed in both service areas, or only in the Terrace Service Area? Should the SWMP limit the amount of MSW by year, by landfill phase, or other parameter? Should the SWMP allow recyclables from other regional districts to be processed in the RDKS? If so, should any limits be set? Should compostables and recyclables from the RDKS get priority access to the processing facilities?

8.2 Stakeholders

- RDKS
- Neighbouring regional districts
- Residents and businesses in the affected service area(s)
- MOE

8.3 Considerations

The SWMP should include a policy statement regarding importation of waste from other regional districts. The content of the policy can be developed during the SWMP development process. Factors to consider include:

- Prohibiting the disposal of waste from neighbouring regional districts will increase the longevity of the Forceman Ridge landfill.
- Allowing the disposal of waste from other regional districts will increase revenue to the RDKS, both because of increased volumes and because of the surcharge levied on waste from outside the service area.
- Prohibiting the processing of compostables and recyclables from other regional districts will help to ensure there is enough capacity to process compostables and recyclables generated in the RDKS.
- Allowing compostables and recyclables from other regional districts to be processed in the RDKS could lead to greater efficiencies and economies of scale. The RDKS would also benefit from increased revenue from compost tipping fees. There would be no direct benefit to allowing out of region recyclables to be processed locally. However, some recyclables may be used on site at Forceman (e.g. glass cullet), which would reduce the cost of procuring equivalent materials.

9 Contaminated Soil Handling and Use

9.1 Key Information and questions

The RDKS has reduced tipping fees for contaminated and other soils at all its facilities, because the soils can be used on site. By using soil brought in by contractors, the RDKS defers costs associated with obtaining the soil (e.g. cutting down trees, developing pits).

Some contaminated soil that is not free draining (e.g. glacial till) can be treated onsite by enclosing it, remediating it, and treating the leachate on site. The treated soil can then be mixed with compost and used to grow grass on closed landfills.

Other soils that cannot be treated on site may be still be used and contained in building berms for the next phase.

Issue: The SWMP should specify how different types of contaminated soil will be used.

9.2 Stakeholders

- Generators of contaminated soil
- RDKS
- MOE
- Communities in the throughout the regional district

9.3 Considerations

By specifying how different types of soil are used on site, the SWMP can solidify existing practices by creating policies. This may help to alleviate concerns that some residents have about how contaminated soil is treated and handled on site.

10 Recycling Collection in the Hazelton and Highway 37 North Service Area

10.1 Key Information and questions

There is currently no standardized service for the collection and management of recyclables in the Hazelton and Highway 37 North Service Area. The District of New Hazelton is the only local government to provide residents with curbside collection of recycling (an unlimited amount is collected biweekly). All residents within the service area may drop off printed paper and packaging at recycling depots, but the depot locations are not convenient for all. The depot in New Hazelton operates under the Recycle BC program. The recycling drop-off facilities at the Kitwanga Transfer Station are fully funded by the RDKS. The RDKS also intends to establish drop off locations at the Meziadin Landfill and Iskut Landfill. As the existing depot in Stewart is about to cease operations, the RDKS will also establish recycling drop-off facilities in Stewart, which will accept PPP and cardboard.

Depots typically collect less per capita than curbside collection programs, because of the increased convenience that curbside collection provides. When a local government implements a curbside recycling program, it can offer incentives to participate in the recycling program, such as reducing the frequency of garbage collection, or by reducing the volume of garbage that is collected for the standard fee, while allowing an unlimited quantity of recycling. This is most applicable in areas that have curbside garbage collection; in the Hazelton Service Area all incorporated areas and many First Nations offer curbside garbage collection, but residents of Electoral Areas must self-haul their garbage to the local disposal site. There are currently no disposal fees for residential garbage, so it is more difficult to provide an incentive for recycling for residents who self-haul their garbage.

Through the SWMP development process, the RDKS would like to explore the viability of providing curbside collection of recyclables to most households in the Hazelton and Highway 37 North Service Area. This could be modeled on the service in the Terrace Service Area, where the City of Terrace, Kitsumkalum First Nation and RDKS each provide comparable services within their jurisdictions, or a different system could be implemented (e.g. the RDKS could be responsible for all curbside collection of recyclables). Regardless of the service delivery model, the RDKS would likely play a major role in the processing and marketing of the materials and would continue to endeavour to have Recycle BC participate.

Issue: Should the RDKS work with municipalities and First Nations to implement a curbside recycling program throughout the Hazelton and Highway 37 North Service Area? Are residents willing to pay more for waste management in order to divert more from disposal?

10.2 Stakeholders

- Municipal governments in the Hazelton Service Area
- First Nations in the Hazelton Service Area
- Residents of the Hazelton Service Area
- RDKS
- Hazelton recycling depot
- Recycle BC
- Do Your Part Recycling

10.3 Considerations

Recycle BC is not expected to agree to funding or participating in a new curbside collection program in the near term. Some municipal and First Nation governments may wish to provide the service directly to increase local employment, whereas others may prefer to have the RDKS manage the collection contract. Residents who already recycle at the depots and RDKS drop off sites will likely welcome the introduction of a curbside service, if they believe the service is provided for a reasonable cost.

Before implementing the service, the RDKS will need to confirm where the recyclables can be taken for processing (based on processor capacity and proximity). Processors may have additional requirements that must be taken into consideration and that may affect the cost of the program.

11 Single Use Plastic Bags - Solutions

11.1 Key Information and questions

The RDKS could use the new SWMP as a method of diverting single use plastic bags from the waste stream. This may include introducing a ban on the distribution of free plastic bags by retailers. Recently, the City of Victoria became the first city in British Columbia to ban the distribution of free plastic bags. The ban applies to “single use plastic checkout bags”, meaning bags used by customers to transport purchases (including take out and delivered food). When the bylaw was proposed, some Victoria residents opposed the idea, because they used the bags as a kitchen waste catcher (so they are not truly single use).

In Victoria, businesses are allowed to sell paper or reusable bags to customers, but only if a customer requests a bag (businesses may not offer). There is a minimum charge of \$0.15 for paper bags and \$1 for reusable bags (these amounts will increase to \$0.25 and \$2, respectively, in January 2019).

The bylaw in Victoria allows bags to be distributed at no cost for the following purposes:

- Packaging loose bulk items such as fruit, vegetables, nuts, grains or candy;
- Packaging small hardware such as nuts and bolts;
- Containing or wrap frozen foods, meat, poultry and fish (whether pre-packaged or not);
- Wrapping flowers, potted plants;
- Protecting prepared foods or bakery goods that are not pre-packaged;

- Containing prescription drugs;
- Transporting live fish;
- Protecting bed linens, bedding or any large item that can't easily fit in a reusable bag;
- Protecting newspapers or other printed material left at a residence or business; and
- Protecting clothing after it has been professionally laundered.

The ban also does not apply to plastic bags purchased for a specific use, such as garbage bags.

The bylaw was passed after several years of consideration and research. It will come into effect six months after it was passed, to allow for additional education and awareness-raising. The City has budgeted \$30,000 for education. Enforcement will start six months after the bylaw comes into effect.

Issue: Should the RDKS pass a bylaw banning the distribution of free plastic bags? Is the City of Victoria bylaw a good model, or would a different approach be preferred in the RDKS?

11.2 Stakeholders

- RDKS
- Retailers
- Customers
- Recycle BC

11.3 Considerations

Those in favour of a plastic bag ban often cite the following reasons:

- Plastic bags pollute land and water. Plastic bags never break down, and are harmful to wildlife, including marine life.
- Plastic bags are made from non-renewable resources and contribute to climate change.
- The cost of manufacturing and distributing plastic bags is incorporated into the cost of purchased goods; the cost of clean up is much higher and is covered by taxpayers.
- Plastic bags are difficult to recycle. They are a common form of contamination in other recycling streams and can get caught on recycling equipment.
- Reusable bags are an easy alternative.

Those who oppose a ban on plastic bags typically have the following objections:

- Plastic bags are convenient.
- Plastic bags are cheap.
- Plastic bags do not take up much space in landfills or garbage collection vehicles.
- Plastic bags can be reused (either multiple times for their original purpose, or for single use purposes such as containing household garbage).
- Recycled plastic bags have value as feedstock for manufactured lumber that can be made into fencing, decks, playground equipment etc. Banning plastic bags will reduce the amount of manufactured lumber available.
- Less energy is used to make and distribute plastic bags than paper bags.
- Reusable bags must be used many times before their environmental impact is less than a plastic bag.

A resource guide was recently released by Recycle BC to help retailers encourage customers to bring their own bags. An alternate approach to passing a bylaw could be an education and awareness campaign based on the Recycle BC resource guide. It is also relevant that the latest draft stewardship plan from Recycle BC includes single use plastic bags as a form of packaging that would be covered by their Extended Producer Responsibility (EPR) program. Much of the RDKS is not covered by Recycle BC’s program.

12 Expansion of the list of Prohibited Wastes

12.1 Key Information and Questions

The Terrace Area Waste Regulation Bylaw (Waste Regulation Bylaw 671) defines several classes of Prohibited Waste. Class C Prohibited Wastes are EPR materials, tires (whether or not they are EPR materials), and cardboard and paper products (whether or not they are EPR materials).

Additional materials could be added to the list of Class C Prohibited Wastes. These include packaging materials that are not covered by EPR (i.e. Styrofoam, plastic, metal and glass packaging from the ICI sector), textiles, furniture etc. Before adding any materials to the list of Class C Prohibited Wastes, it is important to verify that alternate receiving and processing facilities exist that are as convenient as the transfer station and that have capacity to manage the volume that would be generated as a result of being classified as a prohibited waste. The following table illustrates the possible handling of the materials proposed for inclusion as Class C Prohibited Wastes.

Material	Alternative to Disposal	Already exists?
Styrofoam (ICI)	Densify, ship to lower mainland	No
Plastic, metal and glass packaging from ICI sector	Sort, bale, ship to lower mainland	Do Your Part Recycling may be able to manage additional capacity; no facility exists in Hazelton and Highway 37 North Service Area
Textiles	High quality: Reuse/thrift stores Lower quality: Bale and ship to lower mainland	High quality: Yes Lower quality: No
Bulky items (i.e., furniture and mattresses)	High quality: Reuse/thrift stores Lower quality: deconstruct; bale and ship textile portions to lower mainland, recycle metal portions; grind wood portions	High quality: Yes Lower quality: No

12.2 Stakeholders

- RDKS
- Owners/operators of existing alternatives to landfilling (e.g. thrift stores, recycling facilities)
- Residents
- ICI sector
- Provincial government (due to potential for some of the additional materials to be classified as EPR materials in the future)

12.3 Considerations

There has been a large shift in the way waste is managed in the RDKS in the past five years. Some waste generators may still be adjusting to the shift and need support meeting existing disposal restrictions. Adding disposal restrictions could result in backlash.

Another potential drawback to implementing more disposal restrictions is that local alternatives to disposal may be overwhelmed with material. This is particularly true because the RDKS's approach to date has been to direct materials away from its facilities, rather than providing a "one stop drop" facility at its transfer station. The RDKS may need to assist organizations that offer alternatives to disposal (e.g. help thrift stores manage donations that cannot be resold). The RDKS already supports textile recycling in this way.

Support for expanded disposal restrictions would come from generators who want to maximize waste diversion, and from owners/operators of facilities who recognize the business opportunity created by disposal restrictions.

13 Household Hazardous Waste Collection

13.1 Key Information and questions

Many types of household hazardous waste (HHW) are covered by EPR programs. EPR programs are regulated by the provincial government. EPR programs for HHW include:

- Electronics and electrical items, including:
 - Batteries (household),
 - Cell phones and peripherals,
 - Electronic equipment and devices,
 - Information, technology and telecommunications,
 - Lamp and lighting equipment,
 - Large appliances,
 - Outdoor power equipment,
 - Small appliances, tools, sports and hobby equipment,
 - Smoke and carbon monoxide alarms,
 - Thermostats;
- Lead-acid batteries;
- Paints solvents, pesticides & gasoline;
- Pharmaceuticals;
- Used oil & antifreeze.

Throughout the province, most EPR programs for HHW operate depots or return-to-retail programs. Depots may be co-located at disposal facilities operated by local governments or as standalone facilities. In areas without depots, the EPR program usually offers annual or bi-annual "round up" events.

The RDKS conducted an inventory of EPR depots in 2014 and updated the data for the Hazelton Service Area in 2016. The inventory is summarized below.

Materials Accepted	Stewardship Program	Number of drop off locations in the Hazelton Service Area	Number of drop off locations in the Terrace Service Area
Batteries (household)	Call2Recycle	5	11
Cell phones and peripherals	Call2Recycle/Recycle MyCell	5/0	11/1
Electronic equipment and devices	Encorp Return-It Electronics	1	1
Information, technology and telecommunications	Encorp Return-It Electronics	1	1
Lamp and lighting equipment	LightRecycle	1	3
Large appliances	Major Appliance Recycling Roundtable	2	2
Outdoor power equipment	Outdoor Power Equipment Institute of Canada (OPEIC)	0	1
Small appliances, tools, sports and hobby equipment	ElectroRecycle	1	1
Smoke and carbon monoxide alarms	AlarmRecycle	0	1
Thermostats	Switch the 'Stat	0	0
Lead-acid batteries	Canadian Battery Association (CBA)	1	3
Paints, solvents, pesticides and gasoline	Regenerations (Product Care)	1	1
Pharmaceuticals	Medications Return Program (MRP)	0	4
Used oil and antifreeze	BC Used Oil Management Association (BCUOMA)	0	6

The table above reveals that the whole regional district is lacking EPR services for thermostats. In addition, the Hazelton Service Area is missing depots for outdoor power equipment, smoke and carbon monoxide alarms, pharmaceuticals and used oil and antifreeze.

At the household level, some types of HHW, such as batteries, lighting products, pharmaceuticals, and used oil and antifreeze, are generated on a fairly regular basis. Other types of HHW are generated more sporadically, such as during a construction or renovation project. At the community level, all types of HHW have the potential to be generated on a regular basis; it is therefore important to have facilities in place to allow residents to manage all types of HHW responsibly. While some residents may be aware of the potential for a future round up event and be willing to hold onto HHW until the event, others may

not know that that option exists, or they may not have the space or willingness to store HHW until the event.

There are also some types of HHW that are not covered by EPR programs. These include concrete sealer, driveway sealer, nail polish, and products that cannot be identified (e.g. products inherited in a house sale or in cases when the label has come off a container or become unreadable). There are currently no facilities in the RDKS for managing HHW that is not covered by EPR programs.

Issue: The RDKS would like to explore options for making it easier for residents to safely recycle or dispose of HHW, including materials not covered by EPR programs. Options could include:

- **RDKS-funded curbside collection;**
- **Producer-funded expansion of the depot network to include areas currently not serviced;**
- **Regularly scheduled household hazardous waste round up events;**
- **RDKS-funded storage and marshalling of HHW at RDKS waste management facilities and producer-funded transfer from those facilities;**
- **Facilities to allow for the safe handling of orphan products;**
- **Lobby Province and Stewards to expand programs to include additional materials.**

13.2 Stakeholders

- RDKS
- Residents/businesses
- Retailers who sell products covered by EPR programs
- Product stewardship organizations

13.3 Considerations

In order to improve the quality of service offered to residents, the RDKS may choose to fund additional services beyond those in the approved stewardship plans written by each product stewardship organization. This is counter to the principals of EPR but may be the most practical and timely way for missing services to be provided.

14 Access to Services/Facilities in Other Service Areas

14.1 Key Information and questions

Bylaw 671-16 includes a provision for a 25% surcharge to be levied on waste deposited at a Waste Management Facility in the Terrace Service Area by any person from outside the Service Area and any person from an Industrial Work Camp (Section 8.3). According to Section 3.8, the Manager, Works and Services may authorize a person to deposit Solid Waste from outside the Service Area at a Waste Management Facility upon request, where the deposit of such Solid Waste is consistent with the operational certificate for the Waste Management Facility, and on such terms and conditions as the Manager deems appropriate. The bylaw does not differentiate between different types of waste; some types of waste are used on site at Forceman Ridge, and using that waste helps the RDKS avoid costs associated with obtaining similar materials. For example, soil that is brought to the site is used to build berms or for road base, and clean wood waste can be ground and added to the compost facility or used as road base. These waste streams help the RDKS avoid the cost of clearing areas and excavating soil and purchasing wood chips respectively.

Bylaw 671-16 does not address surcharges on cardboard and paper products brought to a Designated Recycling Facility. There is currently no facility in the Hazelton Service Area that is capable of managing the volumes of cardboard and paper products generated by the commercial sector. Currently the RDKS is accepting source-separated loads of cardboard and paper at its disposal facilities and is paying to have the material hauled to Terrace and processed. If a commercial generator were to haul its cardboard and paper products directly to the recycling facility in Terrace, that generator would pay \$99 per tonne, the same as generators from the Terrace Service Area (i.e. no surcharge). When the RDKS brings consolidated loads of cardboard and paper from outside the Terrace Service Area to the Designated Recycling Facility, it pays a negotiated tipping fee of \$125/tonne.

Issue: Should a surcharge be levied on all types or only specific types of waste that originate in neighbouring service areas?

14.2 Stakeholders

- RDKS
- Generators/haulers
- Designated Recycling Facility operator
- Service area residents and businesses

14.3 Considerations

Applying a surcharge to the disposal of some waste streams may align with the RDKS's overall goals. An argument can be made that the cost recovery model in the Terrace Service Area is based on the anticipated revenue from waste from within the service area and surcharges on waste from outside the service area, and that no exceptions should be made for waste from neighbouring service areas. However, some waste streams are beneficial to the RDKS because of their value. If those waste streams do not arrive at the RDKS facilities, then the RDKS will incur costs to obtain replacement materials. It could therefore be argued that the RDKS should encourage the deposit of those materials at its facilities to avoid the costs of obtaining replacements. Removing surcharges on specific, beneficial wastes streams would encourage the deposit of those materials.

Applying surcharges to cardboard and paper products from outside the service area is not appropriate. The only facility in the RDKS with the ability to process large amounts of cardboard and paper products is located in Terrace.⁴ A surcharge on cardboard and paper products from outside the Terrace Service Area would penalize generators from outside the service area for complying with disposal restrictions, especially during the interim period where no tipping fees are being charged for waste in the neighbouring service area. There is no reason to discourage generators and haulers from bringing their cardboard and paper products to the recycling facility in Terrace, and the facility operator does not incur any additional costs for processing materials from outside the Terrace service area (i.e. does not need to receive more revenue from surcharges to offset additional costs).

⁴ Haulers of commercial cardboard and paper pay the facility operator a tipping fee (which is set by the RDKS and is lower than the tipping fee for garbage at the transfer station, to encourage waste separation). The RDKS pays the facility a set fee per tonne processed and shares the revenue from the sale of the material with the facility operator. This system only applies to commercial cardboard and paper generated in the Terrace Service Area.

15 Landfill Gas Utilization/Carbon Credits

15.1 Key Information and questions

The Forceman Ridge Landfill has been designed to generate minimal landfill gas (LFG) and to capture and flare the majority of the LFG that is generated. LFG generation has been reduced by restricting the disposal of organic material and by keeping the active face covered to minimize the amount of rain that falls on exposed waste. LFG capture is achieved by a series of horizontal and vertical pipes that are installed as the waste is disposed. These efforts result in carbon reductions over the business as usual case. Emissions reductions at landfills are outside the local government corporate emissions boundary, as defined in the Carbon Neutral Workbook, and may therefore be used to generate carbon credits. The emission reduction efforts in the RDKS may be eligible for carbon credits if they meet the following additional conditions:⁵

1. Emission reductions have occurred before they are counted
2. Emission reductions are credibly measured by a third party
3. Emission reductions projects are beyond business as usual (BAU): projects must have started after September 26, 2007; must not be required to fulfill a federal or provincial government's legislated or regulatory requirement; and meet one of three tests (financial, other barriers or common practice).
4. Accounting of emission reductions is transparent (the project plan and its verification process are publicly available)
5. Emission reductions are counted only once (i.e. they have not been previously committed or retired as emission reductions)
6. Project proponents have clear ownership of all emission reductions

Assuming that carbon credits are generated, the RDKS must decide how to allocate them. Carbon credits can be used to offset emissions (to help a local government become carbon neutral) or can be distributed to member municipalities to help them achieve carbon neutrality. Credits can also be sold to the Climate Risk and Investment Branch of the Ministry of Environment. This is a competitive process, and the types and volumes of offsets purchased by the province at any given time can vary.

Issue: What is the best use of any carbon credits that may be generated by the operations of the Forceman Ridge Waste Management Facility?

15.2 Stakeholders

- RDKS
- City of Terrace
- Ministry of Environment
- Service area

15.3 Considerations

If the RDKS and/or City of Terrace are already achieving carbon neutrality without the use of credits from the Forceman Ridge Landfill, then it may be most advisable to apply to sell credits to the Province. However, if any local governments are currently purchasing offset credits, then it may be more sensible

⁵ Becoming Carbon Neutral: Guidebook for B.C. Local Governments July 2014
<http://www.toolkit.bc.ca/sites/default/files/BecomingCarbonNeutralGuideV3.pdf>

to apply the credits locally. More information will be available after an outside firm quantifies the credits.

16 Audits of Residential Curbside and ICI Waste

16.1 Key Information and questions

The RDKS would like to be able to inspect residential garbage when it is set out for disposal to look for materials that should be in the recycling or organics streams. Staff refer to this practice as “curbside audits” or “can tipping”. The purpose of this enforcement approach is to encourage all residents to participate equally in the service. This approach is seen as a final option to pursue if diversion of materials remains low once education and awareness efforts have been fully implemented. Routes for can tipping would be selected on the basis of observed contamination rates at the transfer station, since the routes serviced by each truck are known. The routes being examined would be announced in advance, to give residents an opportunity to improve their practices before being inspected. The RDKS would also like to periodically publicize the routes with the best compliance, to encourage friendly competition between neighbourhoods.

Containers that are found to contain recyclables or organics would still be collected, but residents would be informed that they needed to start complying with the bylaws. Residents would be offered education and/or training before any penalties would be imposed.

Implementation will require coordination with the collection contractor, so that the inspections can happen before the waste is collected.

The RDKS would like this program to be approved in the SWMP so that it can later be implemented without need for further approval.

Issue: Can the RDKS use can tipping as a way of finding out which streets/routes need additional support to fully participate in the waste diversion system?

16.2 Stakeholders

- RDKS
- Residents
- Collection contractor

16.3 Considerations

Some residents may be uncomfortable with having their waste examined in front of their residence. However, the collection bylaw (RDKS Bylaw 674, section 17) allows the RDKS to inspect the waste set out for collection.

Some residents may cite barriers to proper sorting, including lack of space to store separate streams and lack of time to sort material. The RDKS is committed to working with residents to develop systems that work for them and enable them to participate fully. In particular, the RDKS would proactively offer workshops to multi-family buildings and other facilities in which space constraints may be an issue.

During the SWMP consultation work, the RDKS will confirm the overall diversion target and determine how much time, energy and goodwill should be spent on implementing the can tipping program, relative to its expected impact on the diversion rate.

17 Enforcement Strategy for ICI sector

17.1 Key information and questions

Currently the RDKS enforces disposal restrictions when waste is brought to the disposal or transfer facility. Any warnings or fines that are imposed are placed on the hauler who brought the waste in. It is up to the hauler to pass on the messages and/or fines to the generator responsible for breaking the bylaw. The RDKS would like to take a more proactive approach to working with ICI generators to ensure that they have the systems and training in place to meet the requirements of the bylaw. This approach is analogous to the source control programs used by other local governments to reduce pollutants in the liquid waste stream. The solid waste source control approach could include:

- An initial visit to every ICI location to determine their baseline waste management practices.
- Regularly scheduled visits to ICI generators that do not have appropriate systems in place. Work with management and staff to remove barriers and kick-start participation.
- Annual or bi-annual visits to ICI generators that do have appropriate systems in place
- Authority to conduct dumpster audits on any ICI generator to check how well systems are working

A benefit of this type of approach is that it levels the playing field for all ICI generators; those who have not implemented systems to segregate waste will be found, and they will not be allowed to have an unfair advantage over those who have spent time and money to put the necessary systems in place.

An enforcement strategy/mechanism is needed when a business is found to not have the right segregation systems in place and/or when non-segregated waste is found during a dumpster audit. During consultation on the SWMP, a range of enforcement options will be presented and discussed, including fines and requirements for more frequent system or dumpster audits.

The RDKS would like this program to be approved in the SWMP so that it can later be implemented without need for further approval. If this option is approved for the SWMP, implementation will require coordination with the collection contractor, so that the inspections can happen before the waste is collected.

The RDKS will need to decide if it will keep the option to penalize haulers who bring in non-conforming loads, or if this “source reduction” approach will replace that practice. It is recommended that both tools be used.

Issue: Can the RDKS use a source control approach on solid waste for the ICI sector?

17.2 Stakeholders

- RDKS
- ICI generators
- Haulers

17.3 Considerations

ICI generators may object to the RDKS getting involved in their internal waste management processes and inspecting their waste.

Haulers will likely support this approach, as it should reduce the likelihood of them bringing in non-conforming loads and being required to pay a fine. Haulers may also find that they do not need to spend as much time conducting outreach to their ICI clients, since the RDKS would be taking on a proactive role.

18 Requirements for Deconstruction (instead of demolition)

18.1 Key information and questions

Demolition projects can generate large quantities of waste, much of which can be avoided if a more methodical approach is taken to deconstruct the building. Deconstruction can salvage reusable materials and makes it easier to segregate recyclable materials. Commonly salvaged materials from deconstructed buildings include structural beams and dimensional lumber, wood flooring, cabinetry, casework and doors, architectural details, brick and stone. Salvage operations can range from selective removal of high-value elements to full-scale deconstruction.

Building salvage is becoming an increasingly important additional service a demolition company can offer. More customers are looking for waste reduction on the jobsite and are using green building rating systems such as LEED and Built Green that call for waste reduction, salvage and recycling

Deconstruction can be supported by adding a new permit category for “advance deconstruction permits”, which are issued before building permits. Demolition and building permits are typically issued simultaneously, which encourages buildings to demolish buildings as quickly as possible. By issuing an advance deconstruction permit, builders can take the time necessary to deconstruct, rather than demolish. These types of permits are offered in both Seattle and Vancouver.

Deconstruction can also be supported by making a deconstruction permit significantly less expensive than a demolition permit. The savings from the deconstruction permit can be used to offset any additional costs associated with the reuse and recycling of building materials.

Many local governments run a pilot program for deconstruction before launching a full-scale program. The pilot program can test the viability of the market for reusing and recycling salvaged materials. The pilot program could be as small as a few buildings that go through the deconstruction process voluntarily.

Issue: Will the introduction of a deconstruction permit make a significant difference in the amount of waste disposed in the RDKS, and do alternatives to disposal exist for the majority of the materials that would be generated by deconstruction? Rather than offering two types of permits (deconstruction vs. demolition) at two different price points, should the RDKS require deconstruction?

18.2 Stakeholders

- RDKS
- Member municipalities
- Construction and demolition industry
- Residents
- ICI sector

18.3 Considerations

The building industry may resist the idea of more expensive demolition permits and/or deconstruction requirements and may need assistance in finding markets for reusing and recycling salvaged materials. The RDKS should consult with the local building industry to fully understand any barriers (and perceived barriers) to deconstruction and work with the industry to overcome those barriers.

Universal implementation of a deconstruction permit may be difficult, because there are some areas of the RDKS that do not issue building permits (i.e. unincorporated areas). This may lead to a slow down in demolition in areas with permits and an increase in demolition and construction in areas without permits.

Deconstruction requirements (or requirements to qualify for a deconstruction permit vs. a demolition permit) should take into account local market conditions. The SWMP should address the issue of the extent to which a building will be required to be deconstructed.

19 Require Waste Management Space in New Construction

19.1 Key information and questions

A common barrier to establishing recycling and organics diversion programs in multi-family and ICI buildings is the lack of available space for collection containers. When the multi-family and ICI buildings were constructed, space was allocated only for garbage containers; providing space for recycling and organics containers may mean giving up parking spaces or making other difficult trade-offs.

To reduce the long-term impacts of this barrier, new buildings should be designed to accommodate all current and foreseeable waste streams. Many municipalities in North America now include mandatory minimum space allocations in their building requirements for both new developments and significant re-developments and renovations. Examples in BC include municipalities and Metro Vancouver and the City of Kamloops. Metro Vancouver, in consultation with its member municipalities and the development community, developed a model bylaw to create consistent space requirements within the regional district and to reduce the amount of work each municipality would have to undertake to prepare their own policy. Variations on the model bylaw have been adopted by several municipalities, including Pitt Meadows and the City of Richmond. The City of Kamloops' zoning bylaw also requires commercial multi-family developments to provide space for both garbage and recycling.

The 1995 SWMP called for the RDKS to encourage its member municipalities to develop bylaws requiring new ICI and multi-family developments (greater than four units) to include areas for storage of waste, recyclables and compostables. No such bylaws were drafted or approved.

Issue: In order to facilitate increased participation in waste diversion among residents of multi-family buildings and in the ICI sector, consider mandating a minimum amount of space that must be dedicated to the storage of segregated waste streams. The new standards would apply to new construction and significant re-development.

19.2 Stakeholders

- RDKS
- Member municipalities
- MF and ICI building owners

- Developers
- MF and ICI building tenants
- Waste Haulers

19.3 Considerations

Some stakeholders may feel that the relatively slow rate of development in the RDKS does not justify adding requirements, and that individual building owners/managers should be left to figure out solutions to having enough space for the storage of all waste streams.

Occupants of existing multi-family and ICI buildings with insufficient storage space may be disappointed that the new regulation does not apply to their buildings.

20 Limits on the Cost of Recycling Printed Paper and Plastic

20.1 Key Information and Questions

PPP recycling in the Terrace Service Area is relatively well established. The curbside programs in the City of Terrace and the District of New Hazelton are partially funded by Recycle BC. The curbside program in the Greater Terrace Area is funded by property taxes and revenue from the sale of materials. Recycling PPP in the Greater Terrace Area is made easier by the existence of a local consolidation and transfer facility that also processes PPP under contract to Recycle BC.

In the remainder of the regional district the cost to collect and transport PPP to a processing facility is and to then ship it to market is extremely high. No subsidies from Recycle BC are available at this time. Residents of the RDKS outside the Terrace Service Area must determine how much they are willing to pay to recycle PPP.

Current costs to recycle PPP in the Hazelton and Highway 37 North Service Area include a processing fee of \$399 per tonne, plus a hauling fee that averages around \$1000 per tonne. By comparison, the cost to landfill the material is less than \$100 per tonne. Landfilling also has external costs such as the opportunity cost of using up landfill space and the costs of extracting and processing virgin materials into consumer goods. However, the RDKS recognizes that there is likely a limit on how much residents are willing to pay to have their PPP recycled, and that alternatives to recycling should be explored.

Alternatives for managing the paper and cardboard portions of the PPP stream include composting and burning. Composting and burning would both cost less than the current cost of recycling.

Alternatives for managing the glass portion of the PPP stream include crushing it and using it as road base or drainage material at the landfill. The cost of crushing would be offset by savings associated with not needing to buying road base and drainage material.

There are no local alternatives (other than landfilling) for the plastic portion of the PPP stream.

Issues: What should the cost threshold be for recycling PPP? What is the preferred alternative to recycling?

20.2 Stakeholders

- RDKS
- Member municipalities

- Residents of areas of the RDKS that are not currently eligible for Recycle BC funding

20.3 Considerations

There are two distinct opposing views for this issue. Some may feel that conserving landfill space and virgin resources is the top priority, and therefore that PPP should be recycled at any cost. Others may place a lower priority on resource conservation and support PPP recycling only up to a certain cost limit.

21 Limits on the Cost of Recycling Cardboard

21.1 Key Information and Questions

The RDKS accepts loads of cardboard in large bins at the Hazelton Waste Management Facility and the Kitwanga Transfer Station. It will soon begin operating a similar program at the new Stewart Transfer Station. Cardboard from the ICI sector is not eligible for Recycle BC funding. Residential cardboard is not currently part of the Recycle BC program in Kitwanga. The RDKS recognizes that it may not make sense to recycle cardboard at any cost. Once a cost threshold is reached, alternatives to recycling should be implemented. These alternatives could include composting or burning (at the Meziadin Landfill).

Issue: What should the cost threshold be for recycling cardboard? What is the preferred alternative to recycling?

21.2 Stakeholders

- RDKS
- Member municipalities
- ICI cardboard generators

21.3 Considerations

As with PPP in the previous section, some stakeholders may feel that conserving landfill space and virgin resources is the top priority, and support cardboard recycling at any cost. Others may place a lower priority on resource conservation and support recycling only up to a certain cost.

Appendix 6 – 2018 Advertising for the SWMP and PTAC recruitment



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NEWS

Telkwa mayoral candidates offer their visions

Brad Layton aims to promote growth and change provincial funding

By Michael Grace-Dacosta

When Telkwa Mayor Darcy Repen announced he wouldn't be seeking re-election, Brad Layton said he knew he had to step up.

"I was worried about whether we [were] going to get somebody who knows the system and is passionate about it. So I decided I'll run," Layton said.

Layton has been a part of the Village of Telkwa council since 2011. Layton served as acting deputy mayor when Repen went on medical leave earlier this year. He is also one of the board of directors for the North West Regional Hospital District.

Layton is competing with Telkwa Senior Housing Society president John McDivitt to become mayor.

Layton said one of his priorities as mayor will be to fix the water lines and sewers. The water lines are reaching the end of their life cycle, Layton said, and need to be upgraded. Issues with downstream piping, looping systems and sewers also needed to be addressed, the mayoral candidate said.

Fixing the piping problem will also help with amount chlorine that gets into the village's water, Layton said.

He added in order to pay for all these upgrades, Telkwa will have to rely on funding from the provincial government.

"We don't have the money to play with that other communities have," Layton said.

Layton said as mayor he will make sure the Province understands the financial struggles a "bedroom community" like Telkwa faces.

Bedroom community are suburbs where the majority of residents commute to a neighbouring city for work, leaving less business and industry tax dollars to be collected.

"The Province needs to recognize that we can't have 10 people on staff writing grants or go after the same grants as Smithers or Prince George," Layton said.

"We have four in-office staff that have to do everything from finance, payroll, bylaws, and we also have to have them write our grants. So how do you compete with a community that can have two or three full-time economic development and grant writers?"

Layton said he will push the Province for a funding mechanism that will level the playing field for communities like Telkwa.

Economic development will be another priority for Layton if elected. Layton said with the soon-to-be built water tower the village will actually be able to accommodate more businesses. Layton said he will promote the benefits of Telkwa to businesses at the Union of BC Municipalities Convention.

"We need to grow," Layton said. "We need to get a broader tax base."

Layton believes having more recreational activities for children and teens in Telkwa is vital to the growth of the community.

"That's going to be [one of] my high priorities in the next four years," Layton said. "Get some funding, get some groups going ... to start getting some of these opportunities in our community."

Layton also stressed he will never take a shortcut to solve any issues he may face as mayor.

"In the next four years I will not agree to or vote in favour of band-aid solutions," Layton said. "Things need to be built for the future. If we get a choice to do something that's going to do good for 10 years or is going to suit the community for 50 years, I'll be going for the 50-year solution at all times."



Village of Telkwa councillor and mayoral candidate Brad Layton.

Contributed photo

John McDivitt wants to cut taxes, stop payment on Hwy 16 bus to Burns Lake

By Michael Grace-Dacosta

Coarse language is used in this article.

Change is coming to Telkwa.

Telkwa Mayor Darcy Repen has announced he will not be seeking reelection, opening the door for someone else to lead the village.

Telkwa Senior Housing Society president John McDivitt and current Village of Telkwa councillor Brad Layton are vying for the job.

McDivitt, who served two terms as a village councillor for one term in the early 2000s and the other in the previous council, said the poor condition of Telkwa's water pushed him to run.

"I have been drinking horrible water for about four years and it stinks," McDivitt said. "I decided nobody done nothing and I was labeled a bitcher, so the best bet is [to] fix the problem myself."

McDivitt said he is already in contact with someone knowledgeable about water treatment plants that can fix the issue.

If elected, McDivitt said he would cancel Telkwa's contract with BC Transit for the bus that travels from Smithers to Burns Lake and back, stopping in Telkwa along the way three times per week.

According to McDivitt, this would save the Village \$6,750 a year.

That bus route has all municipalities and regional districts along Highway 16 pay for routes from Terrace to Prince George. The \$5 Smithers-Burns Lake route and \$2.75 Smithers-Witset route are the least used according to the B.C. Ministry of Transportation, which listed about 100 rides per month on the Burns Lake route and 90 per month on the Witset route as of this past February.

Prince Rupert chose not to take part in the Highway 16 Transportation Action Plan program, though BC Bus North replaced Greyhound and connects the coast to Prince George weekly. Telkwa does not pay for BC Bus North, which is backed by \$2 million in provincial funding.

Smithers and Telkwa also have a bus route that runs Monday to Saturday.



Telkwa Senior Housing Society president and Telkwa mayor candidate John McDivitt

Contributed

Another priority for McDivitt is lowering taxes. The housing society president said he would drop taxes on sewer and water by \$400 in his first year.

When asked how the Village, which has struggled financially for a number of years, could afford this, McDivitt said would institute a hiring freeze and stop unnecessary purchases to come up with the money.

McDivitt pointed to the Village buying a new plow truck as wasteful spending.

The housing society president also proposed using tax breaks to attract more businesses to Telkwa.

McDivitt said he isn't interested in the fame or power that comes with being mayor as he simply wants to do what's best for the village.

"I strongly think politicians, especially here, they might go in with really good ideas [but] once they get a taste of politics they want something more," McDivitt said.

"They want provincial politics or federal politics ... and they forget who elected them in the first place."

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Regional District of
Kitimat-Stikine

Hazelton company forced to lay off 172 mine workers

Pretivm extends jobs invite to Tsetsaut employees

By Chris Gareau

Hazelton-based Tsetsaut Ventures Ltd. has sent out 172 layoff notices after negotiations failed with Pretivm to continue contract work at Brucejack Mine, according to Tsetsaut owner Darlene Simpson.

She said she and her husband and co-owner George Simpson were "gutted on rates." They could not divulge the offers due to an agreement with Pretivm, she said, but did give examples of what going rates were for some of the services they offered.

The jobs lost would be in a variety of areas. "We offer them cooks, housekeeping, buses, vans, operators, we've been freighting, road maintenance," explained Darlene Simpson.

Workers still have about 12 weeks until the layoffs take effect.

Tsetsaut uses suppliers and hires most people from Houston to Terrace, said Simpson.

"Pretivm won't talk to us anymore," she said.

Simpson is from the Skii km Lax Ha First Nation according to the Indigenous Business and Investment Council, a nation of 30 people surrounded by Gitxsan territory.

She pointed out that the company is a big employer of Indigenous people along with other locals.

Pretivm responded through executive vice president Michelle Romero: "Darlene and

Workers still have about 12 weeks until the layoffs take effect.

George Simpson and their company Tsetsaut Ventures Ltd. (TVL) have been a big part of the Brucejack project, and we appreciate the role their contracting company TVL has played since we first started out as an exploration company seven years ago. We have always been supportive of their growth and success as a contracting company at Brucejack," read the email.

"Our transition to mining operations has brought changes throughout Pretivm, and the changes in our management of the Brucejack site are enabling us to successfully perform at a new level both safely and efficiently for the long haul.

"The maintenance of the 75-kilometer long mine access road and lower support camps is a critical part of our operations."

Romero's email said on Sept. 12 that re-negotiations were still ongoing with Tsetsaut.

"Regardless of the outcome of those negotiations, which are based on commercially competitive considerations, we're committed to maintaining a high level of local employment and supporting long-term capacity building for the workforce in local communities.

"As part of that commitment, we would certainly extend opportunities for employment to TVL's employees for available roles."



Tsetsaut Ventures Ltd's George Simpson (left) with Pretivm president, CEO and director Joseph Ovsenek in 2013, before the Brucejack Mine was developed. (Indigenous Business and Investment Council photo)

Telkwa's Rural Party co-founder reacts to pro-NDP accusation

By Barry Gerding

The Telkwa co-founder of the new B.C. Rural Party says the Liberals are spreading a false accusation that he is an NDP supporter.

Darcy Repen says he has been a vocal critic of both the B.C. Liberal Party and B.C. New Democratic Party in the past for not being strong advocates of rural regional development.

"That accusation is 100 per cent false," said Repen. "I have never supported the NDP or worked on an NDP leadership campaign. I am disappointed a Liberal MLA would utilize false information in that way."

"That is exactly why so many of us today question the integrity of our politicians and the political process in this province."

Repen, the mayor of Telkwa who is not running for a second term this October, was accused by Kelowna-Lake Country MLA Norm Letnick last week of being a campaign supporter of Premier John Horgan.

Repen's political party co-founder Jonathan Van Barneveld, a Houston municipal councillor, was also noted to be a past president of the NDP provincial youth wing of the party.

Linda Larson, the Liberal MLA for Boundary-Similkameen, also reiterated Letnick's claims, calling it "just plain silly" to form a new political party and not acknowledge past personal political affiliations.

"If you are an NDP supporter just say it, and don't just create a new political party to do the same thing. But I think there is fertile ground in B.C. especially with the promotion of proportional representation. You could start to see more marginalized small political parties start to pop up."

Repen argues political affiliation is a false red herring, saying the B.C. Rural Party is a response to an unfair and ill-thought out excess of infrastructure dollars being devoted to the highest populated jurisdictions of the province, namely the Lower Mainland and southern Vancouver Island.

Repen says that is not an NDP or Liberal issue, as both fall prey to playing to the voters in those high density urban areas.

He said frustration in northwest B.C. led in 2014 to the creation of the Northwest Resource Benefits Alliance, a political lobby group supported by municipal governments from Vanderhoof to Terrace to encourage Victoria to spend more infrastructure dollars in their communities.

He cited the example of a badly needed water reservoir enhancement project for Telkwa, lack of funding for which had placed a moratorium on residential development growth.

"The funding was finally allocated last year for that project but we've been waiting 15 to 20 years for that to happen. That has placed



Telkwa Mayor Darcy Repen

roadblocks on development and prevented Telkwa from becoming a more sustainable community by now," he said.

Repen feels the population growth of the Lower Mainland is placing more intense pressure on urban growth, while long-time or retiring Greater Vancouver residents are looking to move elsewhere for a rural or smaller urban community to live.

"Instead of pouring money into huge infrastructure projects down there, we should be looking at how to enhance the sustainability of the rural communities in our province that could absorb some of that population movement and take some of the pressure off the Lower Mainland," he argued.

He cited the example of the Okanagan, in particular Kelowna, which has seen rapid growth caused by people in Alberta and the Lower Mainland making a lifestyle decision to relocate in the valley.

"I think Kelowna can be held up as a model for the type of development we want to encourage in other communities, where they can grow into smaller cities and have the amenities and services to facilitate that growth," he said.

"I would make the argument that for infrastructure investment, you get a bigger bang for your buck making those investments in a region such as between Smithers and Terrace rather than in Greater Vancouver."

Larson said her attitude in the last more than five years as an MLA is to develop a relationship with all her riding communities and voters, not just those who voted Liberal.

"I don't think there is a disconnect between MLAs and their constituents in the Interior. I think the disconnect comes with people living in the Lower Mainland who work in an office tower and don't realize the importance of resource-based industries play in our province because they don't see it first-hand," Larson said.



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Terrace, Kitimat rallies foreshadow LNG announcement

By Brittany Gervais

Mere days ahead of LNG Canada's positive FID announcement Tuesday morning, more than 150 people attended pro-LNG rallies in Terrace and Kitimat last weekend.

Organized by the group The North Matters, the two rallies were meant to "show everyone who came out that they have a place to have their voice heard."

"It's really important that we keep this momentum going, to show that the majority does support this," said David Johnston, chair of The North Matters. "This isn't a question of one person being against something, it's the question of thousands of families being affected if this doesn't go through."

Around 60 people came to the Terrace rally at George Little Park on Saturday. Johnston estimated there were over 100 people present at the rally held the day before at the Lower City Centre parking lot in Kitimat.

The shows of support came just days before LNG Canada announced its \$40 billion positive investment decision on the \$40-billion project Tuesday afternoon. The export facility will super cool natural gas at Kitimat for tanker transportation to Asian customers.

"I almost didn't have a grasp on the reality of it, definitely very happy about it. It still hasn't sunk in, but I think this is a great step for the North," Johnston said following the announcement. To keep the momentum going, Johnston said The North Matters will continue hosting events and rallies for other LNG and resource development projects.

Fourteen northern B.C. mayors whose communities would financially benefit from the liquefied natural gas project wrote a letter in response to Smithers resident Michael Sawyer's request to the federal National Energy Board to examine whether it has the jurisdiction to review the Coastal GasLink plan to transport natural gas from northeastern B.C. to the planned LNG Canada plant in Kitimat.

"The development of this project would create billions of dollars in taxes for all levels of government which will support programs that are important to all of us, such as education, healthcare, infrastructure, and funding for environmental sustainability initiatives," the mayors wrote.

Terrace mayor Carol Leclerc, who signed the letter, was one of the several who spoke to the crowd on Sept. 29, accompanied by several council members, Kitimat council members and BC Liberal MLA Ellis Ross.

"We sit on the brink of a decision that will help diversify and help change the course of our communities," Leclerc said at the rally.

"When the LNG project goes ahead it will mean an opportunity for good paying jobs that will, in turn, feed our local economies. It means real



QUINN BENDER PHOTO

About 60 people gathered in George Little Park last Saturday at a The North Matters rally in Terrace to show support for LNG Canada

opportunities for local First Nations to prosper. It means infrastructure being built that will keep both the northeast and the northwest employed for decades."

Kitimat Coun. Rob Goffinet said he believes the LNG Canada project will "bring the whole northwest together."

Ross agreed the project is a giant step forward for industry in the region, but there may be some obstacles and challenges that come for Terrace.

"The problem is that Terrace doesn't get direct revenues, that's going to be a problem and that's what I was speaking to here. They're going to get some of the activity that's not desirable," Ross said.

He mentioned while Kitimat will see direct benefit from the project with a lot of contracts and activity, Terrace will remain as the central catchment area for northwest B.C. and will have to prepare for the sudden population influx and increased demand for services.

"You offer all the services, and there's going to be good coming over. But there's also going to be some not so good stuff that we're going to have to deal with. And Terrace is going to try as hard as it can to catch up, and try and get some of that benefit. And I'm in with you."

- with files from Rod Link

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People may not realize that stealing a campaign sign, or tampering with a sign, is a crime.

To those who are damaging or stealing signs, it is still a punishable offence.

The offender may be charged with theft, damage to property and trespassing.

Be responsible

Go out October 20 and vote!

COMMUNITY EVENTS & ANNOUNCEMENTS

THE HAZELTON'S

Submissions to the Bulkley Browser
MUST be to our e-mail or to our phone #.

Lunchtime Stretch & Relax Session. Escape from work. 30 minutes to restore & refresh yourself before the weekends. Fridays 12:15-12:45pm \$10 drop-ins. Yoga Shack BC. 4358 11th avenue, New Hazelton.

The Hazelton Community Concert Band commencing rehearsals Sunday, Oct. 14 & every Sunday 7pm thereafter. We practice upstairs @ the Mtn View United Church next to the Wrinch Hospital. Ever played an instrument such as trumpet, clarinet, saxophone, flute, tuba, trombone, horn, drums etc? Dust it off & join in good music, fun & fellowship. New members welcome.

Is there someone in your life who has a good story to tell? Join us at the **Hazelton Pioneer Museum & Archives** for a FREE 1 hour workshop on "Interviewing for History" noon-1pm Friday Oct 19 & 7-8pm Wed Oct. 24. All materials provided: Lorraine 250-842-6524

Seniors Meeting (Silver Threads) Sunday, Oct. 21 Activity rm. @ Roche View Lodge, 11th Ave. New Hazelton 3:30pm All seniors welcome. Mtg. lasts for 1 hr. then we go out for supper together.

Hazelton Family Life Society AGM: Oct 21, 6:30pm @ 3261 Sargent Cres. New Hazelton; refreshments will be served. New members welcome! info 842-2152

Dance Fit classes at Yoga Shack BC. Enjoy mixed movement of dance, strengthening, yoga, stretching, chair, stillness, self care, aerial & more. Now you can come & calm the nervous system & refresh the mind 7 days a week. View schedule online/drop in/ call. 4358 11th Ave, N Haz; yogashackbc.com; 250-643-4727

The Kispiox Valley Community Association is hosting another **Heart of the Valley Auction** October 25. Three time world champion Keith Dinwoodie will be the auctioneer again. We are raising funds to complete the renovations on our hall & grounds. There will be a 4 course dinner/ live music/a bucket, silent & live auction

Sat., Oct. 27, 10-3pm. **The World is An Apple** join us for a painting class & create your own version of a masterpiece by Vincent Van Gogh. This fundraiser is for the Good Apple pilot project by the Northwest Food Security Partnership. Instruction from by Martha Wertz, a professional artist in & member of the Smithers Art Gallery @ The Learning Shop, 1600 Omenica St. All supplies included. The project launches January 2019 & aims to build capacity for local food security in the Hazeltons by collecting apples & turning them into healthy, value-added products like dried apple rings & apple cider vinegar. For more information contact Laurie Gallant 778-210-MASH or visit www.nwfoodsecure.org.

Flu Clinics Oct 31, 9:30-11:30am, 1-3:30pm; Nov 2: 1-6:30pm; Nov 9: 9:30-11:30am, 1-3:30pm @ Hazelton Health Unit, Wrinch 250-842-4640

IndGenius will be hosting a free, **family science day** event in partnership w/ SCWIST, msinfinity, SIS (Science World) & Gitxsan Health November 4, 9-3pm. Food, free science activities & fun are provided!

Community Kitchen at the Learning Shop From 2-5pm every Thursday ending December 20. Build Food Literacy Skills, Confidence & Community @ the Learning Shop. Everyone welcome. Anissa 250-842-6500 or anissa@upperskeena.ca

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Call 250.615.6100 or 1.800.663.3208

Elect **Dean Paranich**
RDKS AREA "B" DIRECTOR



SPORTS

Peewee, bantam and midgets take over Smithers arenas

The Jim Bolster Hockey Tournament was an excellent contest in all three divisions. All concerned were happy and pleased with the organization of the tournament.

There were three divisions and the teams that took home gold were as follows:

- Peewee- Terrace
- Bantam- Terrace
- Midget- Kitimat

It was an honour to get to know a little bit about Jim Bolster himself and his passion for the game of minor hockey.

Jerry Watson came by on playoff day to honour his best friend and present the gold medal trophies to the winning teams.

Tournament coordinator Danielle Nixon wanted to give a big thank-you to Thomas Camus who photographed the tournament.

"His work is absolutely beautiful and his time was well appreciated. Parents can upload the photos for free through our website, and teams have been emailed links. It is also on our Facebook page," she said.

Nixon also wanted to thank LV Paving, PIR, Rugged Edge and Safeway for their support.

McDonald's was noted for bringing coffee for the parents to help keep them warm and the officials who did such a great job.



The tournament was a good opportunity for players to demonstrate the skills developed during recent training camps attended by many of the participants.

(Tom Best photo)

-Submitted story

LAKE KATHLYN PROTECTION SOCIETY
Annual General Meeting
 Monday, October 22nd, 2018
 Smithers Secondary School
 7:30 p.m.
 Everyone Welcome

CERTIFIED AIR BRAKES COURSE
B.V. Driving School Ltd.
 is offering an air brakes course in Houston on
Friday (evening) Nov 2nd: 6:00-10:00pm,
Saturday, Nov 3rd: 9:00am-5:00pm
& Sunday, Nov 4th: 9:00am-5:00pm
 Anyone interested in taking the course or wants more information about the air brakes course, please call
250-845-3288 or Cell 250-845-1112
 Email: bvdrivin@bvdrivingschool.ca • www.bvdrivingschool.ca
 Spaces are limited so call ASAP

National Paralympic Team coach sees Dieleman on track

By Tom Best

Jonathon Dieleman may once have been flailing around in the pool but that that is no longer the case.

Last summer at the Pan Pacific swimming trials, he crushed the Canadian record in the 100-metre breaststroke in the new classification he had to swim in the Paralympic category.

Dieleman lowered the record by a whopping 12 seconds in winning the event. Internationally, his time was good enough for a fourth place ranking worldwide.

The result keeps his national team status in good stead and will help him work towards his goal of a medal at the upcoming Tokyo Olympics in 2020.

Recently, Dieleman and his home pool coach Tom Best received a courtesy visit from Senior National Paralympic Team coach Vince Mikuska to discuss his training plan and technical aspects of his training.

"It was a very fruitful visit from my standpoint," said Mikuska after two sessions at the local pool.

He felt that his training plan was on course and no major suggestions were made.



Local paralympic swimmer Jonathan Dieleman recently set a Canadian record in the 100 breaststroke for his new classification by over 12 seconds. He hopes to reach the podium at the 2020 Olympics.

Tom Best photo

"Every time he asked a question or made a suggestion it was something we already had underway," said Best.

Dieleman felt that his plans for winter training will fit in well with his longer term goals. "My goal is to be on the podium in two years

at Tokyo so the plan is not a short one. Next summer is the world champs in South Korea so that's a big one but it's only a step along the way," he said.

When he started swimming several years ago, Best saw him and offered his help. Within two years, he was in the finals at the Rio Paralympic Games.

Along the way to South Korea, Dieleman will be swimming up to six times a week as well as work on his hand bike and strength training.

Authorized by Gladys Atrill • 250-877-2290

RE-ELECT Gladys ATRILL

for Smithers Council

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Born to lift

By Matthew Allen

There are many reasons Cindy Leighton loves powerlifting.

There's the discipline and consistency required to achieve excellence. There's the focus necessary to make a plan and stick to that plan to build your strength. There are the friendships forged when competing against other like-minded athletes.

But perhaps the most powerful reason for Leighton is the impact she has on her two young sons.

"I bring them to the gym with me sometimes and my boy Jacob says 'mommy I can't wait until I can workout too,'" she said.

"That's when I realize that this is really making an impact on my kids. Competing is time away from them but the time away from them is to be healthy and fit and strong."

Leighton competed in Western Canadian Regional Powerlifting Meet on Sept. 8. Competing in the open 125-pound division, Leighton—who stands at 5 feet 3 inches tall—won a gold medal while competing against some of the best powerlifters in the west.

Powerlifting competitions test athlete's strength in three basic movements: the bench press, squat and deadlift.

Leighton pressed 181.5 pounds in the bench press, lifted 286 pounds in the squat and pulled 341.2 pounds in the deadlift for a provincial record 809.7 pounds total.

A true perfectionist of her craft, Leighton said she was happy with the result, but felt she could have done even better with some of her lifts.

"I was happy with the gold, but not super excited about my numbers," she said. "I was going for a 363 pound record for the deadlift, but wasn't able to lock it out."

Leighton was introduced to powerlifting in 2014.

She had just given birth to her second son and was looking for a program to help her get back into a gym routine.

The gym where she started working out had a bench press and deadlifting event, and Leighton decided to enter. Despite not having a lot of experience, Leighton won the competition and fell in love with the sport.



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Is abnormal the new normal?

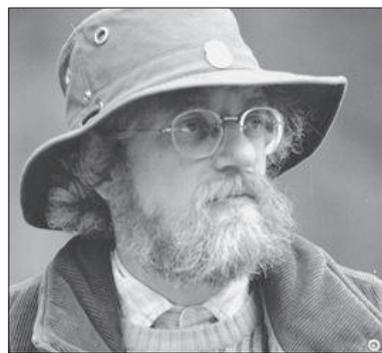
Continued from A23

entail undoing my wading belt and digging down into my back pocket. Ridiculous, I think. Why wouldn't it be there?

I engage the lock and enter the woods.

The muddy little stream that normally grabs at my boots is dry. Hemlock needles carpet the trail. The bush is sere as a rainforest can be, struggling and stressed after what must be the worst drought this area has ever had.

From the bluff presiding over the bend pool, I get a good look at the river. It's a shock. I can see the bottom



ROB BROWN

in vivid detail. In seasons past I could only see dark shadows. On the prime spawning gravel upstream, I can't see a single fish.

I make a few half-hearted casts as

I cross the river, with no reward. At this time of year, steelhead are rare. But, if they are there, they will be in fast wrinkled water. It's one of the few places that affords them cover. Operating on this assumption, I wade down the middle of the river then cross at a place I never thought I'd be able to. The banks are all but free of salmon carcasses. The air is free of the pungent smell of decaying flesh. It's abnormal. Or, is abnormal the new normal?

The Clay Banks Pool has turned into a run. At its head, I see some pinks. They skitter over the gravel. Behind them is a shallow riffle. Remembering my earlier commitment, I drift my fly through it. The rod arches, the reel handle spins. Soon I'm able to reach into the river and slide the barbless hook from the jaw of a really

fat trout. Over the next quarter hour, I free five more cutthroat and lose another two, all of them queued up to feed on the down-

stream dividends flowing from the exertions of those few humpies.

I look at my watch: 4:10. I make the just-one-more-cast and a fish big and strong enough to peel off my fly line and a bit of backing to boot races downstream. It's a struggle on the light rod, but with some difficulty, I bring a reluctant steelhead twice the length of my rod handle to the beach. The riffles below the Clay Banks instantly gather allure. I shelve the idea of heading out and work down to Mink Creek. My nearly complete absorption with the drift of my fly is shattered by Oona's guttural growl. A bark follows. Huffing follows that. I look up and there, a long cast away, a big boar grizzly is standing on two feet in the grass on the far bank.

I spin the spool thankful that it's a new reel devoid of click and able to free spool on the retrieve. The fly hits the tip top. I reflexively look away from the bear to assume as non-confrontational a posture as possible as I walk briskly upstream, quietly but firmly calling Oona as I do. She needs no persuasion.

I speed walk across the smooth rocks. In minutes, I'm crossing the tail of the Clay Banks Pool, my heart just below my Adam's apple. I glance back, relieved to find no bear following, and knowing full well he could have crossed the shrunken river in seconds and been on top of me. Nevertheless, I walk the trail back to Thunderbird Main at about twice the speed I would normally.

I take out my wallet. The key isn't in it. I take out my mobile phone. 27% of its juice remains. I send Karen a text accompanied by directions on how to get there. She sends a picture of a key.

It's the only one I could find. Is this it?

Doesn't look like it. Bring it anyway.

Thirty minutes later, Karen, Cait, and Baxter the Golden Bernadoodle pull up.

I plunge the key into the lock and turn. It works.

Thank god for cell phones, I tell them, thankful that I didn't have to walk 13 clicks to Beam Station Road.

RE-ELECT COUNCILLOR James CORDEIRO

Putting Terrace First

Authorized By James Cordeiro Financial Agent

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Call 250.615.6100 or 1.800.663.3208

ROTARY CLUB OF TERRACE SKEENA VALLEY Starfish Pack Project is Now In Full Swing!

The two schools named for our pilot project between Coast Mountain School District 82 & the Rotary Club Of Terrace Skeena Valley are:

- Cassie Hall with 13 packs
- Suwilaawks with 12 packs

WE PLAN TO INCREASE PACKS TO **48** OVER NEXT FEW WEEKS

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Kispiox Community School Recreation Program Job Posting

- ⇒ Kispiox Community School is seeking a Sports/Recreation Program Coordinator with skills in providing intramurals, afterschool sports, and community programs for our children.
- ⇒ This position is a part time position that will run from October 26th, 2018 to the end of April 1st, 2019.
- ⇒ 30 hours/week, \$25 per hour starting as soon as possible to April 1st, 2019
- ⇒ The ideal candidate should have a background in sports/recreation with the skills to be able to deliver the school/community sports programs.
- ⇒ The purpose of this program is to promote health, improve recreation programs for our youth and building a healthier community.

Positions require the following Qualifications/Skills

1. Current criminal record check and clear drug test
2. The successful candidate should have a completed a college or university program in community recreation or have an equivalent in experience working with children.
3. Experience with First Nation students and knowledge of First Nation Culture would be an asset.
4. Willingness to participate in local community events.
5. Excellent interpersonal skills, management skills, and ability to work as part of a team.

Interested candidates should email, fax or mail resume & covering letter by **October 26, 2018**

To:

Brian Muldon – Principal
Kispiox Community School
1439 Mary Blackwater Drive
Kispiox, B.C. V0J 1Y4

Email: bmuldon@kispioxschool.ca
Fax: 250-842-5799

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Spey Fly-Rod, Hardy, Uniqua, 14 food, #9, LN, \$550 250-842-5958

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Kid's bike, never used \$75 250-847-2778

Pool table & equipment w/ sets of balls \$400 846-9716

Two Conibear #330 beaver traps, 13 Conibear #120 marten traps, wolf snare cable & beaver, wolf & coyote lure, all barely used \$200firm 842-6247

Snowbird 1" wide by 36" long snowshoes, leather boot binding, never used; Manga Parabet Original 29.5" ice pick, EC. As package \$150firm 842-6247

Browning 45-75 lb. pull compound bow, 15 metal arrows 72" long, target & hunting tips, all in hard-shell case \$400 250-842-6247

TOOLS

2000 w generator set \$450 877-0277

Snowblower \$450 778-210-0498

Table saw \$100 250-846-9716

Radial arm saw, new, w/stand 250-847-2778

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Wanted: freezer burnt meat-fish, beef, etc for sled dog team Robynn 250-877-6196 or 877-8973

Wanted: freezer burnt meat-fish, moose, beef, etc for sled dog team Andy Busby 250-842-6229

Wanted: someone with a blade on a pickup to snow plow in the Driftwood area, who can show up automatically after a reasonable snow fall w/t having to be called & respond reasonably quick. Two other people in this Telkwa High Rd area who are also looking for the same as the company we have been using is no longer doing this. 250-847-4020 goatman@bulkley.net



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Stay Informed	Be consulted	Stay Involved	Collaborate
<ul style="list-style-type: none"> Read information Attend open houses 	<ul style="list-style-type: none"> Complete surveys Provide comments 	<ul style="list-style-type: none"> Request a meeting or workshop 	<ul style="list-style-type: none"> Join the Public & Technical Advisory Committee

Help improve waste reduction, reuse, recycling and disposal programs in our communities by joining the **Public and Technical Advisory Committee**.

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Economic Development Commission of the Regional District of Kitimat-Stikine. Here to keep you informed about regional tourism, business and industry.

Terrace, British Columbia

ecdev@rdks.bc.ca

Joined July 2015

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11:52 AM - 5 Oct 2018

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October 2018 - Snapshot of RDKS SWMP Webpage



NEW SOLID WASTE MANAGEMENT PLAN

New Solid Waste Management Plan

What is a Solid Waste Management Plan?

A Solid Waste Management Plan (SWMP) provides direction for how we will reduce, reuse, recycle and dispose of our waste for the next decade. All regional districts are required by the BC Ministry of Environment and Climate Change Strategy to have a SWMP.

The Regional District of Kitimat-Stikine (RDKS) approved its first SWMP in 1995. During development of the [1995 Solid Waste Management Plan](#) (/sites/default/files/zero_waste_files/1995_solid_waste_management_plan_-_vol._1_vol._2_-_the_plan_-_dec._1995.pdf), extensive stakeholder consultation was conducted and a Plan Monitoring Advisory Committee (PMAC) was formed to advise on implementation. Most of the objectives of the 1995 SWMP have been met through the construction of three new landfill facilities, two new transfer stations, recycling depots, a compost facility and closure of four landfills. New supporting programs include: three-stream curbside collection in the Terrace Area (garbage, recyclables and organics), new disposal restrictions, and cost recovery models (i.e., taxes and tipping fees). Programs are all supported by public education and outreach. A new SWMP is now needed to enhance the existing programs and chart a path forward for the future of solid waste management in the RDKS.

What will the Solid Waste Management Plan cover?

The intent of the new SWMP is to focus on improving operational efficiency to ensure that facilities and programs run as well as possible. The RDKS also intends to focus on maintaining and improving relationships with large waste generators and expanding service delivery to cover rural communities. RDKS anticipates the following major topics will be addressed by the new SWMP. Additional topics may be brought up during the early stages of consultation.

Anticipated Solid Waste Management Plan Topics	
Review of the cost recovery model for the Terrace Service Area	Single-use plastic bags - solutions
Review of the cost recovery model for the Hazelton and Highway 37 North Service Area	Expansion of the list of Prohibited Wastes
Dease Lake landfill ownership	Household hazardous waste collection
Telegraph Creek waste management solution	Landfill gas utilization/carbon credits
Limits on municipal-type solid waste from industry	Waste audits and enforcement strategy for Institutional, Commercial and Industrial (ICI) and residential sectors
Contaminated soil handling and use	Requirements for deconstruction (instead of demolition)
Recycling collection in the Hazelton and Highway 37 North Service Area	Limits on the cost of printed paper, plastic and cardboard recycling

What does the planning process entail?

Development of the SWMP will be guided by the RDKS Board of Directors directives to improve facility programs and efficiencies and will follow the [Guide to Solid Waste Management Planning 2016](#) (<https://www2.gov.bc.ca/assets/gov/environment/waste-management/garbage/swmp.pdf>) (BC Ministry of Environment, 2016). The four-step process described in the guide has been adapted for use in the RDKS and has been reviewed and approved by both the existing PMAC committee and the RDKS Board. Step 1 included the following tasks and resulting reports:

- Review of the 1995 SWMP
 - [1995 Solid Waste Management Plan, Plan Summary and Implementation Status Administration Report, January 2014](#) (/sites/default/files/zero_waste_files/swmp_summary_and_implementation_status_report_fv1.pdf)
- Development of a recommended planning process
 - [Solid Waste Management Plan Review Process - Overview Memo, April 19, 2017](#) (/sites/default/files/zero_waste_files/20170419_overview_memo_v1.2.pdf)
- Initial consultation with PMAC regarding the proposed planning process
 - [Developing a new Solid Waste Management Plan in the RDKS, presentation to PMAC August 15, 2017](#) (/sites/default/files/zero_waste_files/pmac_presentation_v1.2.2_per_page.pdf)
- Setting the plan area and assembling background information (including current waste management practices)

- [Background Information and Assessment of the Current Solid Waste System - 2018 Update, Rev. 1.1, January 4, 2019](#) ([/sites/default/files/docs/2019.01.04_current_system_report_2018_update_v1.1.pdf](#))
- Drafting the intended consultation plan
 - [Draft Consultation Strategy for the Development of a Solid Waste Management Plan, January 30, 2018](#) ([/sites/default/files/zero_waste_files/draft_consultation_strategy_v1.3.1.pdf](#))
- Setting the Plan scope, budget and schedule
 - [Step 1 Memo - Proposed Approach to Solid Waste Management Plan Review Process, January 30, 2018](#) ([/sites/default/files/zero_waste_files/20180130_step_1_memo_v1.13.pdf](#))
 - [SWMP Schedule - Whole Process Schematic, July 27, 2018](#) ([/sites/default/files/zero_waste_files/whole_process_schematic_v1.4_11x17_paper.pdf](#))

Step 1 is now complete, and we are currently implementing Step 2. [Step 2 implementation](#) ([/sites/default/files/zero_waste_files/docs/swmp_plan_update_1_20180809_rev.1.8.pdf](#)) has included transition of PMAC to a Public and Technical Advisory Committee (PTAC), and solicitation of new membership to PTAC. Step 2 will also include consultation with the public, stakeholder and special interest groups, setting plan objectives and exploring waste management options. Steps 3 and 4 will include strategy development, drafting the plan, stakeholder engagement, review and revision of the plan. The planning and consultation process is expected to take about two years, with estimated completion in 2020.

Outline and Timeframe of Proposed SWMP Process		
Step	Action	Timeframe
Initiation	Regional District Board passes a resolution to initiate the preparatory work for the SWMP	Complete January 2017
	Develop a recommended planning process	
Step 1	Set the plan area and assemble background information about the plan area	Complete April 2017 to August 2018
	Set the scope of work and recommended planning process	
	Develop the overall consultation plan	
	Set the project budget and schedule	
	Present draft approach to PMAC; receive and incorporate feedback	
	Seek a resolution from the Regional District Board to initiate development of the SWMP	
Step 2	Notify interested parties of the upcoming process and invite them to join PTAC	September 2018
	Formally establish Public and Technical Advisory Committee	October 2018
	Begin to implement the consultation plan	November 2018 to May 2019
	Identify strengths of current system and opportunities for improvement	
	Establish principles, goals and targets	
Develop options for waste management		
Step 3	Combine options to develop strategies	June 2019 - December 2019
	Evaluate strategies in terms of effectiveness and affordability	
	Follow the consultation plan	
Step 4	Draft the plan	January to September 2020
	Publish plan for consultation	
	Revise the plan and submit for Ministry approval	
	Board adoption of approved plan	

How can I be involved?

The public will have opportunities to provide input on plan goals and guiding principles through an online survey and open houses during the early planning stages. Public input will also be sought later in the process when a draft plan has been developed.

The RDKS may host meetings or focused workshops on request for groups or organizations that are concerned about a particular waste management topic.

Key stakeholders with an interest in solid waste have formed a [Public and Technical Advisory Committee \(PTAC\)](#) (<http://www.rdks.bc.ca/PTAC>) to advise on development of the new Solid Waste Management Plan.

Want more information?

For information regarding the planning process, please contact the RDKS Environmental Services Coordinator at (250) 615-6100 or solidwasteplan@rdks.bc.ca.

For information related to the SWMP planning process and former 1995 SWMP, please see background and supporting documents in the document library below.

Documents:

[Background Information and Assessment of the Current Solid Waste System - 2018 Update, Rev. 1.1, January 4, 2019](#) (http://www.rdks.bc.ca/sites/default/files/docs/2019.01.04_current_system_report_2018_update_v1.1.pdf)

[DRAFT Topics for the Solid Waste Management Plan Revision, Rev. 1.1, January 2019](http://www.rdks.bc.ca/sites/default/files/docs/2019.01.04_swmp_draft_topics_paper_v1.1.pdf)

[\(\[http://www.rdks.bc.ca/sites/default/files/docs/2019.01.04_swmp_draft_topics_paper_v1.1.pdf\]\(http://www.rdks.bc.ca/sites/default/files/docs/2019.01.04_swmp_draft_topics_paper_v1.1.pdf\)\)](http://www.rdks.bc.ca/sites/default/files/docs/2019.01.04_swmp_draft_topics_paper_v1.1.pdf)

[Solid Waste Management Plan Review Process - Overview, Apr. 19, 2017](http://www.rdks.bc.ca/sites/default/files/docs/20170419_overview_memo_v1.2.pdf)

[\(\[http://www.rdks.bc.ca/sites/default/files/docs/20170419_overview_memo_v1.2.pdf\]\(http://www.rdks.bc.ca/sites/default/files/docs/20170419_overview_memo_v1.2.pdf\)\)](http://www.rdks.bc.ca/sites/default/files/docs/20170419_overview_memo_v1.2.pdf)

[Step 1 Memo - Proposed Approach to Solid Waste Management Plan Review Process, Jan. 30, 2018](http://www.rdks.bc.ca/sites/default/files/docs/step_1_memo_v1.13.pdf)

[\(\[http://www.rdks.bc.ca/sites/default/files/docs/step_1_memo_v1.13.pdf\]\(http://www.rdks.bc.ca/sites/default/files/docs/step_1_memo_v1.13.pdf\)\)](http://www.rdks.bc.ca/sites/default/files/docs/step_1_memo_v1.13.pdf)

[Draft Consultation Strategy for the Development of a Solid Waste Management Plan, Jan. 30, 2018](http://www.rdks.bc.ca/sites/default/files/docs/draft_consultation_strategy_v1.3.1.pdf)

[\(\[http://www.rdks.bc.ca/sites/default/files/docs/draft_consultation_strategy_v1.3.1.pdf\]\(http://www.rdks.bc.ca/sites/default/files/docs/draft_consultation_strategy_v1.3.1.pdf\)\)](http://www.rdks.bc.ca/sites/default/files/docs/draft_consultation_strategy_v1.3.1.pdf)

[1995 RDKS Solid Waste Management Plan](http://www.rdks.bc.ca/sites/default/files/docs/solid_waste_management_plan_-_vol._1_vol._2_-_the_plan_-_dec._1995.pdf)

[\(\[http://www.rdks.bc.ca/sites/default/files/docs/solid_waste_management_plan_-_vol._1_vol._2_-_the_plan_-_dec._1995.pdf\]\(http://www.rdks.bc.ca/sites/default/files/docs/solid_waste_management_plan_-_vol._1_vol._2_-_the_plan_-_dec._1995.pdf\)\)](http://www.rdks.bc.ca/sites/default/files/docs/solid_waste_management_plan_-_vol._1_vol._2_-_the_plan_-_dec._1995.pdf)

[SWMP Step 2 Implementation Update, August 2018 \(\[http://www.rdks.bc.ca/sites/default/files/docs/swmp_plan_update_1_20180809_rev.1.8.pdf\]\(http://www.rdks.bc.ca/sites/default/files/docs/swmp_plan_update_1_20180809_rev.1.8.pdf\)\)](http://www.rdks.bc.ca/sites/default/files/docs/swmp_plan_update_1_20180809_rev.1.8.pdf)

Tags:

October 2018 - Snapshot of the RDKS PTAC Webpage



PUBLIC AND TECHNICAL ADVISORY COMMITTEE (PTAC)

Public and Technical Advisory Committee (PTAC)

A Plan Monitoring and Advisory Committee (PMAC) was developed to advise on implementation of the **1995 RDKS Solid Waste Management Plan** (/sites/default/files/zero_waste_files/1995_solid_waste_management_plan_-_vol._1_vol._2_-_the_plan_-_dec._1995.pdf). The 1995 Plan objectives have been met and the Regional District is now developing a new Solid Waste Management Plan.

A new Public and Technical Advisory Committee (PTAC), comprised of members of the public, local government representatives, and industry and technical experts, has been formed to advise on the development of the **New Solid Waste Management Plan (SWMP)** (<http://www.rdks.bc.ca/solidwasteplan>). PTAC will advise the Regional District Board on the design and implementation of the SWMP consultation process, guiding principles, topics and supporting studies, and development of plan targets and strategies.

PTAC will operate under Terms of Reference. The **PTAC Draft Terms of Reference** (/sites/default/files/2018_draft_tor_-_ptac_20180808_rev.2.pdf) are available for review and may be revised by the PTAC at its first meeting on January 15, 2019, before being adopted.

For information regarding the SWMP planning process, please contact the RDKS Environmental Services Coordinator, Nicki Veikle, at (250) 615-6100 or solidwasteplan@rdks.bc.ca.

The first meeting of the Public and Technical Advisory Committee was held at 1:00 pm on January 15, 2019, in the RDKS Boardroom in Terrace, BC. A "Solid Waste Workshop" was presented, which focused on the solid waste management planning process, the current solid waste management system in the RDKS and PTAC Committee business. View the (<https://kitimatstikine.civicweb.net/document/28396>) **January 15, 2019 PTAC Meeting Agenda.** (<https://kitimatstikine.civicweb.net/document/28396>) **View the January 15, 2019 PTAC "Solid Waste Workshop" presentation.** (/sites/default/files/2019.01.14_presentation_ptac_meeting_1.pdf)



Public and Technical Advisory Committee (PTAC) Information:

[2019 Proposed PTAC Meeting Schedule](/sites/default/files/2019_proposed_ptac_meeting_schedule.pdf)

/sites/default/files/2019_proposed_ptac_meeting_schedule.pdf

[2019 PTAC Membership Application Form](/sites/default/files/2019_ptac_application_fillable.pdf)

/sites/default/files/2019_ptac_application_fillable.pdf

[2019 PTAC Draft Terms of Reference](/sites/default/files/2019.01.07_2019_rep_1_draft_tor_-_ptac_rev.2.4.pdf)

/sites/default/files/2019.01.07_2019_rep_1_draft_tor_-_ptac_rev.2.4.pdf

Former Plan Monitoring Advisory Committee (PMAC) Information:

[PMAC Documents, Meeting Minutes and Agendas](https://kitimatstikine.civicweb.net/filepro/documents/24860)

<https://kitimatstikine.civicweb.net/filepro/documents/24860>

[PMAC Administration](http://www.rdks.bc.ca/node/506/edit?destination=admin%2Fcontent%2Fnode)

[Background Reports](http://www.rdks.bc.ca/content/pmac-background-information)

<http://www.rdks.bc.ca/content/pmac-background-information>
<http://www.rdks.bc.ca/node/506/edit?destination=admin%2Fcontent%2Fnode>

[Presentations to PMAC](http://www.rdks.bc.ca/content/pmac-solid-waste-management-presentations)



Tags:

Appendix 7 – Solid Waste Management Plan Targeted Stakeholder List

Organization	Organization Branch/Location	Community	Source for PTAC	Inform or Invite	PTAC Type	Mailing 1	City/Prov/PC	Website	General Email	Phone
Ministry of Crown-Indigenous Relations and Northern Affairs			Yes	Inform	Government Agency	10 rue Wellington	Gatineau, QC K1A 0H4	www.aandc-aandc	aandc.infolopubs.aandc@canada.ca	
Ministry of Environment and Climate Change - Federal			Yes	Inform	Government Agency	201-104 Burrard Street	Vancouver, BC V6C 3S5	https://www.aandc	ec.environfo.ec@1-800-668-6767	
Agricultural Land Commission			Yes	Inform	Government Agency	133 - 4940 Canada Way	Burnaby, BC V5G 4K6	www.alc.gov.bc.ca		6046607000
Agricultural Land Commission			Yes	Inform	Government Agency	201 - 4940 Canada Way	Burnaby, BC V5G 4K6	www.alc.gov.bc.ca	alcburnaby@victoria	6046607000
Crown - Indigenous Relations and Northern Affairs Canada			Yes	Inform	Government Agency	Terrasses de la Chaudière	Gatineau, QC K1A 0H4			8005673604
Northern Health Environmental Health Officer		City Of Terrace	Yes	Inform	Government Agency	3412 Kalum Street	Terrence, BC V8G 2B2	www.healthspace.ca	canadianbatteries	2506314222
Fisheries and Oceans Canada	Terrace Office	City Of Terrace	Yes	Inform	Government Agency	5235-A Keith Avenue	Terrence, BC V8G 1J2			2508155350
Ministry of Agriculture			Yes	Inform	Government Agency	PO Box 9043	Victoria, BC V8W 9E2	https://www2.gov.bc.ca/gov/content/ag		2503871023
Ministry of Energy, Mines and Petroleum Resources			Yes	Inform	Government Agency	PO Box 9060	Victoria, BC V8W 9T1	https://www2.gov.bc.ca/gov/content/et		2509530900
Ministry of Environment and Climate Change Strategy - Provincial			Yes	Inform	Government Agency	PO Box 9047	Victoria, BC V8W 9E2	https://www2.gov.bc.ca/gov/content/et		2503871187
Ministry of Forests, Lands, & Natural Resource Operations and Ru		City Of Terrace	Yes	Inform	Government Agency	Suite 200 - 5220 Keith A	Terrence, BC V8G 1L1	https://www.for.gov.bc.ca/dk/m/		2506385109
Ministry of Health			Yes	Inform	Government Agency	PO Box 9050	Victoria, BC V8W 9E2	https://www2.gov.bc.ca/gov/content/et		2509533547
Ministry of Indigenous Relations and Reconciliation			Yes	Inform	Government Agency	Bag 5000	Smithers, BC V0J 2N0	https://www2.gov.bc.ca/gov/content/et		2508475004
Ministry of Jobs, Trade and Technology			Yes	Inform	Government Agency	PO Box 9071	Victoria, BC V8W 9E9	https://www2.gov.bc.ca/gov/content/et		2503562771
Ministry of Municipal Affairs and Housing			Yes	Inform	Government Agency	Parliament Buildings	Victoria, British Columbia	V8V 1X4		
Ministry of Transportation and Infrastructure		City Of Terrace	Yes	Inform	Government Agency	18 - 3215 Ely Street	Terrence, BC V8G 2X8			2506154800
Ministry of Transportation and Infrastructure		Dease Lake	Yes	Inform	Government Agency	Bag 2000 - Highway 37	Dease Lake, BC V0C 1L0			2507714511
Nathan Cullen, MP	Terrace	City Of Terrace	Yes	Inform	Government Agency	112 - 4716 Lazelle Avenue	Terrence, BC V8G 1T2	www.nathancullen	nathan.cullen.c2a	2506155339
Union of BC Municipalities			Yes	Inform	Government Agency	Suite 60 - 10551 Shellbr	Richmond, BC V6X 2W9	www.ubcm.ca	ubcm@ubcm.ca	6042708226
North Coast Regional District			Yes	Inform	Neighboring Regional District	14, 342 3rd Avenue West	Prince Rupert, BC V8J 1L5	https://www.ncrdb	info@ncrdb.bc	2506242002
Regional District of Bulkley-Nechako			Yes	Inform	Neighboring Regional District	PO Box 820	Burns Lake, BC V0J 1E0	https://www.rdnb	inquiries@rdnb.bc	2506293195
BC Onsite Sewage Association			Yes	Inform	Stewardship Organization	PO Box 44151	Victoria, BC V9A 7K1	www.boσσα.com	info@boσσα.com	7784322120
BC Used Oil Management Association			Yes	Inform	Stewardship Organization	Suite 1008, 10080 Jasp	Edmonton, AB, T5J 1V9	usedoil.com	reception@usedoil	1-866-254-0555
BC Water and Waste Association			Yes	Inform	Stewardship Organization	620 - 1000 West Pender	Vancouver, BC V6E 2N7	www.bcwwa.org	contact@bcwwa.o	6044334389
Can2Recycle			Yes	Inform	Stewardship Organization	Suite 201, 2590 Granville	Vancouver, BC V6H 3H1	https://www.ca2re	communicate@ca	1-877-232325
Canadian Battery Association			Yes	Inform	Stewardship Organization	Suite 100 - 119 West Per	Victoria, BC V8G 1S5	www.cbc.ca	canadianbatteries	2502163664
CESA - ElectroRecycle			Yes	Inform	Stewardship Organization	95 Mural Street, 6th Floo	Richmond Hill, ON L4B 3M2	https://www.electr	memberservices@	1-877-670-2372
Coast Waste Management Association			Yes	Inform	Stewardship Organization	1185 Rolmar Crescent	Cobble Hill, BC V0R 1L4	www.cwma.ca	info@cwma.ca	2507332213
Electronic Products Recycling Association			Yes	Inform	Stewardship Organization	5750 Explorer Drive, Sui	Mississauga, Ontario L4W 0	epra.ca	info@ecycleMyle	18885674535
Encorp Pacific - Beverage			Yes	Inform	Stewardship Organization	100 - 4259 Canada Way	Burnaby, BC V5G 4Y2	www.return-it.ca	returnit@returni	604-473-2400
Health Products Stewardship Association			Yes	Inform	Stewardship Organization	330-2255 St. Laurent Bl	Ottawa, Ontario K1G 4K3	www.healthsteward	info@healthsteward	613-723-7282
Major Appliance Recycling Roundtable			Yes	Inform	Stewardship Organization	105 West 3rd,	Vancouver, BC, V5Y 1E6	www.marbc.ca	info@marbc.ca	1-888-252-4621
Outdoor Power Equipment Institute of Canada			Yes	Inform	Stewardship Organization	Via email		www.opiec.ca	info@opiec.ca	1877592927
Product Care			Yes	Inform	Stewardship Organization	205 West 3rd Avenue	Vancouver BC V5Y1E6	www.productcare.o	memberservices@	604-592-2972
Recycle BC			Yes	Inform	Stewardship Organization	130-171 Esplanade West	North Vancouver, BC V7M 3	https://recyclebc.o	info@recyclebc.o	778-586-3504
Recycling Council of BC (RCBC)			Yes	Inform	Stewardship Organization	Suite 100 - 119 West Per	Victoria, BC V8G 1S5	www.rcbc.ca	rcbc@rcbc.ca	6048360909
ReGeneration (BC Alarm/Recycle, BC Light/Recycle)			Yes	Inform	Stewardship Organization	105 West 3rd Avenue	Vancouver BC V5Y1E6	https://www.regen	contact@product	6045927227
Tire Stewardship BC			Yes	Inform	Stewardship Organization	PO Box 5366	Victoria, BC V8R 654	http://www.tsbcc.ca	http://www.tsbcc.ca	
Dease Lake & Tahltan Chamber of Commerce		Dease Lake	Yes	Invite	Chambers of Commerce	PO Box 338	Dease Lake, BC V0C 1L0			2507713900
Kiitmat Chamber of Commerce	Chamber of Commerce	District Of Kitimat	Yes	Invite	Chambers of Commerce	PO Box 214,	Kitimat, BC V8G 2C7	kiitmatcchamber.ca	info@kiitmatcchamber.ca	2506326294
Stewart/Hyder International Chamber of Commerce		District Of Stewart	Yes	Invite	Chambers of Commerce	PO Box 306	Stewart, BC V0T 1W0		info@stewart-hyde	2506369224
Terrace & District Chamber of Commerce		City Of Terrace	Yes	Invite	Chambers of Commerce	3224 Kalum Street	Terrence, BC V8G 2N1	www.terracecham	executivedirector@terracechamber.com	
Southwest Lakeview Property Owners Society		District Of Kitimat	Yes	Invite	Community Associations	138 Whitlesey Street	Kitimat, BC V8C 1J8			2506323920
Jackpine Flats Community Association		Jackpine Flats	Yes	Invite	Community Associations	3017 Atree Road	Terrence, BC V8G 0G5			2506387114
Kispixox Valley Community Association		Village Of Hazelton	Yes	Invite	Community Associations	2489 Kispixox Valley Road	Hazelton, BC V0J 1Y4			2508425635
Kiwanga Community Association		Kiwanga	Yes	Invite	Community Associations	PO Box 98	Kiwanga, BC V0J 2A0			2508495050
Lakelse Lake Community Association		Lakelse Lake	Yes	Invite	Community Associations	3870 Lakelse Lake Lodge	Terrence, BC V8C 0G2			2508312069
Rosswood Community Association		Rosswood	Yes	Invite	Community Associations	4145 Kalum Lake Road	Terrence, BC V8G 0G8	www.roswoodbc	roswoodbc@gm	2506154748
South Hazelton Community Association			Yes	Invite	Community Associations	Via email			southhazeltonca@gmail.com	
Stikine Community		Telegraph Creek	Yes	Invite	Community Associations	General Delivery	Telegraph Creek, BC V0J 2W0			
Two Mile Community Association		Two Mile	Yes	Invite	Community Associations	Via email				2508428398
Usk Community Association		Usk East	Yes	Invite	Community Associations	PO Box 593	Terrence, BC V8G 3Z9			
K Beertema Limited		Village Of Hazelton	Yes	Invite	Department stores	4235 Field Street	Hazelton, BC V0J 1Y0		beertemas@bulkie	2508425757
Kondolas Furniture		City Of Terrace	Yes	Invite	Department stores	2910 Kalum Street	Terrence, BC V8G 2M6	www.kondolas.ca/		18004794511
Coast Mountain College		City Of Terrace	Yes	Invite	Educational institutions	5331 McConnell Avenue	Terrence, BC V8G 4X2			2506722728
Coast Mountain College		Village Of Hazelton	Yes	Invite	Educational institutions	Box 338	Hazelton, BC V0J 1Y0			2508425291
Laxgalt'sap Community College		Nass	Yes	Invite	Educational institutions	441 Church Street	Laxgalt'sap, BC V0J 1X0		reception@nlc.bc	2508213300
Northern Lights College	Dease Lake Campus	Dease Lake	Yes	Invite	Educational institutions	PO Box 220	Dease Lake, BC V0C 1L0	www.nlc.bc.ca	kclibourn@nlc.bc	2507715500
School District 82		City Of Terrace	Yes	Invite	Educational institutions	3211 Kenney Street	Terrence, BC V8G 3E9	www.cnsd.bc.ca		2506384407
School District 87	Dease Lake School	Dease Lake	Yes	Invite	Educational institutions	PO BOX 280	Dease Lake, BC V0C 1L0	www.sdb7.bc.ca	ghowell@sdb7.bc	2507714321
School District 87	Board Office	Dease Lake	Yes	Invite	Educational institutions	PO BOX 190	Dease Lake, BC V0C 1L0	www.sdb7.bc.ca	mjordan@sdb7.b	2507714440
School District 92			Yes	Invite	Educational institutions	PO Box 240	New Aynash, BC V0J 1A0	www.nisaaq.ca	2506332228	
UNBC Wilp Wixos'kwil Nisga'a Institute			Yes	Invite	Educational institutions	PO Box 70	Gitwinkshikw, BC V0J 3T0	www.wmni.bc.ca	reception@wmni	2506332292
University of Northern British Columbia		City Of Terrace	Yes	Invite	Educational institutions	4837 Keith Avenue	Terrence, BC V8G 1K7	https://www.unbc	nw-info@unbc.ca	2506153327
KUTE (Kitimat Understanding the Environment)		District Of Kitimat	Yes	Invite	Environmental Groups	316 Railway Avenue	Kitimat, BC V8C 2G2	www.kitimatrecycle	kitimatrecycle@g	2506326633
Lakelse Lake Watershed Society		Lakelse Lake	Yes	Invite	Environmental Groups	PO Box 124	Terrence, BC V8G 4A2	www.lakelsewaters	watershedcoordi	2507982535
Lanny - Citizen running for council		Kitimat	Yes	Invite	Environmental Groups	Via email - need address				
Skeena Watershed Conservation Coalition			Yes	Invite	Environmental Groups	PO Box 70	Hazelton, BC V0J 1Y0	www.skeenawatershed.com		2508422494
SkeenaWild Conservation Trust		City Of Terrace	Yes	Invite	Environmental Groups	Unit 103 - 4622 Greig Av	Terrence, BC V8G 1M9	www.skeenawild.o	info@skeenawild.o	2506380998
Steelhead Society of BC			Yes	Invite	Environmental Groups	110 - 1140 Austin Avenue	Coquitlam, BC V3K 3P5	http://www.steelhe	info@steelheads	6049315044
Gingolx Nisga'a a Village Government			Yes	Invite	First Nations	General Delivery	Gingolx, BC V0J 1B0	www.gingolx.ca		2503264212
Gitanmaax Band		Gitanmaax	Yes	Invite	First Nations	PO Box 440	Hazelton, BC V0J 1Y0	www.gitanmaax.c	info@gitanmaax.c	2508425297
Gitanmaax Market		Gitanmaax	Yes	Invite	First Nations	15 Kispixox Valley Road	Hazelton, BC V0J 1Y2			2508426688
Gitanvow Band		Gitanvow	Yes	Invite	First Nations	PO Box 340	Kiwanga, BC V0J 2A0	www.band.gitanvo	reception@band.g	2508495222
Gitksan Government Commission		Village Of Hazelton	Yes	Invite	First Nations	4125 Field Street, Upper	Hazelton, BC V0J 1Y0	www.gitksan.gc.c		2508422248
Gitlax'aamiks Village Government			Yes	Invite	First Nations	PO Box 233	Gitlax'aamiks, BC V0J 1A0	www.gitlax'aamiks	com	2508333100
Gitseoukila Band		Gitseoukila	Yes	Invite	First Nations	710 Ray Charles Avenue	Gitseoukila, BC V0J 2J3	www.gitseoukila	reception@gitsei	2508495490
Gitwanganak Band Council		Gitwanganak	Yes	Invite	First Nations	PO Box 400	Kiwanga, BC V0J 2A0	www.gitwanganak	reception@gitwan	2508495591
Gitksan Development Corporation		Village Of Hazelton	Yes	Invite	First Nations	PO Box 65	Hazelton, BC V0J 1Y0	www.gitksanbusin	info@gitksanbusin	2508426780
Gitksan Hereditary Chiefs		District Of New Hazelton	Yes	Invite	First Nations	PO Box 229	Hazelton, BC V0J 1Y0	www.gitksanbusin	reception@gitksan	2508426780
Glen Vowell Band - Sik-e-dakh		Glen Vowell	Yes	Invite	First Nations	RR1, Comp 3, Site J	Hazelton, BC V0J 1Y0	www.sik-e-dakh.c	reception@glenvo	2508425241
Haqwilget Village Council		Haqwilget	Yes	Invite	First Nations	PO Box 460	New Hazelton, BC V0J 2J0	www.haqwilget.c		2508426258
Haisla Nation Council		Kitamaat	Yes	Invite	First Nations	PO Box 1101	Kitamaat Village, BC V0T 2E	www.haisla.ca		2506399361
Iskut Band Council		Iskut - Kinaskan	Yes	Invite	First Nations	PO Box 30	Iskut, BC V0J 1K0	www.iskut.org	info@iskut.org	2502343331
Kispixox Band		District Of New Hazelton	Yes	Invite	First Nations	1336 Kispixox Valley Road	Kispixox, BC V0J 1Y4	www.kispixoband	reception@kispiox	2508425248
Kitsiso Band Council		Kitsiso	Yes	Invite	First Nations	PO Box 87	Klentu, BC V0T 1L0	www.klentu.com		2506722728
Kitselas Band		Gitauo	Yes	Invite	First Nations	2225 Gtauo Road	Terrence, BC V8G 0A9	www.kitselas.c	sdnabess@kitsela	2506355084
Kitselas Indian Band Office		Thornhill	Yes	Invite	First Nations	2225 Gtauo Road	Terrence, BC V8G 0A9	http://www.kitsela	sdnabess@kitsela	2506355084
Kitsumkulum Band Council		City Of Terrace	Yes	Invite	First Nations	PO Box 544	Terrence, BC V8G 4B5	www.kitsumkulum	kitsumkulum@city	2506356177
Lax Kw'alaams			Yes	Invite	First Nations	206 Shashaak Street	Lax Kw'alaams, BC V0V 1H	www.laxkwalaams	reception@laxband	com
Laxgalt'sap Village Government			Yes	Invite	First Nations	PO Box 200	Greenville, BC V0J 1X0	www.laxgaltsp.c		2506213212
Morice Town Band		Morice Town	Yes	Invite	First Nations	205 Beaver Road, Suite	Smithers, BC V0J 2N1	www.morice town	info@morice town	2508472133
Nisga'a Lisims Government		Nass	Yes	Invite	First Nations	PO Box 231	Gitlax'aamiks, BC V0J 1A0			2506333000
Nisga'a Lisims Government Office		Nass	Yes	Invite	First Nations	PO Box 231	New Aynash, BC V0J 1A0	www.nisgaanaton	robertac@nisaa	2506333000
Nisga'a Village of Gitwinkshikw			Yes	Invite	First Nations	PO Box 1	Gitwinkshikw, BC V0J 3T0	www.nisgaanaton	ca@gitwinkshikw	2506332294
Office of the Wet suweten		Morice Town	Yes	Invite	First Nations	Suite 1 - 205 Beaver Ro	Morice town, BC V0J 2N1	www.wetsuweten	reception@wetsu	2508473630
Tahltan Band		Telegraph Creek	Yes	Invite	First Nations	PO Box 46	Telegraph Creek, BC V0J 2	www.tahltan.ca	the.mgr@tahtlan.c	2502353151
Tahltan Central Government		Dease Lake	Yes	Invite	First Nations	PO Box 69	Dease Lake, BC V0C 1L0	www.tahltan.org	tamara.dennis@ta	2507713274
Village of Gingolx Office			Yes	Invite	First Nations	General Delivery	Gingolx, BC V0J 1B0			
Village of Gitlax'aamiks Office		Nass	Yes	Invite	First Nations	PO Box 233	Gitlax'aamiks, BC V0J 1A0	www.gitlax'aamiks	mriam@peoplefi	2506333100
Bell 2 Lodge Store		Bell li	Yes	Invite	Grocery stores	PO Box 49	Meziadin Lake, BC V0J 3S9	www.bell2lodge.com		2502754770
Bob's Mercantile Ltd		District Of Stewart	Yes	Invite	Grocery stores	PO Box 340	Stewart, BC V0T 1W0			25063

Solid Waste Management Plan

Targeted Stakeholder Mail-out List
INFORM OF SWMP or INVITE to participate in PTAC

Walmart		City Of Terrace	Yes	Invite	Grocery stores	4427 Highway 16 West	Terrace, BC V8G 5L5		2506154228
Northern Health Authority	Prince George Regional Office		Yes	Invite	Health Authorities	Suite 600, 299 Victoria St	Prince George, BC V2L 5B8		2506562649
Northern Health Authority	Terrace Health Unit	City Of Terrace	Yes	Invite	Health Authorities	3412 Kalum Street	Terrace, BC V8G 1T2		2506314151
BC Ambulance	BC Ambulance Dease Lake	Dease Lake	Yes	Invite	Health Service Providers	7171 Highway 37	Dease Lake, BC V0C 1L0		
BC Ambulance	Kitwanga	Kitwanga	Yes	Invite	Health Service Providers	Need contact			
BC Ambulance	Terrace	City Of Terrace	Yes	Invite	Health Service Providers	4804 Highway 16 West	Terrace, BC V8G 1L6	www.terrace.ca	firehall@terrace.ca
BC Ambulance	Stewart	District Of Stewart	Yes	Invite	Health Service Providers	Need contact			
Hazleton Community Health		District Of Stewart	Yes	Invite	Health Service Providers	Bag 999	Hazleton, BC V0J 1Y0		2508424640
Northern Health Authority	Mills Memorial Hospital	City Of Terrace	Yes	Invite	Health Service Providers	4720 Haugland Avenue	Terrace, BC V8G 2W7		
Northern Health Authority	Stikine Health Centre Des	Dease Lake	Yes	Invite	Health Service Providers	PO Box 386	Dease Lake, BC V0C 1L0		2507714444
Northern Health Authority	Kitimat Hospital and Health	District Of Kitimat	Yes	Invite	Health Service Providers	920 Lahakas Boulevard	Kitimat, BC V8C 2S3		2506322121
Northern Health Authority	Stewart Health Centre	District Of Stewart	Yes	Invite	Health Service Providers	PO Box 8	Stewart, BC V0T 1W0		2506362221
Northern Health Authority	Winch Memorial Hospital	Village Of Hazelton	Yes	Invite	Health Service Providers	Bag 999	Hazleton, BC V0J 1Y0		2508424403
St. John Ambulance		City Of Terrace	Yes	Invite	Health Service Providers	4443 Keith Avenue	Terrace, BC V8G 1J7	https://www.sja.ca	terrace@bc.sja.ca (250) 636-5500
Allovoorp Mining Inc.	Avanti Kitsault Mine	Nass	Yes	Invite	Industrial Camps	Suite 501, 67 Yonge Street	Toronto, ON M5E 1J8	www.allovoorp.com	4168470376
Avanti Kitsault Mine	Allovoorp	Nass	Yes	Invite	Industrial Camps	4843 Park Ave	Terrace, BC V8G 1V8		2506565125
Chevron Canada - Kitimat LNG		District Of Kitimat	Yes	Invite	Industrial Camps	500-5th Avenue SW	Calgary, AB T2P 0L7	https://canada.chevron.com	4032345098
Ekay Creek Mine		Iskut - Kinaskan	Yes	Invite	Industrial Camps	Via email			info@eskimining.com
Imperial Metals - Red Chris Mine			Yes	Invite	Industrial Camps	Suite 200 - 580 Hornby	Vancouver, BC V6C 3B6	www.imperialmetals.com	6048009200
LNG Canada		District Of Kitimat	Yes	Invite	Industrial Camps	176 Ocelot Road	Kitimat, BC	https://www.lngcanada.com	2506393229
Meziadin Junction Camp		Meziadin	Yes	Invite	Industrial Camps	PO Box 9	Meziadin Lake, BC V0J 3S0		marvin_reid@telus.net 8665007302
Pretium Resources - Brucejack Mine			Yes	Invite	Industrial Camps	PO Box 10	Smithers, BC V0J 2N0	http://www.pretium.com	invest@pretium.com 2508472526
City of Terrace	Terrace City Hall	City Of Terrace	Yes	Invite	Member Municipalities	3215 Eby Street	Terrace, BC V8G 2X8	www.terrace.ca	cityhall@terrace.ca 2506356311
District of Kitimat		District Of Kitimat	Yes	Invite	Member Municipalities	270 City Centre	Kitimat, BC V8C 2H7	www.kitimat.ca	2506328916
District of New Hazelton		District Of New Hazelton	Yes	Invite	Member Municipalities	PO Box 340	New Hazelton, BC V0J 2J0		info@newhazleton.ca 2508426571
District of Stewart		District Of Stewart	Yes	Invite	Member Municipalities	PO Box 460	Stewart, BC V0T 1W0	www.districtofstewart.com	2506362251
Village of Hazelton		Village Of Hazelton	Yes	Invite	Member Municipalities	PO Box 40	Hazleton, BC V0J 1Y0	www.hazleton.ca	info@hazleton.ca 2508425591
Alex Ramos-Espinoza, Director of	District of Kitimat		Yes	Invite	PMAC Members	270 City Centre	Kitimat, BC V8C 2H7		aramos_250-632-8905wk
Barb Hall	Kitimat Understanding		Yes	Invite	PMAC Members	Via email	Kitimat, BC		turbobarb@telus.net 250-633-3781
Cedar Welsh	City of Terrace, Resident		Yes	Invite	PMAC Members	4741 Soucie	Terrace, BC V8G 2E9		cedar.welsh@ubc 641-1700
Diane McRae	Gitksan Government		Yes	Invite	PMAC Members	14 Kispiox Valley Rd	Hazleton, BC V0J 1Y0		diane.mcrac@ggc 250-842-2248x23
Eric Pierce, Environmental Protection	Ministry of Environment		Yes	Invite	PMAC Members	Bag 5000, 3726 Alfred	Smithers, BC V0J 2N0		eric.pierce@govt 250-847-7252-31
Gail Lowry	RDKS Board - District of		Yes	Invite	PMAC Members	Via email	New Hazelton		gall2009@live.ca 250-842-6571
Jennifer Larson, CFO	District of Stewart		Yes	Invite	PMAC Members	Stewart BC V0T 1W0			finance@districtofstewart.com 250-436-2251
Jessica McCallum-Miller	RDKS Board - Electoral		Yes	Invite	PMAC Members	Area C	Terrace, BC V8G 4V5		jmccallummiller 250-922-4055
Josh Wilson	Gitksan Government		Yes	Invite	PMAC Members	14 Kispiox Valley Rd	Hazleton, BC V0J 1Y0		josh.wilson@ggc 250-842-2248x225
Ken Mallard	District of Kitimat		Yes	Invite	PMAC Members	38 Currie Street	Kitimat, BC V8C 2K2		ken5882@telus.net 250-632-6882
Linda Pierre	RDKS Board-Electoral		Yes	Invite	PMAC Members	Via email			electpierre@yahoo 250-842-8594
Rob Schibill, Director of Public Works	City of Terrace		Yes	Invite	PMAC Members	3215 Eby St.	Terrace, BC V8G 2X8		rschibill@terrace.ca 250-615-4021
Robyn Carle, Development Services	District of New Hazelton		Yes	Invite	PMAC Members	PO Box 340	New Hazelton, BC V0J 2J0		rcarle@newhazleton.ca 250-842-6571
Sandra Harris	Gitksan Government		Yes	Invite	PMAC Members	14 Kispiox Valley Rd	Hazleton, BC V0J 1Y0		sandra.harris@ggc 250-842-2248x30
Sean Buttas	RDKS Board - City of		Yes	Invite	PMAC Members	3215 Eby St.	Terrace, BC V8G 2X8		sbuttas@terrace.ca 250-615-6334
Stewart Christensen	City of Terrace, Resident		Yes	Invite	PMAC Members	4514 Cedar Crescent.	Terrace, BC V8G 1X6		stewartchristensen 250-635-3429
Tanalee Hesse, CAO	Village of Hazelton		Yes	Invite	PMAC Members	Box 40,	Hazleton, BC V0J 1Y0		thesse@hazleton.ca 250-842-5991
Tara Irwin, City Planner	City of Terrace		Yes	Invite	PMAC Members	3215 Eby St.	Terrace, BC V8G 2X8		irwin@terrace.ca 250-615-4021
Wendy Hunt, CAO	District of New Hazelton		Yes	Invite	PMAC Members	PO Box 340	New Hazelton, BC V0J 2J0		whunt@newhazleton.ca 250-842-6571
Gaier Waste Services		City Of Terrace	Yes	Invite	Private Haulers	202 - 4644 Lakelse Avenue	Terrace, BC V8G 1S6	www.gaierwasteservices.ca	2506381100
Waste Management Inc		City Of Terrace	Yes	Invite	Private Haulers	4760 Banzer Drive	Prince George, BC V2K 4H4	www.wmcanada.com	2509620369
Lani Gibson	Kitimat		Yes	Invite	Public	Via email			lani.gibson@gmail.com
28 Inn		District Of New Hazelton	Yes	Invite	Recycling Depot	4545 10th Avenue	New Hazelton, BC V0J 2J0	https://www.28inn.com/	2508426006
ABC Recycling		Thornhill	Yes	Invite	Recycling Depot	2550 Queensway Drive	Terrace, BC V8G 3X8	www.abcrecycling.com	2506351228
Allen's Scrap and Salvage		City Of Terrace	Yes	Invite	Recycling Depot	5206 Keith Avenue	Terrace, BC V8G 3W8	www.allensscrap.com	2506386378
BC Liquor Stores		City Of Terrace	Yes	Invite	Recycling Depot	3240 Eby Street	Terrace, BC V8G 5H4	www.bcliquorstores.com	2506355850
Canadian Tire		City Of Terrace	Yes	Invite	Recycling Depot	5100 Highway 16 West	Terrace, BC V8G 5S5	www.canadiantire.ca	2506357178
Cooper's Used Auto Parts		City Of Terrace	Yes	Invite	Recycling Depot	3701 16 Hwy E	Thornhill BC V8G 4M2		1 250-835-4919
Do Your Part Recycling		Thornhill	Yes	Invite	Recycling Depot	PO Box 885	Terrace, BC V8G 4R1	www.doyourpart.ca	2506157692
Fountain Tire		City Of Terrace	Yes	Invite	Recycling Depot	4841 Keith Avenue	Terrace, BC V8G 1K4	www.fountaintire.com	2506343444
Innovation Autoworks Ltd		City Of Terrace	Yes	Invite	Recycling Depot	2801 Kalum Street	Terrace, BC V8G 4M2	www.innovationautoworks.com	2506357228
Kal Tire		City Of Terrace	Yes	Invite	Recycling Depot	4929 Keith Avenue	Terrace, BC V8G 1K7	www.kaltire.com	2506356170
Kalum Tire		City Of Terrace	Yes	Invite	Recycling Depot	4808 Highway 16 West	Terrace, BC V8G 1L6	www.kalumtire.ca	2506354902
Ken's Marine		City Of Terrace	Yes	Invite	Recycling Depot	4946 Greig Avenue	Terrace, BC V8G 1N4	www.kensmarine.com	2506352909
MacCarthy Motors		City Of Terrace	Yes	Invite	Recycling Depot	5004 Highway 16 West	Terrace, BC V8G 5S5	www.maccarthymotors.com	2506354941
Mount'n View Tire		South Hazelton	Yes	Invite	Recycling Depot	27901 Highway 16	Hazleton, BC V0J 2J1	https://lovetheshazleton.com/business	2508427004
N & V Johnson Services		Kitwanga	Yes	Invite	Recycling Depot	Highway 37 & Highway 16	Kitwanga, BC V0J 2A0		2508495793
New Hazelton Bottle Depot		District Of New Hazelton	Yes	Invite	Recycling Depot	4413 10th Avenue	New Hazelton, BC V0J 2J0	https://www.return-it.ca/locations/hazelton	2508777244
OK Tire and Auto		City Of Terrace	Yes	Invite	Recycling Depot	108 - 4526 Greig Avenue	Terrace, BC V8G 1M5	https://www.oktire.com/stores/ok-tire-terrace	2506350078
People's Pharmacy		City Of Terrace	Yes	Invite	Recycling Depot	103 - 4741 Lakelse Avenue	Terrace, BC V8G 4R9	https://pharmasave.com/store/pharmasave-terrace	2506352206
Safeway Pharmacy		City Of Terrace	Yes	Invite	Recycling Depot	4655 Lakelse Avenue	Terrace, BC V8G 1R3		2506357206
Salvation Army		City Of Terrace	Yes	Invite	Recycling Depot	3236 Kalum Street	Terrace, BC V8G 2N5		250-636-5446
Save On Pharmacy		City Of Terrace	Yes	Invite	Recycling Depot	4731 Lakelse Avenue	Terrace, BC V8G 1R5		983pha@owfg.com 2506354021
Shoppers Drug Mart - Lakelse Avenue		City Of Terrace	Yes	Invite	Recycling Depot	102 - 4647 Lakelse Avenue	Terrace, BC V8G 1R3	https://www1.shopperdrugmart.com	asdm266@shopperdrugmart.com 2506357261
Shoppers Drug Mart - Park Avenue		City Of Terrace	Yes	Invite	Recycling Depot	100 - 4634 Park Avenue	Terrace, BC V8G 1V7	https://www1.shopperdrugmart.com	asdm2259@shopperdrugmart.com 2506155151
Staples		City Of Terrace	Yes	Invite	Recycling Depot	4645 Greig Avenue	Terrace, BC V8G 5P9	https://stores.staples.ca/bc/terrace/4645-greig-ave	2506357797
Terrace Bottle and Return-It Depot		City Of Terrace	Yes	Invite	Recycling Depot	3110 Kalum Street	Terrace, BC V8G 4L1	https://www.return-it.ca/locations/terrace	2506353779
Terrace Totem Ford Sales		City Of Terrace	Yes	Invite	Recycling Depot	4631 Keith Avenue	Terrace, BC V8G 1K3	www.terraceford.com	2506354984
Terrace Toyota		City Of Terrace	Yes	Invite	Recycling Depot	4912 Highway 16 West	Terrace, BC V8G 1L8	www.terracetoyota.ca	2506356558
The Brick		City Of Terrace	Yes	Invite	Recycling Depot	4730 Keith Avenue	Terrace, BC V8G 4K1	https://www.thebrick.com/furniture-store	2506354111
Thornhill Fire Department	Thornhill Fire Department	Thornhill	Yes	Invite	Recycling Depot	3128 Highway 16	Terrace, BC V8G 4P3		chief@thornhillfire.ca 2506381466
Thornhill Subaru		Thornhill	Yes	Invite	Recycling Depot	3026 Highway 16 East	Terrace, BC V8G 3N5	www.thornhillsubaru.com	2506354286
Trollzone Enterprises		District Of New Hazelton	Yes	Invite	Recycling Depot	394B Poplar Park Road	New Hazelton, BC V0J 2J0		troll.hagen_41@hazleton.ca 2508420348
Walmart Pharmacy		City Of Terrace	Yes	Invite	Recycling Depot	4427 Highway 16 West	Terrace, BC V8G 5L5		
GG's Thrift Store	Terrace		Yes	Invite	Thrift Store	Hand-delivered Sept. 7,	Kalum St., Terrace, BC		
Mills Memorial Hospital Auxiliary	Terrace		Yes	Invite	Thrift Store	Hand-delivered Sept. 7,	Lakelse Ave., Terrace, BC		
Salvation Army Thrift Store	Terrace		Yes	Invite	Thrift Store	Hand-delivered Sept. 7,	3236 Kalum St., Terrace, BC V8G 2N5		

Appendix 8 – Solid Waste Management Plan “INVITE” Letter Template and Public and Technical Advisory Committee “INFORM” Letter Template

Our File No. 5360-01-13

September 6, 2018

Organization
Organization
Address
City, Postal code



Re: New RDKS Solid Waste Management Plan, Public and Technical Advisory Committee

Dear «GreetingLine»

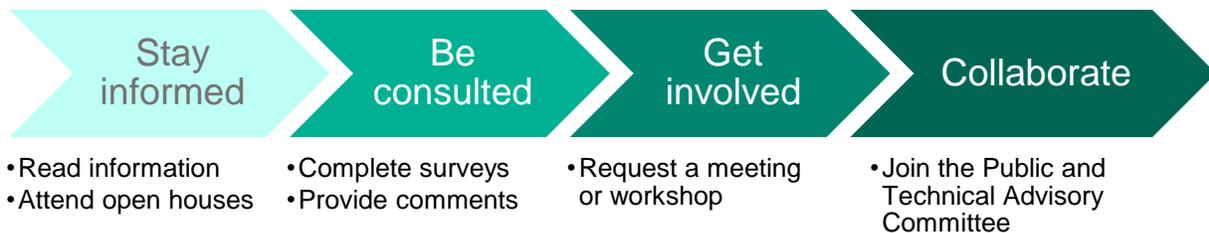
We're inviting you to assist the Regional District of Kitimat-Stikine (RDKS) develop a new **Solid Waste Management Plan (SWMP)** that will provide direction for how waste materials will be reduced, reused, recycled and disposed within our region for the next decade.

Insert tailored letter content

The Regional District anticipates that the new SWMP will not include any major policy changes or plans for new facilities. The objectives of the new SWMP will be to:

- Improve operational efficiencies;
- Assist users to improve their participation in waste segregation and diversion programs;
- Continue monitoring new and upgraded solid waste management facilities and services;
- Maintain and improve relationships with larger waste generators, and
- Expand service delivery to rural communities.

You can provide input to the SWMP planning process by participating in several ways:



We are currently seeking representatives from businesses, institutions, regulatory agencies, community organizations and the public to play a major role in developing the new SWMP. These representatives will form a joint **Public and Technical Advisory Committee (PTAC)** that will balance technical and non-technical solid waste perspectives and reflect the Regional District's varied geographic, social, and economic interests.

The PTAC will be asked to provide input on the consultation plan and its implementation, the guiding principles that shape the SWMP, and associated solid waste management services and programs. PTAC members will also be asked to comment on the reports resulting from each planning step and on the draft SWMP. PTAC members will not be responsible for drafting the



plan; the SWMP will be developed by RDKS staff and consultants. Final approval of the SWMP will be the responsibility of the BC Ministry of Environment in conjunction with the Regional District Board of Directors.

PTAC members will be asked to commit to attending regular (typically bi-monthly) meetings, review reports and information prior to each meeting, and provide feedback at the meetings. The meetings can be attended in person or by conference call and are expected to be held mainly in Terrace. The SWMP development process is expected to take 18 to 24 months.

Applications to join PTAC are available online (www.rdks.bc.ca/solidwasteplan) and at the RDKS office. The PTAC membership application deadline is October 26, 2018.

PTAC would be strengthened by representation from your sector. We look forward to receiving an application from a representative of your organization.

Feel free to contact Environmental Services Coordinator with any questions or comments by email (solidwasteplan@rdks.bc.ca), phone (Toll-free: 1-800-663-3208), or drop by the office at 300-4545 Lazelle Avenue, Terrace, B.C. For more information please visit our website at

www.rdks.bc.ca/solidwasteplan

Yours Truly,

Nicki Veikle
Environmental Services Coordinator
nveikle@rdks.bc.ca

[Initials-ie. NV/rf]
Enclosure



September 6, 2018

Organization
Organization
Address
City, Postal code



Love this place.
Reduce your waste.

Re: New RDKS Solid Waste Management Plan

Dear «GreetingLine»

The Regional District of Kitimat-Stikine (RDKS) is developing a new **Solid Waste Management Plan** (SWMP) to provide direction for how waste materials will be reduced, reused, recycled and disposed of in our region for the next decade. The Regional District anticipates that the new SWMP will not include any major policy changes or plans for new facilities. The objectives of the new SWMP will be to:

- Improve operational efficiencies;
- Assist users to improve their participation in waste segregation and diversion programs;
- Continue monitoring new and upgraded solid waste management facilities and services;
- Maintain and improve relationships with larger waste generators, and
- Expand service delivery to more rural communities.

Insert tailored content

Over the next 18 to 24 months, your organization is invited to offer input on the new SWMP by providing comments to the Environmental Services Coordinator, participating in an online survey, or by requesting a meeting or workshop with the RDKS. The first round of surveys and meetings are expected to occur by early 2019.

If a representative of your organization is interested in being more deeply involved, please let us know. We would be happy to send you information about how to apply for a position on our new Public and Technical Advisory Committee (PTAC).

For information or to provide comments, please contact the Environmental Services Coordinator by email (solidwasteplan@rdks.bc.ca) or by phone (Toll-free: 1-800-663-3208). For more details on the planning process, please visit our website at www.rdks.bc.ca/solidwasteplan.

Yours Truly,

Nicki Veikle, B.Sc., A.Sc.T.
Environmental Services Coordinator
nveikle@rdks.bc.ca

[Initials-ie. BM/rl]
Enclosure

Appendix 9 – Targeted Letter Content

Appendix E: Targeted Letter Content

This appended report – “Targeted Letter Content” - identifies which stakeholder groups received “Invite” or “Inform” letters and states the targeted content that was inserted into each letter using Mail Merge.

1. “INVITE” LETTERS

1.1. Current PMAC Members

As a current member of our Plan Monitoring Advisory Committee (PMAC), you have offered valuable input into the development and implementation of our solid waste facilities and programs to date. We invite your continued participation as we develop our new SWMP. The planning process will benefit from your knowledge and familiarity of Regional District solid waste services.

1.2. Recycling Depot Operators

As the operator of a recycling depot, you are a key stakeholder in solid waste management within the RDKS. The new SWMP will be covering the following topics or issues that may be relevant to your operations:

- *Establishing strategies to achieve new waste diversion targets;*
- *Potential expansion of the list of wastes prohibited from disposal. This may include textiles and furniture from all sources, and Styrofoam, plastic, metal and glass packaging from the Industrial, Commercial and Institutional (ICI) sector;*
- *Options for improving collection of household hazardous waste (HHW) to facilitate easy and safe recycling/disposal., Options to investigate may include: producer-funded expansion of the depot network, regularly scheduled household hazardous waste round up events, lobbying Province and Stewards to expand programs to include additional materials;*
- *Establishment of a policy regarding the maximum cost for recycling printed paper, packaging and cardboard, as collection, processing and transportation of these materials may be, at times, cost prohibitive; and*
- *Defining the level of involvement RDKS has in the delivery of EPR programs (i.e., RDKS may become an EPR agent in more rural communities).*

1.3. Private Haulers

As a private waste hauler, you are an essential stakeholder in solid waste management within the RDKS. The new SWMP will be covering a wide range of topics or issues that may be relevant to your business. Some of these include:

- *Establishing strategies to achieve new waste diversion targets;*
- *Development of a strategy to encourage industrial, commercial and institutional (ICI) waste generators to improve the diversion of materials. Currently haulers could be penalized if their customers’ waste includes prohibited or restricted wastes. We will explore other strategies, such as introducing a “source control” program that would give the RDKS authority to inspect and enforce internal waste segregation systems;*

- *Potential expansion of the list of wastes prohibited from disposal. This may include textiles and furniture from all sources, and Styrofoam, plastic, metal and glass packaging from the Industrial, Commercial and Institutional (ICI) sector;*
- *Review of the cost recovery models for the Terrace and Hazelton-Highway 37 North Service Areas, which may include a modification to taxation and/or tipping fees along with community contributions;*
- *Potential future participation of the District of Kitimat in the Terrace Service Area;*
- *Explore the viability of providing curbside recycling collection in the Hazelton-Highway 37 North Service Area (i.e., the Hazeltons and surrounding communities, Stewart, Telegraph Creek, Dease Lake, and Iskut);*
- *Options for improving collection of household hazardous waste (HHW) to facilitate easy and safe recycling/disposal of these materials. Options to be investigated may include: producer-funded expansion of the depot network, regularly scheduled household hazardous waste round up events, lobbying Province and Stewards to expand programs to include additional materials, and other options; and*
- *Establishment of a policy regarding the maximum cost of recycling printed paper, packaging and cardboard, as collection and transportation of these materials may be, at times, cost prohibitive.*

1.4. Health Authorities: Northern Health

With seven medical facilities located within the RDKS, Northern Health is considered a major waste generator in our region. Recognizing that waste management will impact cost and logistics at your facilities, we are inviting your organization to participate in the SWMP planning process. The SWMP will set the stage for how the region effectively manages waste over the next 5-10 years.

We would also like the opportunity to work collaboratively with your management team(s) to assist in the planning and preparation for waste diversion and segregation at your new and existing facilities. We can also provide support, resources and education to your staff in implementing waste diversion programs. We have also sent information packages directly to your facilities within the RDKS with the intent of soliciting representative participation from Northern Health.

1.5. Health Service Providers

Wrinch Memorial Hospital, Mills Memorial Hospital, Kitimat General Hospital and Health Centre, Stikine Health Centre, Hazelton Community Health, Terrace Health Unit, Stewart Health Centre

Recognizing that, as health care service providers, waste management regulations will impact logistics and costs to your facility. We would therefore like to invite your organization to participate in the SWMP planning process. The SWMP will set the stage for how we effectively manage waste in the future.

We would appreciate the opportunity to work collaboratively with your management team(s) to plan and prepare for waste diversion at your new and existing facilities (i.e., installing segregated waste bins, adequately managing special waste or biomedical waste). We can also provide support, resources and education to your staff in implementing waste diversion programs.

1.6. Member Municipalities

As a member municipality within the Regional District, you are a key stakeholder in the development and implementation of the regional solid waste management plan. We invite you to assign a member of your administration to join our Public and Technical Advisory Committee (PTAC). It is important for us to hear your municipality's perspective when developing new policies and regulations. The new SWMP will be covering a wide range of topics or issues that may be relevant to your municipality. Some of these include:

- *Establishing strategies to achieve new waste diversion targets;*
- *Review of the cost recovery models for the Terrace and Hazelton-Highway 37 North Service Areas, which may include a modification to taxation and/or tipping fees along with community contributions;*
- *Development of waste management solutions for the District of Stewart, Dease Lake and Telegraph Creek (i.e., transfer station development, landfill ownership);*
- *Potential future participation of the District of Kitimat in the Terrace Service Area;*
- *Exploration of the viability of providing curbside recycling collection in the Hazelton-Highway 37 North Service Area (i.e., the Hazeltons and surrounding communities, Stewart, Telegraph Creek, Dease Lake, and Iskut);*
- *Potential expansion of the list of wastes prohibited from disposal. This may include textiles and furniture from all sources, and Styrofoam, plastic, metal and glass packaging from the Industrial, Commercial and Institutional (ICI) sector;*
- *Options for improving collection of household hazardous waste (HHW) to facilitate easy and safe recycling/disposal. Options may include: producer-funded expansion of the depot network, regularly scheduled household hazardous waste round up events, lobbying Province and Stewards to expand programs to include additional materials, and other options; and*
- *Establishment of a policy regarding the maximum cost of recycling printed paper, packaging and cardboard, as collection and transportation these materials may be, at times, cost prohibitive.*

1.7. First Nations

As a First Nations community within the Regional District, you are a key stakeholder in the development and implementation of the regional solid waste management plan. We invite you to assign a member of your leadership team to join our Public and Technical Advisory Committee (PTAC). It is important for us to hear your community's perspective when developing new policies and regulations. The new SWMP will be covering a wide range of topics or issues that may be relevant to your municipality. Some of these include:

- *Establishing strategies to achieve new waste diversion targets;*
- *Review of the cost recovery models for the Terrace and Hazelton-Highway 37 North Service Areas, which may include a modification to taxation and/or tipping fees along with community contributions;*
- *Development of waste management for the District of Stewart, Dease Lake and Telegraph Creek solutions (i.e., transfer station development, landfill ownership);*
- *Exploration of the viability of providing curbside recycling collection in the Hazelton-Highway 37 North Service Area (i.e., the Hazeltons and surrounding communities, Stewart, Telegraph Creek, Dease Lake, and Iskut);*

- *Potential expansion of the list of wastes prohibited from disposal. This may include textiles and furniture from all sources, and Styrofoam, plastic, metal and glass packaging from the Industrial, Commercial and Institutional (ICI) sector;*
- *Options for improving collection of household hazardous waste (HHW) to facilitate easy and safe recycling/disposal. Options may include: producer-funded expansion of the depot network, regularly scheduled household hazardous waste round up events, lobbying Province and Stewards to expand programs to include additional materials, and other options; and*
- *Establishment of a policy regarding the maximum cost of recycling printed paper, packaging and cardboard, as collection and transportation of these materials may be, at times, cost prohibitive in the Hazelton-Highway 37 North Service Area.*

1.8. Industrial Camps

Industrial camps are a major waste generator in our region. Recognizing that waste management will impact cost and logistics at your facility, we would like to invite your organization to participate in the SWMP planning process. The new SWMP will be covering a wide range of topics or issues that may be relevant to your business. Some of these include:

- *Establishing strategies to achieve new waste diversion targets;*
- *Authorizing the RDKS to conduct on-site audits of waste segregation practices for the industrial, commercial and institutional (ICI) sector, and development of a related strategy to encourage participation and facilitate diversion;*
- *Development of requirements or incentives for building deconstruction, as opposed to demolition;*
- *Development of specific requirements for dedicated waste management space in new construction;*
- *Creation of a policy on the amount of municipal-type solid waste (MSW) from industrial sources that can be disposed at RDKS facilities;*
- *Definition of policies regarding handling and use of contaminated soil at RDKS facilities.*

1.9. Educational institutions

Educational institutions generate a substantial portion of the waste in our region. Recognizing that waste management will impact cost and logistics at your facility, we would like to invite your organization to participate in the SWMP planning process. The new SWMP will be covering a wide range of topics or issues that may be relevant to your operations. Some of these include:

- *Establishing strategies to achieve new waste diversion targets;*
- *Authorizing the RDKS to conduct on-site audits of waste segregation practices for the industrial, commercial and institutional (ICI) sector, and development of a related enforcement strategy;*
- *Potential expansion of the list of wastes prohibited from disposal. This may include textiles and furniture from all sources, and Styrofoam, plastic, metal and glass packaging from the Industrial, Commercial and Institutional (ICI) sector;*
- *Development of an enforcement strategy for industrial, commercial and institutional (ICI) generators. Currently haulers can be penalized if their customers' waste includes prohibited or restricted wastes. We will explore other options, such as introducing a "source control" program that would give the RDKS authority to inspect and enforce internal waste segregation systems.*

We would appreciate the opportunity to work collaboratively with you to plan and prepare for waste diversion at your facilities. We can provide support, resources and education to your staff in implementing waste diversion programs.

1.10. Grocery and department stores

Grocery and department stores are major waste generators in our region. Recognizing that waste management policies and regulations adopted by the RDKS can impact logistics and costs for your business, we invite your participation in the SWMP planning process. The new SWMP will be covering a wide range of topics or issues that may be relevant to your business. Some of these include:

- *Food waste prevention;*
- *Ensuring adequate waste segregation, including diversion of organics and recyclables from landfills;*
- *Establishing strategies to achieve new waste diversion targets;*
- *Development of an enforcement strategy for industrial, commercial and institutional (ICI) generators. Currently haulers can be penalized if their customers' waste includes prohibited or restricted wastes. We will explore other options, such as introducing a "source control" program that would give the RDKS authority to inspect and enforce internal waste segregation systems;*
- *Potential expansion of the list of wastes prohibited from disposal. This may include textiles and furniture from all sources, and Styrofoam, plastic, metal and glass packaging from the Industrial, Commercial and Institutional (ICI) sector;*
- *Establishment of a policy regarding the maximum cost of recycling printed paper, packaging and cardboard, as collection and transportation of the materials may be, at times, cost prohibitive.*

1.11. Ministry of Environment and Climate Change Strategy – Provincial

Generic government blurb – SEND TO SMITHERS AND VICTORIA

We look forward to engaging directly with your Regional office representative during establishment of PTAC and throughout development of the SWMP.

1.12. Chambers of Commerce

Chambers of Commerce represent the business community. Recognizing that waste management will impact cost and logistics to your members, we would like to invite your organization to participate in the SWMP planning process. The new SWMP will be covering a wide range of topics or issues that may be relevant to your business. Some of these include:

- *Food waste prevention;*
- *Ensuring adequate waste segregation, including diversion of organics and recyclables from landfills;*
- *Establishing strategies to achieve new waste diversion targets;*
- *Review of the cost recovery models for the Terrace and Hazelton-Highway 37 North Service Areas, which may include a modification to taxation and/or tipping fees along with community contributions;*

- *Development of waste management solutions for the District of Stewart, Dease Lake and Telegraph Creek (i.e., transfer station development, landfill ownership);*
- *Potential future participation of the District of Kitimat in the Terrace Service Area;*
- *Potential expansion of the list of wastes prohibited from disposal. This may include textiles and furniture from all sources, and Styrofoam, plastic, metal and glass packaging from the Industrial, Commercial and Institutional (ICI) sector;*
- *Establishment of a policy regarding the maximum cost of recycling printed paper, packaging and cardboard, as collection and transportation these materials may be, at times, cost prohibitive.*
- *Authorizing the RDKS to conduct on-site audits of waste segregation practices for the industrial, commercial and institutional (ICI) sector, and development of a related enforcement strategy; and*
- *Development of an enforcement strategy for industrial, commercial and institutional (ICI) generators. Currently haulers can be penalized if their customers' waste includes prohibited or restricted wastes. We will explore other options, such as introducing a "source control" program that would give the RDKS authority to inspect and enforce internal waste segregation systems.*

1.13. Community Associations

Community Associations are the voice of our rural communities. Recognizing that waste management will impact cost and logistics to your residents, we would like to invite your Association to participate in the SWMP planning process. The new SWMP will be covering a wide range of topics or issues that may be relevant to your community. Some of these include:

- *Ensuring adequate waste segregation, including diversion of organics and recyclables from landfills;*
- *Establishing strategies to achieve new waste diversion targets;*
- *Review of the cost recovery models for the Terrace and Hazelton-Highway 37 North Service Areas, which may include a modification to taxation and/or tipping fees along with community contributions;*
- *Development of waste management solutions for the District of Stewart, Dease Lake and Telegraph Creek (i.e., transfer station development, landfill ownership);*
- *Exploration of the viability of providing curbside recycling collection in the Hazelton-Highway 37 North Service Area (i.e., the Hazeltons and surrounding communities, Stewart, Telegraph Creek, Dease Lake, and Iskut);*
- *Options for improving collection of household hazardous waste (HHW) to facilitate easy and safe recycling/disposal. Options may include: producer-funded expansion of the depot network, regularly scheduled household hazardous waste round up events, lobbying Province and Stewards to expand programs to include additional materials, and other options;*
- *Potential future participation of the District of Kitimat in the Terrace Service Area; and*
- *Establishment of a policy regarding the maximum cost of recycling printed paper, packaging and cardboard, as collection and transportation these materials may be, at times, cost prohibitive.*

1.14. Environmental Groups

Solid waste has the potential to impact the environment if improperly managed. The RDKS has constructed new landfills to manage residual waste materials and developed recycling and

compost programs to support the diversion of wastes where possible. We invite you to provide an environmental perspective to waste management within our region by participating in the SWMP planning process. The new SWMP will be covering a wide range of topics or issues that may be relevant to your organization. Some of these include:

- Ensuring adequate waste segregation, including diversion of organics and recyclables from landfills;
- Establishing strategies to achieve new waste diversion targets;
- Contaminated soil handling and use (i.e., remediation or use as landfill cover, depending on the soil properties);
- Solution to divert “single use plastic checkout bags” from the waste stream, which may include introducing a ban on distribution of free plastic bags by retailers;
- Options for improving collection of household hazardous waste (HHW) to facilitate easy and safe recycling/disposal. Options may include: producer-funded expansion of the depot network, regularly scheduled household hazardous waste round up events, lobbying Province and Stewards to expand programs to include additional materials, and other options;
- Landfill gas utilization at the Forceman Ridge Landfill is anticipated to create carbon credits, which may be used to offset regional emissions.

2. “INFORM” LETTERS

2.1. Government Agencies

Generic Government blurb: RDKS will be conducting extensive stakeholder consultation during development of the SWMP, including direct engagement with First Nations representatives and member municipalities at the community level. We also invite your input to the SWMP planning process.

If your agency has an administration office within our district, RDKS would be pleased to assist with your “office greening,” and can provide support, resources and education to your staff in implementing waste diversion programs.

2.2. Agricultural Land Commission

Generic government blurb

2.3. Crown - Indigenous Relations and Reconciliation

Generic government blurb

2.4. Environmental Health Officer

Generic government blurb

The new SWMP will be covering a wide range of topics or issues, some of which may be relevant to your operations. In particular, the SWMP will address segregation of organic waste at restaurants and grocers, which may have implications for environmental health.

2.5. Fisheries and Oceans Canada

Generic government blurb

2.6. Ministry of Agriculture

Generic government blurb

2.7. Ministry of Environment and Climate Change - Federal

Generic government blurb

2.8. Ministry of Environment and Climate Change Strategy – Provincial

See Invite list.

2.9. BC Parks

Generic government blurb

RDKS is also available to assist in “greening” your parks and facilities, which may include discussion of options for segregated waste containers for installation at your parks and facilities and delivering public awareness and education.

2.10. Ministry of Forests, Lands, & Natural Resource Operations and Rural Development

Generic government blurb

2.11. Ministry of Health

Do we need to engage Ministry of Health or just Northern Health?

Generic government blurb

2.12. Ministry of Indigenous Relations and Reconciliation

Generic government blurb

2.13. Ministry of Jobs, Trade and Technology

Generic government blurb

2.14. Ministry of Transportation and Infrastructure

Generic government blurb

RDKS is also available to assist in “greening” your roadside facilities, which may include discussion of options for segregated waste containers for installation at your facilities and delivering public awareness and education.

Please work with your road maintenance contractor to ensure that wastes generated at your facilities are segregated in compliance with RDKS regulations.

2.15. Ministry of Municipal Affairs and Housing

Generic government blurb

Over the past two years, the RDKS has conducted extensive outreach on waste segregation at multi-family complexes in the Terrace area, and we plan to conduct outreach in the Hazelton and Highway 37 North Service Area in the coming years. We would appreciate your support at the provincial policy level to ensure that multi-family complexes are designed and constructed to

include an area for waste segregation and that residents are kept informed of waste segregation requirements.

2.16. Nathan Cullen, MP

Generic government blurb

2.17. Union of BC Municipalities

Generic government blurb

2.18. Ministry of Energy, Mines and Petroleum Resources

Generic government blurb

The primary objective of the new SWMP is to increase service efficiency. As a component of this efficiency, we have reduced the amount of soil resources required by introducing steel plates (i.e., Revelstoke Iron Grizzly plates) as an alternative daily cover. We are also managing contaminated soils at our engineered facilities which results in reducing the amount of soil resources required.

2.19. Neighboring Regional Districts

In development of our new SWMP, there may be opportunity to explore potential synergies between our Regional Districts. We understand that you are busy and may not have time to participate on our advisory committee, so we propose scheduling a meeting or phone call to discuss solid waste management topics with your Administration.

*Appendix 10 – Brochure: Solid Waste Management Plan, Step 2 Implementation,
August 2018*

Solid Waste Management Plan

Step 2 Implementation, August 2018



Love this place.
Reduce your waste.



Forceman Ridge Waste Management Facility

WHAT IS A SOLID WASTE MANAGEMENT PLAN?

A Solid Waste Management Plan (SWMP) provides direction for how we will reduce, reuse, recycle and dispose of our waste for the next decade. All regional districts are required by the BC Ministry of Environment and Climate Change Strategy to have a SWMP. The Regional District of Kitimat-Stikine (RDKS) approved its first SWMP in 1995. Extensive stakeholder consultation was conducted during development of the 1995 SWMP. Additionally, a Plan Monitoring Advisory Committee (PMAC) was formed to advise on implementation. Most of the objectives of the 1995 SWMP have been met through the construction of three new landfill facilities, two new transfer stations, recycling depots, a compost facility and closure of four landfills. New supporting programs include: three-stream curbside collection in the Terrace Area (garbage, recyclables and organics), new disposal restrictions, and cost recovery models (i.e., taxes and tipping fees). Programs are supported by public education and outreach. A new SWMP is now needed to enhance existing programs and chart a path forward for the future of solid waste management in the RDKS.

WHAT WILL THE NEW PLAN COVER?

The anticipated intent of the new SWMP is to focus on improving operational efficiency to ensure that facilities and programs run as well as possible. The RDKS also intends to focus on maintaining and improving relationships with large waste generators and expanding service delivery to rural communities. The RDKS anticipates the major topics listed below will be addressed by the new SWMP. Additional topics may be suggested during early stages of consultation.

Anticipated Solid Waste Management Plan Topics	
Review of the cost recovery model for the Terrace Service Area	Single-use plastic bags - solutions
Review of the cost recovery model for the Hazelton and Highway 37 North Service Area	Expansion of the list of Prohibited Wastes
Dease Lake landfill ownership	Household hazardous waste collection
Telegraph Creek waste management solution	Landfill gas utilization/carbon credits
Limits on municipal-type solid waste from industry	Waste audits and enforcement strategy for Institutional, Commercial and Industrial (ICI) and residential sectors
Contaminated soil handling and use	Requirements for deconstruction (instead of demolition)
Recycling collection in the Hazelton and Highway 37 North Service Area	Limits on the cost of printed paper, plastic and cardboard recycling



WHAT DOES THE PLANNING PROCESS ENTAIL?

Development of the SWMP will be guided by the RDKS Board directive to improve facility and program efficiencies, and will follow the Guide to Solid Waste Management Planning (BC Ministry of Environment, 2016). The four-step process described in the guide has been adapted for use in the RDKS and has been reviewed and approved by both the existing PMAC committee and the RDKS Board.

Step 1 included initial consultation with PMAC regarding the proposed planning process, setting the plan area and background information, drafting the intended consultation plan and setting the Plan scope, budget and schedule. Step 1 is now complete, and we are currently starting Step 2.

Step 2 will include transition of PMAC to a Public and Technical Advisory Committee (PTAC), solicitation of new membership to PTAC, consultation with public, stakeholder and special interest groups, setting plan objectives and exploring waste management options. Steps 3 and 4 will include strategy development, drafting the plan, stakeholder engagement, review and revision of the plan. The planning and consultation process is expected to take about two years, with estimated completion in 2020.

HOW CAN I BE INVOLVED?

The public will have opportunities to provide input on plan goals and guiding principles through an online survey and open houses during the early planning stages. Public input will also be sought when a draft plan has been developed.

The RDKS may host meetings or focused workshops upon request for groups or organizations that are concerned about a particular waste management topic.

Individuals that would like to have a higher level of involvement in the planning process can apply to be part of the **Public and Technical Advisory Committee (PTAC)**.

PUBLIC AND TECHNICAL ADVISORY COMMITTEE

The SWMP will be drafted with input from a new Public and Technical Advisory Committee (PTAC), who will advise the Regional District Board of Directors on development of plan targets and strategies and will monitor implementation of the approved plan.

Solicitation for PTAC membership will start in September 2018, with a target membership of:

- Two representatives from the RDKS Board;
- Up to 10 members representing community interests (i.e., private waste management service providers, non-profit groups such as reuse/thrift organizations, large institutional or commercial waste generators, business associations, and members at large);
- Members representing a variety of government agencies (i.e., staff from member municipalities, First Nations governments, provincial agencies and federal agencies); and
- Three RDKS staff members (Environmental Services Coordinator and other solid waste services staff).

Applications to participate on the PTAC will be accepted until October 26, 2018. Application forms can be completed online or obtained from the RDKS office. The time commitment for PTAC members will include attendance at regular meetings (typically every two months) and review of supporting documents prior to meetings. PTAC will operate under terms of reference. The draft terms of reference are available for review online and may be revised by the PTAC at its first meeting before being adopted.



Forceman Ridge Compost Facility

WHERE DO I GET MORE INFORMATION?

For information regarding the planning process or involvement in PTAC, please contact the RDKS Environmental Services Coordinator at (250) 615-6100 or solidwasteplan@rdks.bc.ca.

www.rdks.bc.ca/solidwasteplan



*Appendix 11 – Public and Technical Advisory Committee (PTAC) Membership
Application Form 2018*



**Solid Waste Management Plan
Public and Technical Advisory Committee (PTAC)
MEMBERSHIP APPLICATION FORM**

Please submit completed applications to:

Public and Technical Advisory Committee
300-4545 Lazelle Avenue, Terrace, B.C. V8G 4E1
Phone: (250) 615-6100 Fax:(250) 635-9222
solidwasteplan@rdks.bc.ca

APPLICANT INFORMATION

Name: _____

Address: _____ Postal Code: _____

City/Town: _____ Province: _____

Phone number: _____ Alt. number: _____

Email: _____

Please indicate which seat(s) you are applying for: _____ Alternate Member for _____

	Electoral Area A (Area commencing just north of Bell II, south to north of Rosswood, west to the Portland Canal, east to the easterly boundary of the Skeena and Nass watersheds; includes: Alice Arm, Bell II, Gingolx, Gitwinskihkw, Kitsault, Laxgalts'ap, Meziadin, Nass Camp, Gitlaxt'aamiks)
	Electoral Area B (Area commencing north of the Upper Kispiox Valley, south to Moricetown, west of Cedarvale, east to the Hazeltons; includes: Cedarvale, Gitanyow, Gitwangak, Glen Vowell, Kispiox Valley, Kispiox Village, Kitwanga, Moricetown, South Hazelton, Two Mile, Gitsegukla, Gitanmaax, Hagwilget)
	Electoral Area C (Area commencing north of Rosswood, south to Hecate Straight, west of Salvus, east to west of Cedarvale; includes: Brauns Island, Butedale, Chimdemash, Copperside, Dutch Valley, Gitaus, Gossan, Jackpine Flats, Kemano, Kitasoo/Klemtu, Kitima'at Village, Kitsumkalum, Kleanza, Lakelse Lake, New Remo, North Terrace, Old Remo, Rosswood, Usk)
	Electoral Area D (Area commencing north to between Iskut and the Stikine Rivers, south to north of Bell II, west to the Alaska Panhandle and east from the Gladys Ridge Ecological Reserve; includes: Bob Quinn, Glenora, Iskut, Tatogga, Telegraph Creek)
	Electoral Area E (The community of Thornhill; includes Kulspai)
	Electoral Area F (Area commencing 75 kilometers north of Dease Lake, south to between Iskut and the Stikine River, west to 20 kilometers east of Telegraph Creek; includes Dease Lake)
	Member municipality (Includes: City of Terrace, District of Kitimat, District of Stewart, Village of Hazelton, District of New Hazelton)
	Economic Development (any location within the RDKS)
	Recycling/Diversion based business (any location within the RDKS)
	Federal Agency, please specify:
	Provincial Agency, please specify:
	First Nations Community, please specify:
	Other, please state:

Reason for seeking appointment to PTAC

Description of skill set (expertise, experience, community involvement, etc.) (attach resume if preferred):

Additional information (i.e., waste management issues of interest, meeting availability, communication preference, etc.)

Declaration and Consent of the Applicant

I declare that I am a resident living within the boundaries of the Regional District of Kitimat-Stikine and will endeavor to represent my electoral area, community, organization or business sector in development of the Solid Waste Management Plan.

Signature of applicant

Date

Name of applicant (please print)

***Appendix 12 – Email to Unrepresented Local Governments Regarding
Appointment of a Member to PTAC***

From: [Nicki Veikle](#)
Cc: [Solid Waste Plan](#)
Bcc: info@hazeltan.ca; [Tanalee Hesse](mailto:Tanalee.Hesse); wwaycheshen@kitimat.ca; planning@kitimat.ca; edo@kitimat.ca; engineering@kitimat.ca; sroberts@kitsumkalum.bc.ca; projects@kitsumkalum.ca; executivedirector@tahltan.org; tbc.mgr@tahltan.org; info@ncrdbc.com; neal.barton@gingolx.net; darlene@peopleofthegrizzly.com; miriam@peopleofthegrizzly.com; phyllis.adams@gitwinksihlkw.ca; cao@lvqgov.net; info@gitanmaax.com; d.shanoss@gitanmaax.com; reception@band.gitanyow.com; shane.gibson@gitanvowband.ca; sdnabess@kitselas.com; cao@kitselas.com; reception@gitsegukla.net; bandmanager@gitsegukla.net; reception@gitwangak.ca; jeff.ross@gitwangakband.ca; reception@glenvowell.ca; administrator@glenvowell.ca; barbara@hagwilget.com; reception@kispioxband.ca; bandmanager@kispioxband.ca; info@iskut.org; maggiedennis@iskut.org
Subject: Regional District of Kitimat-Stikine Solid Waste Management Plan
Date: December 4, 2018 10:51:00 AM
Attachments: [SWMP Plan Update 1 20180827 Rev.1.9.pdf](#)

Good morning,

In September, the Regional District of Kitimat-Stikine mailed a letter to your office inviting your participation in our new Solid Waste Management Plan. Our last plan was developed in 1995, so we are now developing a new Plan that will provide direction for how waste materials will be reduced, reused, recycled and disposed within our region for the next decade. The main objectives of the new Plan will be to improve operational efficiencies, increase participation in waste segregation and diversion programs, continue monitoring new and upgraded solid waste management facilities and services, maintain and improve relationships with larger waste generators, and expand service delivery to rural communities.

A Public and Technical Advisory Committee (PTAC) is being formed to guide the Plan development and advise on targets and strategies. Local governments are key stakeholders in the development and implementation of the regional Solid Waste Management Plan (SWMP) and have therefore been designated a seat on the PTAC committee. It is important for us to hear your community's perspective when developing new solid waste policies, bylaws and budgets. We invite you to appoint a member of your leadership team to join our PTAC Committee.

PTAC members will be asked to commit to attending regular (typically bi-monthly) meetings, review reports and information prior to each meeting, and provide feedback at the meetings. The meetings can be attended in person or by conference call and are expected to be held mainly in Terrace. The SWMP development process is expected to take 18 to 24 months.

There will also be opportunities to participate in the SWMP through workshops, open houses, and surveys over the next two years.

Please see the attached brochure for more information. Also, please feel free to call or email for details. I hope to connect with a member of your team soon.

Kind regards,

Nicki Veikle B.Sc., A.Sc.T.
Environmental Services Coordinator

Regional District of Kitimat-Stikine
Suite 300, 4545 Lazelle Avenue, Terrace, BC V8G 4E1

250.615.6100
nveikle@rdks.bc.ca
www.rdks.bc.ca



Love this place.
Reduce your waste.

Appendix 13 – PTAC Terms of Reference

Public and Technical Advisory Committee: Terms of Reference

Purpose and Scope

The purpose of the Public and Technical Advisory Committee (PTAC) is to provide input on the development of the Solid Waste Management Plan (SWMP) from a variety of perspectives. Input from the committee will be sought on:

- Reports and technical memoranda developed as part of the planning process,
- Guiding principles, goals and targets,
- The design and implementation of the consultation processes,
- Strengths and weaknesses of the current system,
- Identification, development and evaluation of options for the proposed plan,
- The results of public consultation, and
- The draft Plan.

The Regional District of Kitimat-Stikine (RDKS) will continue to operate under its 1995 SWMP while the new SWMP is being developed, from approximately 2018 to 2020. The scope for PTAC will also include reviewing and providing input on information related to the implementation of the 1995 SWMP.

Committee members will be expected to:

- Review provided information and offer comments and suggestions to members,
- Report back to their own organizations or constituent groups regarding the progress of the SWMP development,
- Express their organizations' interests or concerns regarding proposed content of the new SWMP to the committee,
- Recommend proposed programs and policies that are in the best interests of all residents of the region, balancing both community and industry needs, and technical requirements, and
- Participate in public consultation (for example, promote opportunities for public input, attend open houses).

There may be opportunities for some members to participate in smaller ad-hoc committees dealing with specific issues or tasks.

Authority

The committee makes recommendations to the RDKS Board of Directors. The Board is the final decision-making authority.

Membership

The PTAC shall consist of members representing a diverse and balance of backgrounds, interests and geographical locations within the RDKS. The target membership shall include:

- Two representatives from the RDKS Board;
- Appointed local, provincial, and federal government representatives, which may include:
 - Council-appointed staff or delegates from member municipalities,
 - Council-appointed staff or delegates from First Nations communities,
 - Council-appointed staff or delegates from neighboring Regional Districts,
 - Staff from provincial agencies (e.g., Ministry of Environment, local health authority),
 - Staff from federal agencies;
- Volunteer members of the public from each electoral area and member municipality;

- Volunteer members of the public representing relevant community interests (up to 10), which may include:
 - Private sector waste management service providers,
 - Non-profit groups with an interest in solid waste management (e.g., reuse/thrift organization, recycling association/depot),
 - Large industrial, commercial, and institutional solid waste generators,
 - Business associations.

PTAC memberships are subject to approval by the RDKS Board.

Voting Structure

Representatives from provincial and federal agencies and other regional districts are considered non-voting members.

All other members each get one vote.

Members are encouraged to work collaboratively and to be committed to reaching consensus where possible. Any members unable to agree with a decision may have their objections noted in the minutes.

Term

The committee will serve until the SWMP is approved by the RDKS Board.

Members who miss three committee meetings during the term of the committee may have their membership revoked at the Board's discretion.

A member who is unable to fulfil their duties should inform the RDKS in writing of their resignation, so that an alternate member may be sought.

Roles and Responsibilities

The Chair and Vice-chair will be elected from amongst the voting members at the first meeting. The role of Chair and Vice-chair will remain constant throughout the plan development process.

RDKS staff will prepare agendas in consultation with the Chair and Vice-chair.

RDKS staff and/or consultants are responsible for preparing the reports for each meeting.

Agendas and accompanying reports will be circulated by email and posted on the RDKS website at least one week prior to the meeting date.

The Chair is responsible for reviewing the agenda with RDKS staff prior to each meeting and understanding the objectives for each meeting.

RDKS staff are responsible for taking minutes. Draft minutes will be approved by the committee at the next meeting and forwarded to the RDKS Board for information.

Regular communications between the RDKS and PTAC members between meetings will be by email or other accepted form of communication.

Alternate Members

PTAC members who represent member municipalities and First Nations may send a council-appointed alternate in their absence. The alternate from member municipalities and First Nations does not need to

be approved by the RDKS Board, although confirmation of attendance is required before each meeting. Council-appointed alternates from member municipalities and First Nations each get one vote.

PTAC members who represent community interests may send an alternate. This alternate must be approved by the RDKS Board in order to be a voting member of PTAC. An alternate who is sent without Board approval may participate in discussions but does not get a vote. Confirmation of attendance is required before each meeting.

Meeting Conduct

PTAC will meet monthly or at the call of the Chair. Meetings will take place in the RDKS boardroom unless otherwise specified. It is preferable for members to attend in person, although the RDKS can assist with arrangements for those needing to participate by phone.

All committee members are considered equal and will therefore have equal opportunity to contribute at meetings. All members must respect the opinions of others.

Members must declare any real or perceived conflict of interest. The member involved should excuse themselves from proceedings which relate to the conflict unless explicitly requested to speak by a majority vote. Any subsequent information provided by the individual will clearly be identified in the minutes as coming from a source perceived to be in a conflict of interest.

Members of the public may observe meetings but will not have speaking rights unless invited to participate by the Chair. Attending public will not have voting rights.

Quorum

Quorum shall be a minimum of 25% plus one voting members.

Reporting

PTAC reports to the RDKS Board.

Meeting minutes will be provided to the RDKS Board. Board members who serve on PTAC are expected to provide regular updates to the Board.

Resources and Budget

RDKS will provide the meeting space and equipment. If a meeting is scheduled over a mealtime, the RDKS will provide light refreshments.

Participation in the committee is voluntary and the RDKS does not offer remuneration for members' time.

Travel assistance is provided for members following the current RDKS travel guidelines.

Deliverables

During each meeting, PTAC's comments and suggestions will be recorded. Members may from time to time be requested to generate individual written comments. A member who misses a meeting may submit his or her input by email within three business days of the meeting.

Review

Once approved, these Terms of Reference will remain in place until the SWMP is approved by the RDKS Board. Any changes to the Terms of Reference must be approved by the Board.

Appendix 14 – Emails to the Involved Working Group

Nov.12, 2019	Cost Recovery	<ul style="list-style-type: none"> ▪ Review of the cost recovery model for the Terrace Service Area ▪ Review of the cost recovery model for the Hazelton and Highway 37 North Service Area ▪ Balancing financial constraints, operational needs and capacity
Dec. 2019	Evaluate Options	<ul style="list-style-type: none"> ▪ Impact on diversion rate and cost of a few different groupings of solutions

I look forward to hearing your input on solid waste management in our region.

Warm regards,

Nicki Veikle B.Sc., A.Sc.T.
Environmental Services Coordinator

Regional District of Kitimat-Stikine
Suite 300, 4545 Lazelle Avenue, Terrace, BC V8G 4E1
250.615.6100
nveikle@rdks.bc.ca
www.rdks.bc.ca



Please contact me directly if you do not wish to receive further correspondence from this group.

Nicki Veikle

From: Nicki Veikle
Sent: Tuesday, May 14, 2019 5:00 PM
To: Nicki Veikle
Cc: Roger Tooms; Sarah Wilmot; Erin Blaney; eric.pierce@gov.bc.ca; Erin Blaney; Murray Daly; Jennifer Coosemans
Subject: RDKS Solid Waste Involved Working Group Update #2

Good afternoon,

The Regional District of Kitimat-Stikine (RDKS) is developing a new Solid Waste Management Plan (SWMP) to set the direction for how we will reduce, reuse, recycle and dispose of our waste for the next decade. Through the month of March, we ran a **Solid Waste Survey** to get input from the public regarding topics and priorities for the Solid Waste Management Plan. I am contacting you because you are either an existing member of the Involved Working Group, or identified your interest on the recent survey (i.e., you selected "Please add me to the Solid Waste Management Plan email distribution list" on the last page of the survey). This email is being sent as an update regarding the SWMP process. You have been added to the SWMP **Involved Working Group**. Through this group, I will be emailing you regular Plan updates, including a summary of topics currently under discussion, agendas, minutes and report. If there is a topic of particular interest or concern to you, please contact me and we can set up a meeting to discuss.

A Public and Technical Advisory Committee (PTAC) was established at the beginning of 2019 to collaborate with the Regional District and guide the Plan direction. The committee has held three meetings so far:

- January 15, 2019 PTAC meeting focused on the solid waste management planning process, the current solid waste management system in the RDKS and PTAC Committee business. View the [January 15, 2019 PTAC Meeting Agenda](#), ["Solid Waste Workshop" presentation](#), and [Meeting Minutes](#);
- February 12, 2019 PTAC meeting discussed the theme of Efficiency for the SWMP, the Consultation Strategy and summary of SWMP consultation to date. View the [February 12, 2019 PTAC Meeting Agenda](#) and ["Efficiency and Consultation" presentation](#);
- April 16, 2019 PTAC meeting focused on reduction and reuse initiatives. At this meeting, PTAC reviewed the first five topics, as presented in technical memos 2 to 6 (links below). View the [April 16, 2019 PTAC Meeting Agenda](#) and ["Reduction and Reuse" presentation](#).

The intent of the new SWMP is to improve operational efficiency to ensure that facilities and programs run as well as possible. Efficiency will be an overarching theme for the SWMP, as outlined in [Technical Memo 1: Efficiency within RDKS Solid Waste Management Functions, February 2019](#). The RDKS also intends to focus on maintaining and improving relationships with large waste generators and expanding service delivery to cover rural communities. The following major topics and will be addressed by the new SWMP and are described in detail in the [Draft Topics for the Solid Waste Management Plan Revision, Rev. 1.1; January 2019](#):

Reduction and Reuse

1. Reduction and reuse options - [Technical Memo 2, April 2019](#)
2. Strategies to reduce single use items - [Technical Memo 3, April 2019](#)
3. Food waste reduction strategy - [Technical Memo 4, April 2019](#)
4. Waste management space in new commercial construction - [Technical Memo 5, April 2019](#)
5. Deconstruction versus demolition - [Technical Memo 6, April 2019](#)

Recycle

6. Recycling collection in the Hazelton and Highway 37 North Service Area
7. Options for compost collection and organics processing in the Hazelton and Highway 37 North Service Area

8. Expansion of the list of Prohibited Wastes
9. Household hazardous waste collection
10. Curbside audits
11. Solid waste source control and enforcement for the Industrial, Commercial and Institutional (ICI) sector
12. Setting an upper limit on the acceptable cost of recycling cardboard and printed paper and plastic

Residuals Management at Existing Facilities

13. Limits on municipal-type solid waste (MSW) from industry and outside the RDKS
14. Access to services/facilities in other service areas within the RDKS
15. Contaminated soil handling and use
16. Landfill gas utilization/carbon credits
17. Strategies to assist in the prevention of illegal dumping
18. Setting parameters for acceptable liquid waste brought to RDKS solid waste facilities

Residuals Management at New Facilities

19. Telegraph Creek and Dease Lake waste management solution
20. Potential participation of District of Kitimat in the Terrace Service Area

Cost Recovery

21. Review of the cost recovery model in the Terrace Service Area
22. Review of the cost recovery model in the Hazelton and Highway 37 North Service Area

Over the next year and a half, RDKS Administration will work with PTAC and other regional stakeholders to review all of the topics and determine feasible management options for each topic. Once all topics are reviewed, an initial Solid Waste Management Plan will be drafted and presented for public consultation and review. We anticipate that the planning process will be complete by early 2021.

I look forward to your input regarding solid waste management in our communities. Please email me directly if you want more information or wish to be removed from this group.

Warm regards,

Nicki Veikle, B.Sc., A.Sc.T.

Environmental Services Coordinator



Office: 250-615-6100 Toll Free: 1-800-663-3208 Fax: 250-635-9222

Email: nveikle@rdks.bc.ca Website: <http://www.rdks.bc.ca>

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The Agenda Packages for the two PTAC meetings that have taken place since reconvening the planning process have been attached to this email for your reference.

- The January 7, 2020 meeting recapped what had been done to-date, including expected SWMP direction, consultation process, and potential Reduce & Reuse strategies to form part of the Plan.
- The February 11, 2020 meeting covered new material on potential Recycling and Organics Management strategies to include in the Plan.

More information on the Solid Waste Management Plan process is available on our website at www.rdks.bc.ca. If any of the material covered in the attached documents is of particular interest to you, or may affect your community, please feel free to contact me and we can set up a meeting or workshop to discuss.

Please contact me directly if you do not wish to receive further correspondence on this matter at eblaney@rdks.bc.ca.

Kind Regards;

Erin Blaney, BSc., EPT

Environmental Services Coordinator



Office: 250-615-6100 Toll Free: 1-800-663-3208 Fax: 250-635-9222

Email: eblaney@rdks.bc.ca Website: <http://www.rdks.bc.ca>

Northwest BC Resource Benefits Alliance: <https://www.nwresourcebenefits.ca/>

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From: [Erin Blaney](#)
To: [AB; AB; AB; AB; AH; AH; AK; AL; AM; Andrew Mackay; AO; AP; AP; AS; AV; AW; AW; Barbara McRae - Hagwilget; BB; BD; BD; BD; Ben Reinbolt - MOTI Ops Tech; BK; BL; BL; BM; BM; BP; Brian Bedford MMAH; Bruce Bidgood; CB; CG; CG; CH; CK; CL; CL; Cliff Hagen - Troll Zone; CM; CM; CM; Conrad Haegi; CoT Mayor - Carol LeClerc; CP; CT; CW; DA; Dan Baker - MOTI; Danielle Branco; Darcie; Darlene Glaim - Witset; Darlene Morgan - Gitlaxt'aamiks; Dave Pritchard - Nechaco Northcoast; DB; DB; DC; DD; Deacon Liddy; Dennis Sterrit - RDKS Board/Gitxsan; DG; Dharmesh Makwana - Gitsegukla; DM; DM; DM; DM; DM; Dominique Melanson - VoH Dep. Corp. Office; DP; DQ; DS; DS; DS; DT; EA; EA; EA; EA; EB; EC; EC; Edward - Hazelton public; EH; EK; Emily Chu; EN; EO; EP; EP; ER; ER; ES; Eva Clayton - Nisgaa Lisms President; EW; FL; Gitanmaax Band; Gitanvow Band; Gitwangak Band; Gitxsan Govt Commission; GM; GM; GM; Grant Watson - MOTI; GS; Haisla Nation Council; IR; ISC - Rachele Ormond; IZWTAG; Jacqueline Sweet; JB; JD; JE; Jeanette Spalding; JF; JH; JH; JH; JJ; JJ; JK; JK; JL; JM; JM; JO; JS; JS; Julia Hill - SkeenaWild; JV; JVD; KE; Kelsey Green - VoH Finance; KG; KG; KH; Kirsten Emmerton; Kispiox Band; Kitselas Band; Kitsumkalum Band; KK; KK; KL; KL; KN; KP; KW; Laurie Gallant; Laxgalts'ap Village; LB; Les Clayton - Gingolx CAO; Leticia Kistamas; LG; LG; LG; LH; Linda Morven - Gitsinksihlkw; Liz Smaha - Kermodai Tourism; LL; LL; LM; LNG Canada; LP; LR; LR; LT; Mary Jane Maitland - Glen Vowell; MB; MB; MB; MD; MH; MH; MH; MH; MH; Ministry of Agriculture; ML; ML; ML; MM; MM; MN; MN; MP; MR; MS; MT; MT; NB; nichole Bailey; NJ; NO; NP; NV; Parrish Miller; Pat Grue; Pat Smith - FLNRO; PD; PD; PG; PJ; PL; PM; PM; PP; PQ; PS; RA; RB; RC; RG; RG; RI; RL; RM; RM; RM; RN; RO; Robert Sessford - Public; Rod Link; Rosemary Barnewall MOTI; RS; RS; RT; RT; RVK; SA; Sabina & Alex Lautensach; SB; SB; SB; SD; SD; SE; SG; SH; SH; SH; Shana Dennis - Tahltan Band Manager; Shane Gibson - Glen Vowell; Sharon; Shauna Sturgeon - ISC; SJ; SJ; SK; SK; SM; SR; SS; SS; SS; Steve; Survery Resp; Survery resp; Survey Resp. 1; Survey Resp. 2; Survey Resp. 3; survey resy; SV; SV; SW; SZ; TB; TB; TB; TC; Terrace Child Dev. Center; TH; TJ; TM; TM; TN; TR; Tracy Walbauer - CO Sergeant; TW; Ulysses Klee - Kitselas; VW; Warren Waycheshen - DoK CAO; Wilf Butters; WM; WR; YF](#)
Subject: RDKS Solid Waste Management Plan - Involved Working Group
Date: June 9, 2020 9:55:00 AM
Attachments: [PTAC Meeting Package 2020.05.28.pdf](#)
[image001.png](#)
[PTAC Mtg Package 2020.03.10.pdf](#)

Hello there;

The Regional District of Kitimat-Stikine (RDKS) is developing a new Solid Waste Management Plan (SWMP or Plan) to set the direction for how we will reduce, reuse, recycle and dispose of our waste for the next decade. A Public and Technical Advisory Committee (PTAC) has been established to collaborate with the Regional District and guide the Plan direction.

You are receiving this e-mail because you either indicated your interest in staying informed when filling out the RDKS Solid Waste Survey in March 2019 or you have been identified by the RDKS as a key stakeholder to keep informed due to potential impacts of Plan topics on you or your community. The purpose of the Involved Working Group is to keep interested stakeholders informed of the planning process and offer opportunities for additional dialogue and input should any of the topics be of a particular interest to you.

The planning process with PTAC began in January of 2019, with a break taking place from June to November 2019 while the Regional District sought a Solid Waste Consultant to assist in the completion of the new SWMP. Through a formal process, the Regional District obtained the services of Morrison Hershfield (MH). Meetings with the PTAC resumed in January 2020. A Draft of the new SWMP is expected to be ready for a public consultation period in September 2020.

The Agenda Packages of the last two PTAC meetings have been attached to this email for your reference.

- The March 10, 2020 meeting covered potential strategies for Residuals Management at Existing Facilities to include in the Plan.

The May 28, 2020 meeting covered potential strategies for Cost Recovery and Residuals Management at New Facilities to include in the Plan.

More information on the Solid Waste Management Plan process is available on our website at www.rdks.bc.ca. If any of the material covered in the attached documents is of particular interest to you, or may affect your community, please feel free to contact me and we can set up a call to discuss.

Please contact me directly if you do not wish to receive further correspondence on this matter at eblaney@rdks.bc.ca.

Kind Regards;

Erin Blaney, BSc.

Environmental Services Coordinator



Office: 250-615-6100 Toll Free: 1-800-663-3208 Fax: 250-635-9222

Email: eblaney@rdks.bc.ca Website: <http://www.rdks.bc.ca>

Northwest BC Resource Benefits Alliance: <https://www.nwresourcebenefits.ca/>

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Please consider the environment before printing this e-mail.

From: [Nicki Veikle](#)
Cc: [Erin Blaney](#); [Veronica Bartlett](#); [Eva Robertsson](#)
Bcc: [AB](#); [AB](#); [AB](#); [AB](#); [AH](#); [AH](#); [AK](#); [AL](#); [AM](#); [Andrew Mackay](#); [AO](#); [AP](#); [AP](#); [AS](#); [AV](#); [AW](#); [AW](#); [Barbara McRae - Hagwilget](#); [BB](#); [BD](#); [BD](#); [BD](#); [Ben Reinbolt - MOTI Ops Tech](#); [BK](#); [BL](#); [BL](#); [BM](#); [BM](#); [BP](#); [Brian Bedford MMAH](#); [Bruce Bidgood](#); [CB](#); [CG](#); [CG](#); [CH](#); [CK](#); [CL](#); [CL](#); [Cliff Hagen - Troll Zone](#); [CM](#); [CM](#); [CM](#); [Conrad Haegi](#); [CoT Mayor - Carol LeClerc](#); [CP](#); [CT](#); [CW](#); [DA](#); [Dan Baker - MOTI](#); [Danielle Branco](#); [Darcie](#); [Darlene Glaim - Witset](#); [Darlene Morgan - Gitlaxt'aamiks](#); [Dave Pritchard - Nechaco Northcoast](#); [DB](#); [DB](#); [DC](#); [DD](#); [Deacon Liddy](#); [Dennis Sterrit - RDKS Board/Gitxsan](#); [DG](#); [Dharmesh Makwana - Gitsegukla](#); [DM](#); [DM](#); [DM](#); [DM](#); [DM](#); [Dominique Melanson - VoH Dep. Corp. Office](#); [DP](#); [DQ](#); [DS](#); [DS](#); [DS](#); [DT](#); [EA](#); [EA](#); [EA](#); [EB](#); [EC](#); [EC](#); [Edward - Hazelton public](#); [EH](#); [EK](#); [Emily Chu](#); [EN](#); [EO](#); [EP](#); [EP](#); [ER](#); [ER](#); [ES](#); [Eva Clayton - Nisgaa Lisms President](#); [EW](#); [FL](#); [Gitanmaax Band](#); [Gitanwow Band](#); [Gitwangak Band](#); [Gitxsan Govt Commission](#); [GM](#); [GM](#); [GM](#); [Grant Watson - MOTI](#); [GS](#); [Haisla Nation Council](#); [IR](#); [ISC - Rachele Ormond](#); [IZWTAG](#); [Jacqueline Sweet](#); [JB](#); [JD](#); [JE](#); [Jeanette Spalding](#); [JF](#); [JH](#); [JH](#); [JH](#); [JI](#); [JJ](#); [JK](#); [JK](#); [JK](#); [JL](#); [JM](#); [JM](#); [JO](#); [JS](#); [JS](#); [Julia Hill - SkeenaWild](#); [JV](#); [JVD](#); [KE](#); [Kelsey Green - VoH Finance](#); [KG](#); [KG](#); [KH](#); [Kirsten Emmerton](#); [Kispiox Band](#); [Kitselas Band](#); [Kitsumkalum Band](#); [KK](#); [KK](#); [KL](#); [KL](#); [KN](#); [KP](#); [KW](#); [Laurie Gallant](#); [Laxqalts'ap Village](#); [LB](#); [Les Clayton - Gingolx CAO](#); [Leticia Kistamas](#); [LG](#); [LG](#); [LG](#); [LH](#); [Linda Morven - Gitsinksihlkw](#); [Liz Smaha - Kermodei Tourism](#); [LL](#); [LL](#); [LM](#); [LNG Canada](#); [LP](#); [LR](#); [LR](#); [LT](#); [Mary Jane Maitland - Glen Vowell](#); [MB](#); [MB](#); [MB](#); [MD](#); [MH](#); [MH](#); [MH](#); [MH](#); [Ministry of Agriculture](#); [ML](#); [ML](#); [ML](#); [MM](#); [MM](#); [MN](#); [MP](#); [MR](#); [MS](#); [MT](#); [MT](#); [NB](#); [nichole Bailey](#); [NJ](#); [NO](#); [NP](#); [NV](#); [Parrish Miller](#); [Pat Grue](#); [Pat Smith - FLNRO](#); [PD](#); [PD](#); [PG](#); [PJ](#); [PL](#); [PM](#); [PM](#); [PP](#); [PQ](#); [PS](#); [RA](#); [RB](#); [RC](#); [RG](#); [RG](#); [RI](#); [RL](#); [RM](#); [RM](#); [RM](#); [RN](#); [RO](#); [Robert Sessford - Public](#); [Rod Link](#); [Rosemary Barnewall MOTI](#); [RS](#); [RS](#); [RT](#); [RVK](#); [SA](#); [Sabina & Alex Lautensach](#); [SB](#); [SB](#); [SB](#); [SD](#); [SD](#); [SE](#); [SG](#); [SH](#); [SH](#); [SH](#); [Shana Dennis - Tahltan Band Manager](#); [Shane Gibson - Glen Vowell](#); [Sharon](#); [Shauna Sturgeon - ISC](#); [SJ](#); [SJ](#); [SK](#); [SK](#); [SM](#); [SR](#); [SS](#); [SS](#); [SS](#); [Steve](#); [Survey Resp](#); [Survey Resp. 1](#); [Survey Resp. 2](#); [Survey Resp. 3](#); [survey resp](#); [SV](#); [SV](#); [SZ](#); [SZ](#); [TB](#); [TB](#); [TB](#); [TC](#); [Terrace Child Dev. Center](#); [TH](#); [TJ](#); [TM](#); [TM](#); [TM](#); [TN](#); [TR](#); [Tracy Walbauer - CO Sergeant](#); [TW](#); [Ulysses Klee - Kitselas](#); [VW](#); [Warren Waycheshen - DoK CAO](#); [WM](#); [WR](#); [YF](#)
Subject: RDKS Solid Waste Management Plan - Involved Working Group Update
Date: November 13, 2020 12:09:00 PM
Attachments: [image001.png](#)

Good afternoon,

You are receiving this email as you have expressed interest in solid waste management in your region (you requested to stay informed via the March 2019 RDKS Solid Waste Survey or you have been identified as a key stakeholder).

The Regional District of Kitimat-Stikine (RDKS) is developing a new Solid Waste Management Plan (SWMP; Plan) to set the direction for how we will reduce, reuse, recycle and dispose of our waste for the next decade. A Public and Technical Advisory Committee (PTAC) was established in 2019 to collaborate with the Regional District and guide the Plan direction, as presented in the PTAC agendas:

[2019.01.15 PTAC Meeting 1 – Current waste management system](#)

[2019.02.12 PTAC Meeting 2 – Efficiency of current system; Consultation strategy](#)

[2019.04.16 PTAC Meeting 3 – Reduction and reuse](#)

[2019.06.11 PTAC Meeting 4 – Consultation outcomes](#)

[2020.01.07 PTAC Meeting 5 – Reduce and reuse options](#)

[2020.02.11 PTAC Meeting 6 – Reduce and reuse priorities and strategies](#)

[2020.03.10 PTAC Meeting 7 – Recycling and organics diversion; Residuals management \(i.e., refuse\) at existing facilities](#)

[2020.05.28 PTAC Meeting 8 – Strategies for residuals management at existing facilities; Waste management at new facilities](#)

[2020.06.04 PTAC Meeting 9 – Cost recovery](#)

[2020.06.25 PTAC Meeting 10 - Preferred waste management options](#)

In consultation with the PTAC, RDKS staff and consultants have completed the first draft of the new Solid Waste Management Plan. At the October 23rd Board Meeting, the [RDKS Board of Directors](#)

[approved the Draft Solid Waste Management Plan.](#)

The next step will be to consult citizens (using pandemic-appropriate engagement methods) on proposed waste management strategies presented in the Plan. For more information, visit our [website](#).

Please contact me directly to UNSUBSCRIBE from this email list.

Warm regards,

Nicki Veikle, B.Sc., A.Sc.T.

Environmental Coordinator



Office: 250-615-6100 Toll Free: 1-800-663-3208 Fax: 250-635-9222

Email: email@rdks.bc.ca Website: <http://www.rdks.bc.ca>

Northwest BC Resource Benefits Alliance: <https://www.nwresourcebenefits.ca/>

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Open House #5	April 13	7:00 to 8:30 pm	 (833) 253-7696, 353603045# Canada (Toll-free)
Open House #6	April 15	3:00 to 4:30 pm	 (833) 253-7696, 296486109# Canada (Toll-free)

Hope to hear from you at one of our "Let's Talk Trash" Open Houses!

Warm regards,

Nicki Veikle A.Sc.T.

Environmental Coordinator



**Regional District of
Kitimat-Stikine**
Suite 300 - 4545 Lozelle Avenue
Terrace, B.C. V8G 4E1

Office: 250-615-6100 Toll Free: 1-800-663-3208 Cell: 250-638-6804

Email: nveikle@rdks.bc.ca Website: <http://www.rdks.bc.ca>

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Appendix 15 – February 21, 2019, SWMP Board Workshop Presentation



Regional District of Kitimat-Stikine
**Solid Waste
Management Plan**

Board Workshop February 21, 2019

Meeting Overview

Description of the existing RDKS solid waste system

Supper Break

Waste diversion results

Solid Waste Management Planning

RDKS SWMP Theme: Efficiency

RDKS Planning Process and Progress

Stakeholder Consultation Strategy



Love this place.
Reduce your waste.

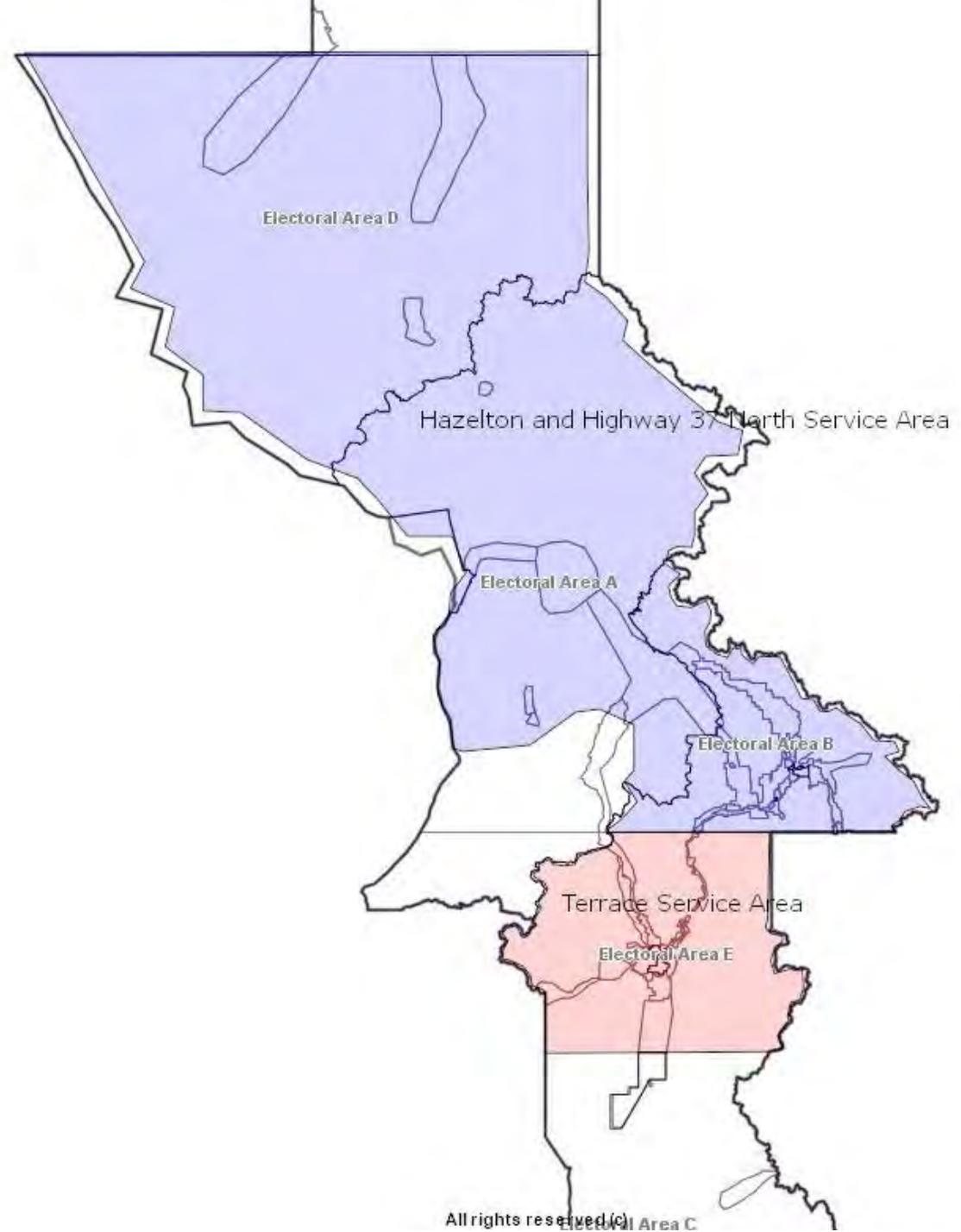
RDKS Existing Solid Waste Management System



Love this place.
Reduce your waste.

1995 SWMP Implementation

- Two service areas established
 - Terrace (includes surrounding electoral areas)
 - Hazelton and Highway 37 North
- Each service area has:
 - Cost recovery model
 - Disposal restrictions
 - Transfer, processing and disposal infrastructure



Education and Community Outreach

Residential Recycling:
Curbside Collection
and Depot Guides

Waste and Recycling
Composition Audits to
Target Education

Community Events and
Information Booths

Elementary School
Presentations

Industrial, Commercial,
and Institutional (IC&I)
Waste Management
Support

Recycle Coach: App
and Website Tool



Love this place.
Reduce your waste.

Curbside Collection Support for the Terrace Area



Greater Terrace Area Curbside Organics, Recycling & Garbage Collection Schedule INFORMATION – GUIDE – 2019

POST ME

2019 Collection Schedule

Legend ■ Recycle ■ Garbage ■ Organics ■ No Collection

No Collection on the Following Days: New Year's Day, Family Day, Good Friday, Easter Monday, Victoria Day, Canada Day, BC Day, Labour Day, Thanksgiving Day, Remembrance Day, Christmas Day, Boxing Day. **Collection occurs the following business day.**

JANUARY 2019							FEBRUARY 2019							
S	M	T	W	T	F	S	S	M	T	W	T	F	S	
				1	2	3	4	5					1	2
6	7	8	9	10	11	12	3	4	5	6	7	8	9	
13	14	15	16	17	18	19	10	11	12	13	14	15	16	
20	21	22	23	24	25	26	17	18	19	20	21	22	23	
27	28	29	30	31			24	25	26	27	28			

MARCH 2019							APRIL 2019							MAY 2019							JUNE 2019							JULY 2019											
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S					
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31																			30																				

AUGUST 2019							SEPTEMBER 2019							OCTOBER 2019							NOVEMBER 2019							DECEMBER 2019							
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	
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4	5	6	7	8	9	10	8	9	10	11	12	13	14	13	14	15	16	17	18	19	10	11	12	13	14	15	16	8	9	10	11	12	13	14	
11	12	13	14	15	16	17	15	16	17	18	19	20	21	20	21	22	23	24	25	26	17	18	19	20	21	22	23	15	16	17	18	19	20	21	
18	19	20	21	22	23	24	22	23	24	25	26	27	28	27	28	29	30	31		24	25	26	27	28	29	30	22	23	24	25	26	27	28		
25	26	27	28	29	30	31	29	30											29	30	31					29	30	31							



NEVER MISS ANOTHER COLLECTION DAY!

Download the FREE Recycle Coach™ app

Your collection schedule and notices at your fingertips.

Revised: December 2018



Regional District of
Kitimat-Stikine
RECYCLING DIRECTORY
Terrace Area

de to where you can take h
reuse and recyl
250.615.61
www.rdks.



RECYCLING DIRECTORY

The Hazeltons and Kitwanga
A guide to recycling, reducing, and reusing household waste.

RECYCLING DIRECTORY STEWART

de to recycling, reducing, and using household waste.



November 2018

March 2018

If You're Burning Garbage, You're Creating Toxic Pollution And Breaking the Law!

Burning household garbage releases multiple forms of pollution, smoke, toxic gas, and ash.



Burning garbage in our back yards or in wood stoves used to be common practice. Today, the practice is **considered pollution**, and a **violation** under the *Environmental Management Act*. Smoke created from burning garbage creates multiple forms of pollution, smoke, toxic gases, and ash.

It is **not healthy** or environmentally responsible to burn **any form** of garbage. Household waste must be managed properly by using curbside collection programs, recycling depots, and waste management facilities.

Anyone that is burning garbage is causing harm to themselves, those in their community, and the environment. If you observe someone burning garbage please report the incident to the RAPP Hotline.

RAPP Report All Poachers and Polluters
Conservation Officer 24 Hour Hotline
1-877-952-RAPP (7277)

BRITISH COLUMBIA rapp.bc.ca Conservation Officer Service



Regional District of **Kitimat-Stikine**



Construction Site Waste Management Terrace Area

This pamphlet provides comprehensive information for contractors to manage construction site waste.



Tips for Composting in Bear Country

Keep Wildlife Wild and Neighborhoods Safe

KITWANGA TRANSFER STATION RECYCLING

MIXED CONTAINERS	PAPER	GLASS
<ul style="list-style-type: none"> Plastic bottles, jugs, and jugs Caps, tops, lids, and pumps Metal cans 	<ul style="list-style-type: none"> Plastic trays and dishware Plastic or paper take-out cups, bowls, and lids Cardboard boxes and packaging Magazines, catalogues, phone books 	<ul style="list-style-type: none"> Glass bottles (not deposit) Glass jars
<ul style="list-style-type: none"> Plastic patio less than 25L for laundry detergent, etc. Spiral wound cans and lids for frozen juice concentrates, coffee, etc. Plastic tubs for yogurt, margarine, etc. 	<ul style="list-style-type: none"> Paper egg cartons Shredded paper (contained in paper bag or box) Envelopes Household paper 	<ul style="list-style-type: none"> Foam meat trays (removes absorbent pad) Foam take-out containers and cups Foam packaging used to protect electronics etc.
<ul style="list-style-type: none"> Plastic take-out containers, soup, etc. Full wrap and take-out containers Paper carry-out beverage trays 	<ul style="list-style-type: none"> Corrugated cardboard boxes Household paper 	<ul style="list-style-type: none"> Plastic bags and overwrap Plastic bags
<ul style="list-style-type: none"> Plastic packaging for toys and other household items Plastic tubs for yogurt, margarine, etc. 	<ul style="list-style-type: none"> Plastic patio less than 25L for laundry detergent, etc. Spiral wound cans and lids for frozen juice concentrates, coffee, etc. Plastic tubs for yogurt, margarine, etc. 	<ul style="list-style-type: none"> Plastic bags for groceries, produce, bulk dry foods, water softener, wood pellets, etc. Overwrap for toilet paper, paper towels, soft drink flats, etc.
<p>NOT ACCEPTED</p> <ul style="list-style-type: none"> Hangers, pins, pens, and other sharp metal Toys and games Hazardous waste (batteries, flammable/oxidizing/toxic material etc.) Paper boards, staples and tissues Hard and soft cover books 		
<p>NOT ACCEPTED</p> <ul style="list-style-type: none"> X Drinking glasses, or dishes X Window glass, mirrors, or ceramic X Light bulbs X Blue or pink foam (insulation, packing chips, or peanuts) X Flexible foam, foam noodles X Full lined bags (chip and snack bags) X Kitchen stretch wrap or "crinkly" plastic (peas or cereal bags) 		

Recycle Coach

Choose Your Area Greater Terrace Area

What Goes Where?
What do you want to recycle?

My Schedule
Your personalized calendar. Sign up for reminders and more.
[View Schedule](#) [My Reminders](#)

Get the Free Recycle Coach App
Get complete waste and recycling information and schedules in Greater Terrace.
[Available on the App Store](#) [Android App on Google Play](#)


What Type of Recycler Are You?
Take our quiz and find out!


Collection Requirements
Learn how to prepare for your collection day.


Be a Better Recycler
Boost your recycling knowledge with our blog.

Recycling information at your fingertips!

Regional District of **Kiitimat-Silkine**

You get:

- A personalized collection schedule
- Custom pickup reminders
- A "What Goes Where?" search tool
- And more!

Download the **FREE Recycle Coach™** app

[Download on the App Store](#) [GET IT ON Google Play](#) Search "Recycle Coach"



Elementary School Presentations



Hidden Recycling at Home



Does your home have any hidden recycling?

Kitchen:

- Empty dish soap bottles
- Empty soup cans and cartons
- Empty cereal boxes (take out the bag)
- The cardboard tube from a paper towel roll
- Empty pickle jars (Remember: Glass has to go to the Depot, Not in your bin!)
- Empty egg cartons (Remember: Styrofoam has to go to the Depot, Not in your bin!)

All Over:

- Box from a new toy or game
- Magazines and newspapers
- Empty to-go cups and lids (plastic and paper ones)
- Empty jugs of laundry soap

Bathroom:

- Empty shampoo and body wash bottles
- Box from a new tube of toothpaste
- The cardboard tube from the toilet paper roll
- Empty tissue boxes

Can you think of anything else? Add it here!



IC&I Waste Management Support

Recycling and Waste Diversion Directory for Industrial, Commercial & Institutional Producers.

IC&I



Regional District of
Kitimat-Stikine
(250) 615-6100
www.rdks.bc.ca



300-4545 Lazelle Avenue
Terrace, B.C. V8G 4E1
Tel 250-615-6100
Fax 250-635-9222

Terrace Area Integrated Solid Waste Management: IC&I Stakeholder Engagement Communication Record

Stakeholder Organization: _____
 Representative Name(s): _____
 Contact info: _____
 Address: _____
 RDKS Representative: _____

Date and Method of Engagement:

Phone	Email	Meeting	Letter

Current Solid Waste Management Practices:

Requested Info & Required Follow-up

_____ Completion Date _____

_____ Completion Date _____

_____ Completion Date _____

Extended Producer Responsibility (EPR) Programs

ElectroRecycle
SMALL APPLIANCE & POWER TOOL
RECYCLING PROGRAM

 **AlarmRecycle**


Canada's
National Brewers


It's Worth It.™

 **LightRecycle**

 **MARR**
Major Appliance Recycling Roundtable



RECYCLEBC™

call2recycle®



TIRE
Stewardship
New value from old tires
BC



BCUOMA
British Columbia Used Oil
Management Association



HEALTH PRODUCTS
STEWARDSHIP
ASSOCIATION

 Love this place.
Reduce your waste.



RECYCLEBC™

Packaging and Printed Paper Stewardship Program



Glass



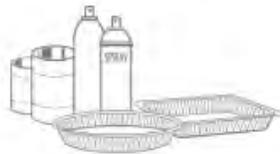
**Plastic Bags/
Overwrap**



Plastic Containers



Foam Packaging



**Aluminum
Containers**



Paper Packaging



**Paper &
Cardboard**



Steel Containers



Love this place.
Reduce your waste.



RDKS-Operated Recycling Services

Greater Terrace Area	<ul style="list-style-type: none">• Printed paper and packaging is collected at curb (NO funding received from Recycle BC)	
Kitwanga Transfer Station	<ul style="list-style-type: none">• Printed paper and packaging (NO funding from Recycle BC)• Household and Office Electronics• Small Appliances and Power Tools	<ul style="list-style-type: none">• Light Fixtures• Large Household Appliances• Tires
Stewart Landfill (Pending Transfer Station)	<ul style="list-style-type: none">• Printed Paper and Packaging• Household and Office Electronics• Small Appliances and Power Tools• Light Fixtures, Lamps, and Bulbs• Tires	<ul style="list-style-type: none">• Large Household Appliances• Smoke and carbon monoxide detectors• Batteries (under 5kg) and Cell Phones

Policies and Servicing Plans

Regional District of Kitimat-Stikine

DRAFT
*Transfer Station and Landfill
Commissioning Guide*

v.2.2 August 4, 2016



Regional District of Kitimat-Stikine

*Draft Cardboard and
Paper Products Strategy*

Rev. 2.3

July 18, 2016

Regional District of Kitimat-Stikine

*Draft Service Specifications:
Curbside Collection Service
(Garbage, Recycling, Organics)*

July 4, 2016

Regional District of Kitimat-Stikine

Draft Community Organics Strategy
Rev. 7

August 11, 2016

Regional District of Kitimat-Stikine

*Draft Hazelton and Highway 37 North
Servicing Plan*

Rev. 2.6.2
January 30, 2018

Prepared By:
Sarah Wilmot Environmental Planning, in collaboration with the Regional District of Kitimat-Stikine



Bylaws

- Service Area Establishment
- Facility Regulation Bylaws
- Solid Waste and Recycling Collection Service Rates and Regulations



Terrace
Service Area

Curbside
collection
programs in City
and electoral
areas

Commercial
cardboard and
paper recycling
program

Disposal
restrictions cover
a wide range of
materials

Thornhill and City
of Terrace
Landfills
undergoing
closure

New transfer station, 100 year landfill,
in-vessel composting facility and
septage facility

Costs are recovered by user fees and tax requisition



Curbside Collection



Garbage



Cardboard



Organics



Commercial Waste Separation



**Bales of residential
single stream recycling**

**Residential
drop off**

Recycling Facilities





Cardboard Baler

Industrial, Commercial and Institutional (ICI) Cardboard and Paper Recycling

Bales of cardboard from commercial waste generators





Thornhill Transfer Station

- Thornhill Landfill closed
- Leachate catchment with wetland treatment lagoons
- Transfer station facility:
 - Automated scale
 - Scale house attendant
 - Z-wall
 - Marshalling bays
 - Tip floor (Transfer Station building)

PHYTOREMEDIATION AREA
• 2800 TREES
• DRIP IRRIGATION
• DIRECTIONAL SPRAY IRRIGATION BACKUP

EQUALIZATION POND
• DOUBLE LINED POND
• RETENTION CAPACITY FOR 12 MONTHS

AERATION POND
• WITH SUBMERGED BUBBLER AERATION SYSTEM

SEDIMENTATION POND
• FOR SUSPENDED SOLIDS REMOVAL

SAND FILTER
• SUBSURFACE LEACHATE TREATMENT

SEPTAGE FACILITY
• SEPTAGE DEWATERING

PHASE 1 LANDFILL
• LINED DISPOSAL AREA
• LEACHATE COLLECTION SYSTEM

VEHICLE SCALE AND ACCESS LOOP ROAD

LEAK DETECTION MONITORING SYSTEM

COMPOST FACILITY
• WITH IN-VESSEL GORE COVER COMPOSTING TUNNELS

MAINTENANCE BUILDING

ELECTRIC FENCE (SURROUNDS SITE)

SITE OFFICE

ELECTRICAL BUILDING

SITE GATES



FORCEMAN RIDGE WASTE MANAGEMENT FACILITY



Forceman Ridge Landfill Active Face



Summer
2018



Future
(~10 years)

Forceman Ridge Phytoremediation



Forceman Ridge Compost Facility



Award-Winning

"The solid waste management planning process, careful landfill siting, genuine and meaningful First Nations and public consultation, and design and construction of the of the facilities clearly demonstrate that the Regional District has gone above and beyond."
- BC Ministry of Environment

"The quality and the level of environmental protection at these sites have set a new standard for other projects to match. Forceman Ridge is the most environmentally protective landfill in its class, in Canada, [and] possibly North America at this time."
- BC Ministry of Environment

- NCLGA Community Leadership Environmental Sustainability Award
- Community Energy Association Climate and Energy Action Award
- UBCM Community Excellence Award
- FCM Sustainable Communities Award
- SWANA 2018 Excellence Award



Hazelton and
Highway 37
North
Service Area

Municipal
collection
programs

- Garbage: Stewart, Hazelton, and New Hazelton
- Recycling: New Hazelton

Recycling & EPR
material drop-
off

Disposal
restrictions

RDKS Transfer
stations and
Landfills

Telegraph Creek and
Dease Lake are
under development
(with INAC and
MOTI)

Costs recovered by tax requisitions, service contributions
and user fees



Hazelton Waste Management Facility

- Landfill Phase 1
- Z-wall for public drop-off
- U-bays / marshalling area
- RIG plates on active landfill face
- Septage/liquid waste facility

Construction completion anticipated by end of 2019



Kitwanga Transfer Station

- Kitwanga Landfill closure
- Tip floor / Transfer Station Building
- Recycling Diversion Center
- U-bays / Marshalling area





Stewart Landfill Closure and Transfer Station Development

- Preliminary earthworks contract completed Fall 2018
- Transition recycling services to RDKS in December 2018
 - Recycling Diversion Center
 - Outreach and education
- Transfer Station construction and full Landfill closure to be completed in 2019





RDKS owned facilities:

- Meziadin
- Iskut
- Rosswood

Operated by others:

- Dease Lake
- Telegraph
- Gitlax'taamiks
- Kitimat

Other Facilities



Supper Break



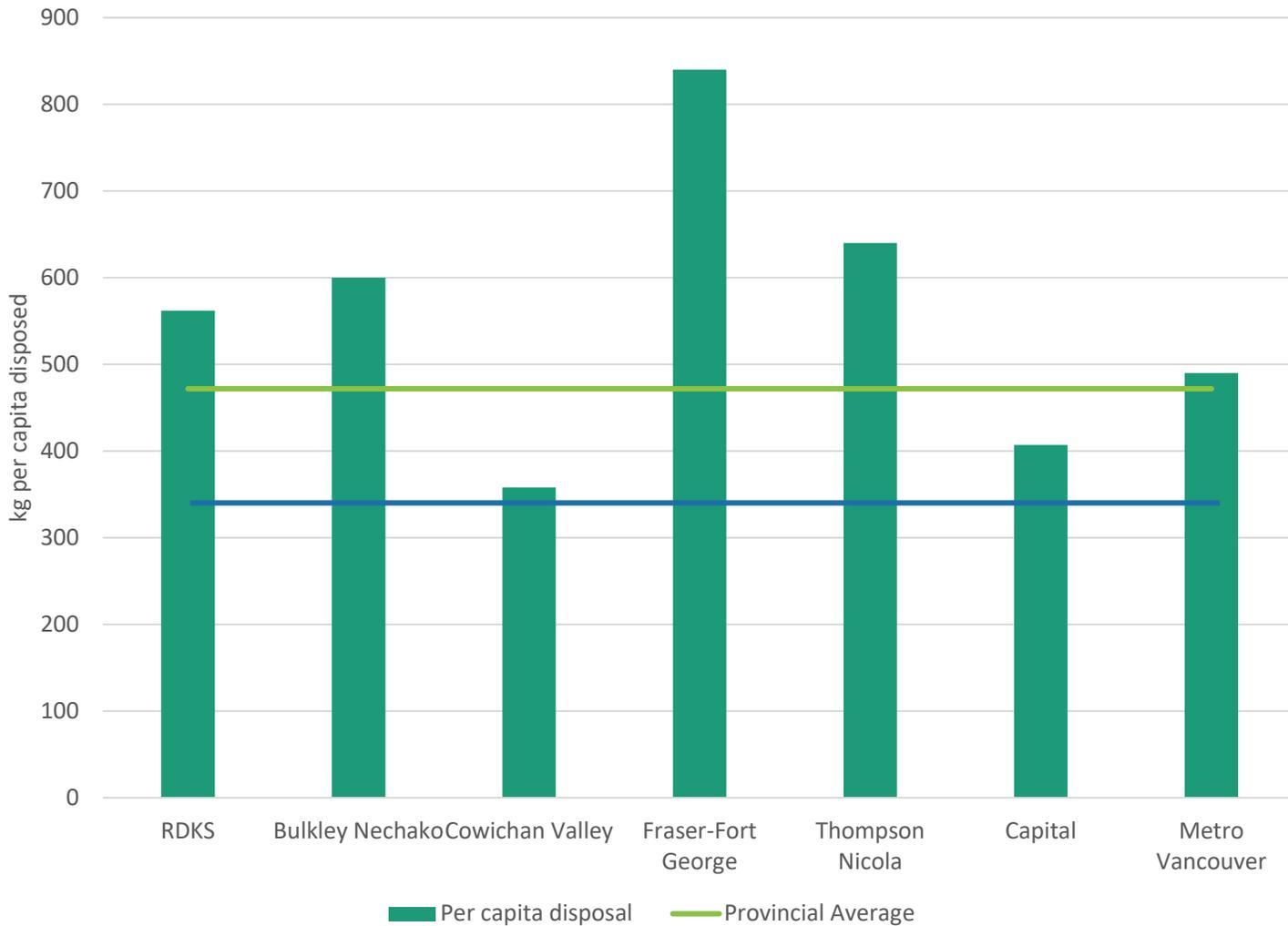
Love this place.
Reduce your waste.



Results



Love this place.
Reduce your waste.



- Disposal rate fell to 562 kg per capita per year, including waste from industrial camps (522 kg without industrial waste)
- Provincial average disposal rate is 472 kg per capita
- Regional districts on chart listed in order of increasing population
- Diversion rate in 2018 was about 22% (for **entire RD**)

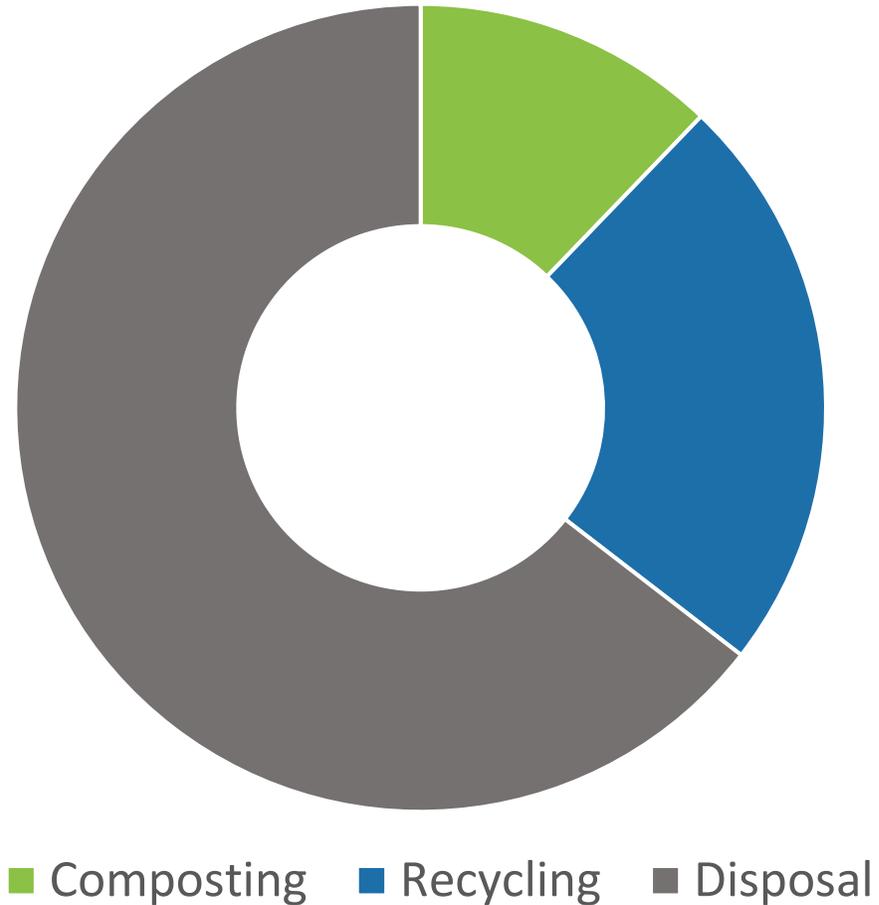
Overall Impact for the Entire Regional District



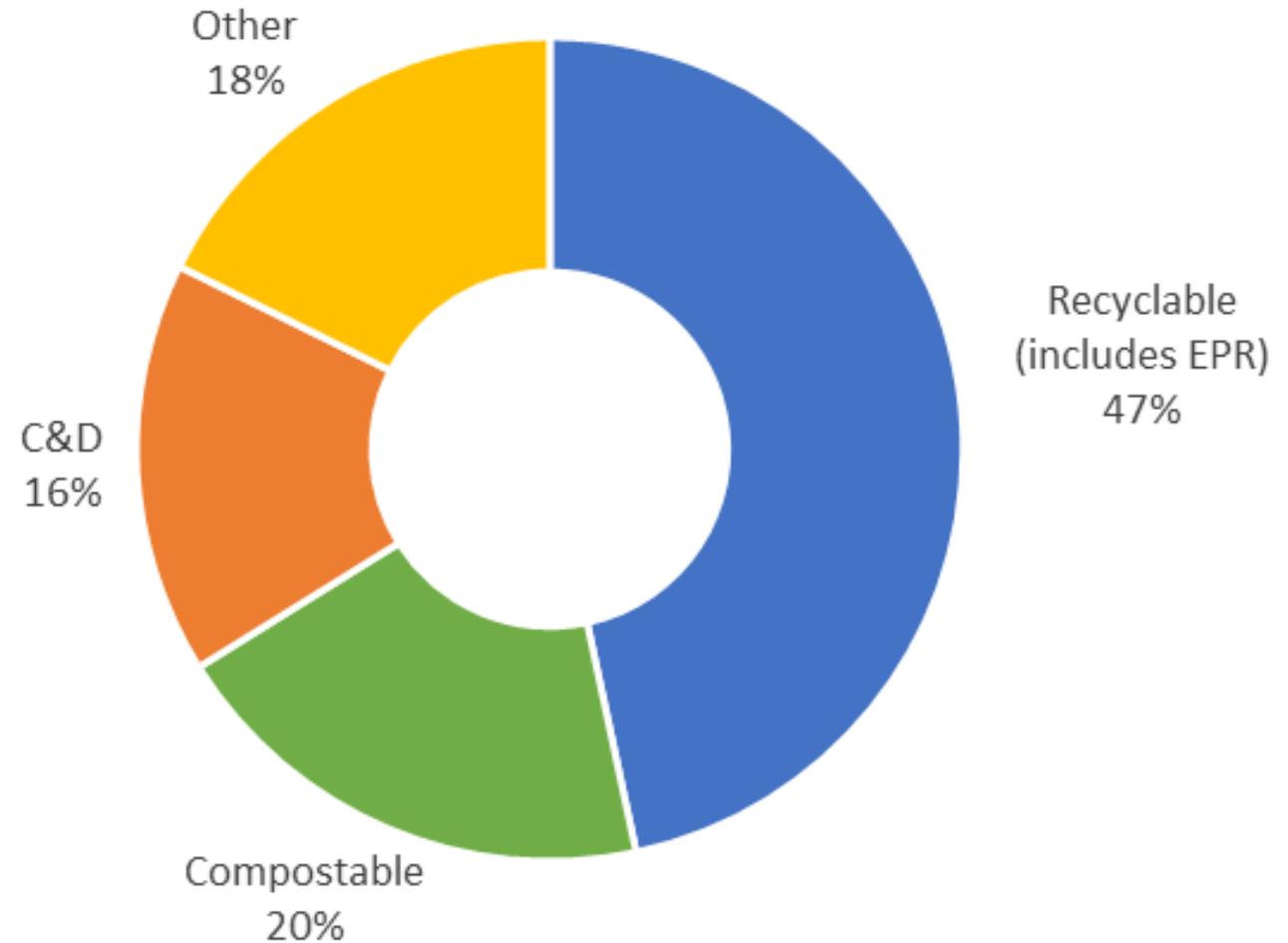


Terrace Service Area Quantified Results

Waste handling in the Terrace Service Area (2018)



Composition of Discarded Materials (2017)





Solid Waste Management Planning



Love this place.
Reduce your waste.

What is a solid waste management plan?

The Ministry of Environment requires Regional Districts to prepare Solid Waste Management Plans (SWMP)

The SWMP defines regional services, programs and infrastructure

The SWMP covers all aspects of solid waste management

Collection, recycling and disposal

Education, outreach and waste reduction

Financing and cost recovery

And more!



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Reduce your waste.

Importance of a Solid Waste Management Plan

A detailed servicing plan for 10 years

A guide for the next 10 to 20 years

Provincial approval required before adoption

The SWMP provides authorization to spend funds identified in the Plan

No referendum needed to approve borrowing for items in the SWMP



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Solid Waste
Management Plan
**Process
Summary**



Public engagement

Step 1: Initiate

Evaluate
current system

Define
approach

Step 2: Set
Direction

Establish PTAC

Develop
options

Step 3: Evaluate

Evaluate
options

Step 4: Prepare
Plan

Draft Plan

Consult on Plan

Plan approval

Step 1: Initiate the planning process

- Define the area covered by the plan
- Assemble background information
- Set the scope of work
- Draft a consultation plan
- Present draft approach to PMAC; receive and incorporate feedback
- Present approach to Regional District Board for approval
- Approval given January 30, 2018





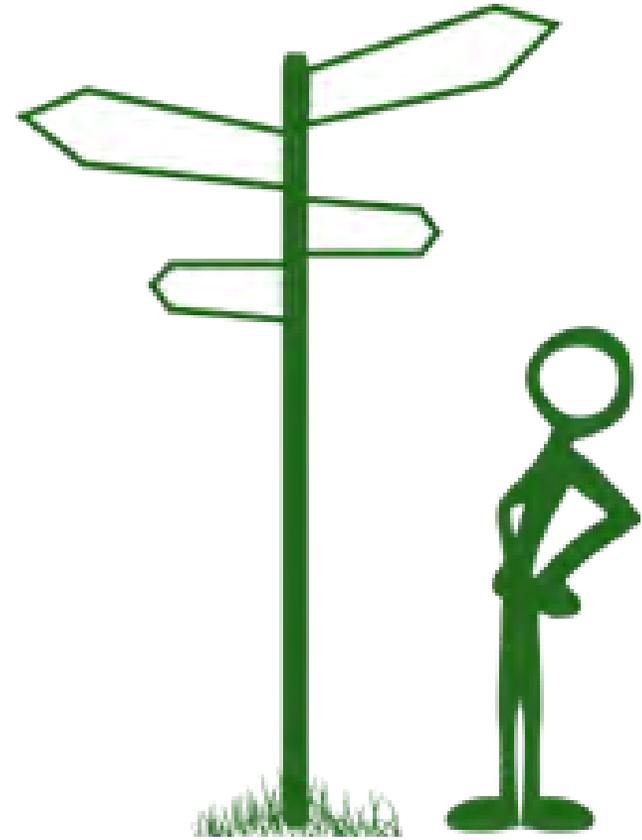
Step 2: Set the Plan Direction

- Notify interested parties and invite them to join advisory committee
- Formally establish Public and Technical Advisory Committee
- **Begin to implement the consultation plan**
- Identify strengths of current system and opportunities for improvement
- Establish principles, goals and targets
- Develop options for waste management

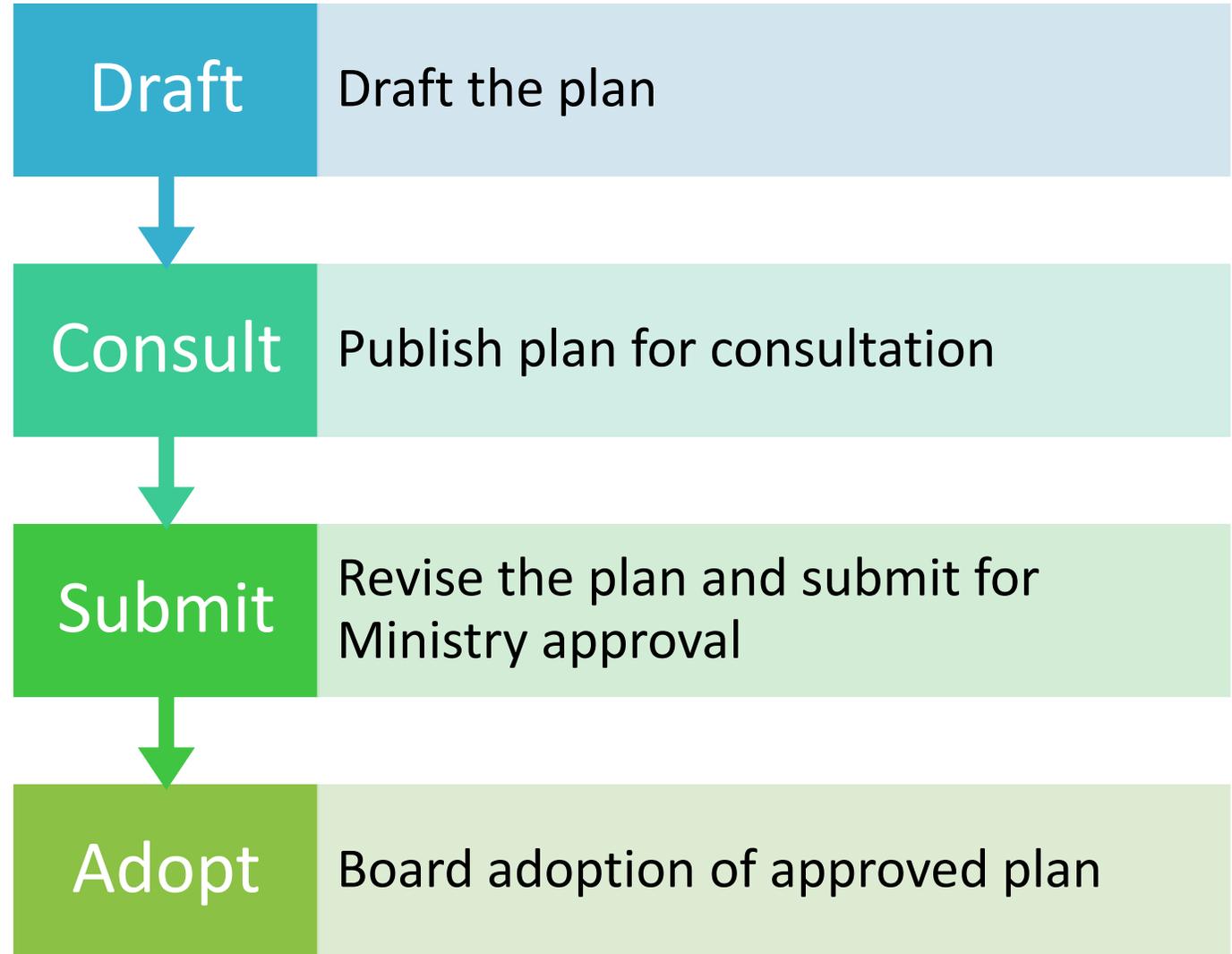


Step 3: Evaluate Options

- Consider a range of criteria
- Extensive public engagement



Step 4: Prepare and Adopt the Plan



RDKS Theme of Efficiency



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Reduce your waste.

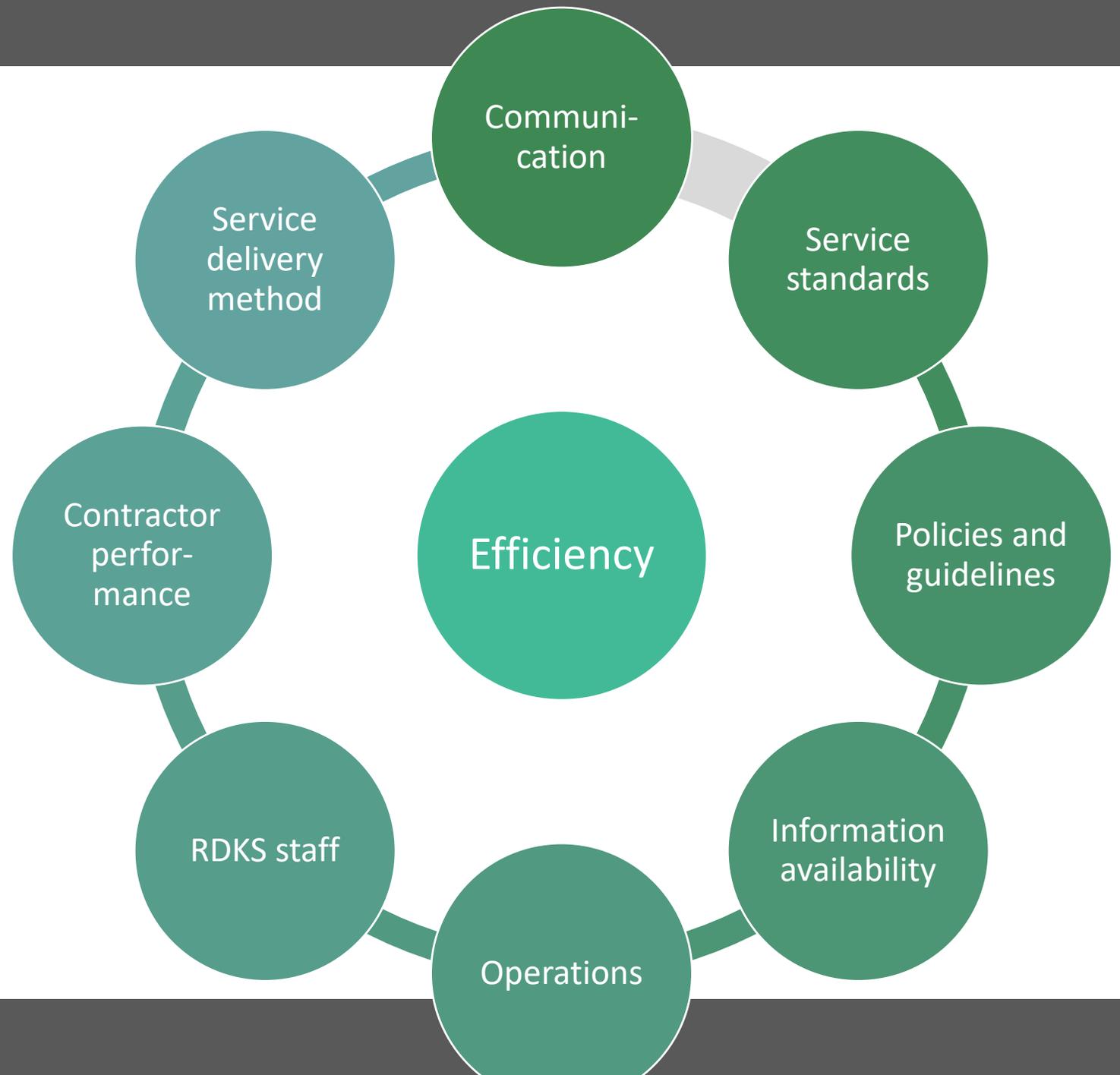


Efficiency



- Focus of Solid Waste Management Plan
- Improve operational efficiencies
- Improve user participation in waste diversion
- Services are reasonably convenient for most users

Elements of Efficiency



- Servicing requirements
 - Provincial regulations, bylaws, contracts
- Cost and financial implications
 - Budget
 - User costs
- Capacity and resource impacts
 - Staffing limitations
- **Community needs and wants**

Solid Waste Management Decision Making Priorities





RDKS Planning Process and Progress



Love this place.
Reduce your waste.



Topics for the SWMP

Reduce and Reuse

- Require waste management space in new construction
- Strategies to reduce use of single-use items
- Requirements for deconstruction
- Food waste reduction strategy
- Other reduction and reuse initiatives that can be supported by the RDKS

Recycle

- Recycling collection in the Hazelton and Highway 37 North Service Area
- Expansion of the list of Prohibited Wastes
- Household hazardous waste collection
- Audits of curbside waste
- Audits and enforcement for the Industrial, Commercial and Institutional (ICI) sector
- Setting an upper limit on the acceptable cost of recycling cardboard, printed paper and plastic packaging



More Topics for the SWMP

Residuals Management

At Existing Facilities

- Composting at the Hazelton Waste Management Facility
- Limits on municipal-type solid waste from industry and from outside the RDKS
- Access to services/facilities in other service areas within the RDKS
- Contaminated soil handling & use
- Landfill gas utilization/carbon credits
- Strategies to assist in the prevention of illegal dumping
- Setting parameters for acceptable liquid waste brought to RDKS solid waste facilities

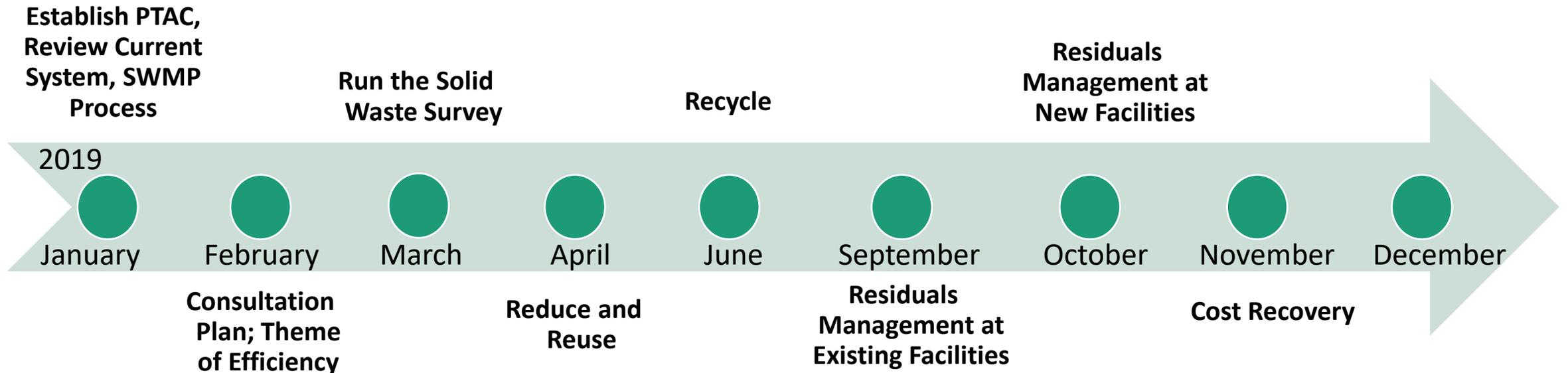
At New Facilities

- Telegraph Creek waste management solution
- Dease Lake landfill ownership
- Potential participation of District of Kitimat in the Terrace Service Area



Anticipated Schedule

- SWMP anticipated to be complete by the end of 2020 (may be extended if required)
- Need sufficient time for get quality stakeholder feedback





Consultation Strategy



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Reduce your waste.



Public Participation Spectrum



Engagement Methods

	Step 1	Step 2	Step 3	Step 4
Board meetings				
PMAC meetings				
Internal RDKS meetings				
Create brand, set up website				
Maintain website				
PTAC meetings				
Involved Working Group (regular info distribution, workshops/meetings)				
Administrative Financial Working Group				
Board workshop				
Unaddressed mail				
Survey				
Open houses				





- Brand development
- Website development
- Announcement of new SWMP and PTAC member recruitment
 - Targeted letters
 - Posters and newspaper ads
 - Targeted emails
- Establish PTAC
- Begin discussing proposed topics



Love this place.
Reduce your waste.

Consultation Summary To Date

Love this place.
Reduce your waste.

Regional District of
Kitimat-Stikine

Interested in how we manage garbage?

The Regional District of Kitimat-Stikine is developing a new **Solid Waste Management Plan** to provide direction for how waste is managed in our region for the next decade. You can participate in several ways:

Stay informed	Be consulted	Stay involved	Collaborate
<ul style="list-style-type: none"> • Read information • Attend open houses 	<ul style="list-style-type: none"> • Complete surveys • Provide comments 	<ul style="list-style-type: none"> • Request a meeting or workshop 	<ul style="list-style-type: none"> • Join the Public & Technical Advisory Committee

Help improve waste reduction, reuse, recycling and disposal programs in our communities by joining the **Public and Technical Advisory Committee**.

For more information:
Visit www.rdks.bc.ca/solidwasteplan
Email solidwasteplan@rdks.bc.ca
Call **250.615.6100**
or **1.800.663.3208**



Reduce your waste.

Public and Technical Advisory Committee

- Role: To provide recommendations to the RDKS Board on the new SWMP
- Representatives from public, key stakeholders and technical experts
- Representatives from all Member Municipalities
- Still need public representatives from Electoral Areas A, D, F, District of Stewart and Village of Hazelton
- Stakeholders not able to participate in PTAC will be included in the Involved Working Group



Public survey for preliminary feedback to inform the topics and priorities for the Solid Waste Management Plan.

Appendix 16 – 2019 Solid Waste Survey

Over one third of the food produced and distributed in Canada is never consumed. Strategies, such as participation in a national food waste reduction campaign, should be explored to reduce food waste.

Strongly Agree Agree Neutral Disagree Strongly Disagree

Currently the RDKS accepts municipal-type solid waste from industry (i.e., mines, work camps) with a 25% surcharge. Limits should be established on the amount of waste that can be disposed by industry.

Strongly Agree Agree Neutral Disagree Strongly Disagree

Did we miss anything? What else should our Solid Waste Plan cover? Tell us what you think.

To be entered into the draw, the best way to contact me is:

Contact information will not be publicized. Only prize winners or those requesting to be on the distribution list will be contacted.

By email. My name and email address is: _____

By phone. My name and phone number is: _____

By addressed mail. My name and mailing address is: _____

Please do not contact me.

Please add me to the Solid Waste Management Plan email distribution list

Return this survey by mail to: **Regional District of Kitimat-Stikine**
300-4545 Lazelle Ave.
Terrace, BC V8G 4E1

Submit this survey to your local Municipal or Band Office.

Complete this survey online at: jitsutech.ca/solidwasteplan

COMPLETE THE SURVEY FOR YOUR CHANCE TO WIN A \$100 VISA GIFT CARD!



HAZELTONS & HIGHWAY 37 NORTH AREA SOLID WASTE SURVEY

COMPLETE THE SURVEY FOR YOUR CHANCE TO WIN A \$100 VISA GIFT CARD!

Complete this survey online at: jitsutech.ca/solidwasteplan

The Regional District of Kitimat-Stikine is developing a new Solid Waste Management Plan to provide direction for how we will reduce, reuse, recycle and dispose of waste for the next decade. The new Plan will focus on improving operational efficiency and expanding service delivery to more rural communities.

The RDKS anticipates that about 20 major topics will be addressed within the new Plan. You can suggest additional topics by completing this survey. Please visit www.rdks.bc.ca/solidwasteplan for the full list of topics.

A Public and Technical Advisory Committee (PTAC) has been formed to advise on development of the Solid Waste Plan. PTAC is still looking for individuals that live in the following areas to represent their community on the committee:

- Electoral Area A (Stewart, Nass Valley)
- Electoral Area D (Telegraph, Iskut)
- Electoral Area F (Dease Lake)
- District of Stewart
- Village of Hazelton

If you live in one of these communities and would like to participate in PTAC, please contact the RDKS Environmental Services Coordinator.

Would you like higher level of involvement in how we manage waste? Join our **Involved Working Group** to be kept informed of PTAC business via email (agendas, minutes and reports) and participate in focused meetings regarding waste management topics of interest to you.

For information, contact the Environmental Services Coordinator at (250) 615-6100 or solidwasteplan@rdks.bc.ca, or visit www.rdks.bc.ca/solidwasteplan.

Please return this survey by **April 1st** to be entered into the draw.



We appreciate you taking 10 to 15 minutes of your valuable time to share your thoughts on garbage and recycling in our region. We need your input for our Solid Waste Plan to be successful.

I am replying to this survey as [pick one]:

A Resident A Business Seasonal Resident

I live or run a business in:

New Hazelton Kispiox Hagwilget Two Mile Iskut
 South Hazelton Meziadin Gitsegukla Gitanyow Glen Vowell
 Telegraph Creek Witsset Gitwangak Kitwanga Stewart
 Village of Hazelton Dease Lake Gitanmaax Other _____

I contribute to the reuse of quality items and materials [check all that apply]:

I give my used items away (i.e., to family/friends, thrift stores). No, I do not.
 I use online or other resources (i.e., buy and sell websites).
 I would like to see more reuse opportunities in my community, such as: _____

I divert my organics (i.e., compost) [check all that apply]:

I compost at home. I keep for mine or other's farm/garden/animals.
 No, I do not compost. I would use a public compost facility if available.

I divert my recyclable materials [check all that apply]:

I bring my recycling to a depot. I use curbside collection of recyclables.
 I do not have curbside recycling collection; I would use it if available.
 I do not have curbside recycling collection; I would not use it if available.
 No, I do not recycle.

Please rate your agreement with these statements:

Education programs have changed the way I manage my waste; I now separate my recycling from the rest of my garbage.

Strongly Agree Agree Neutral Disagree Strongly Disagree

More items should be prohibited from the landfill (e.g. Styrofoam, textiles/fabric, furniture and mattresses) as recycling opportunities become available.

Strongly Agree Agree Neutral Disagree Strongly Disagree

Current recycling options in my community are sufficient.

Strongly Agree Agree Neutral Disagree Strongly Disagree

Recycling depots are convenient for drop-off of recyclable materials.

Strongly Agree Agree Neutral Disagree Strongly Disagree Not Applicable

Recycling programs can be expensive, particularly in northern rural communities where haul distance leads to high transportation costs. A spending cap for recycling programs should be established.

Strongly Agree Agree Neutral Disagree Strongly Disagree

Curbside collection of garbage should be provided for all residents (with a fee for service).

Strongly Agree Agree Neutral Disagree Strongly Disagree

Curbside collection of recycling should be provided for all residents (with a fee for service).

Strongly Agree Agree Neutral Disagree Strongly Disagree

The new Solid Waste Management Plan (SWMP) should review the current cost recovery model for the Hazelton and Highway 37 North Service Area (service costs covered through taxes, user fees and community contributions).

Strongly Agree Agree Neutral Disagree Strongly Disagree

Where curbside collection programs exist, residential curbside waste should be inspected before being collected to confirm that households are separating their recycling from garbage.

Strongly Agree Agree Neutral Disagree Strongly Disagree

Garbage bins at businesses and institutions (i.e., clinics) should be inspected to confirm that the organization is separating their recyclables from garbage.

Strongly Agree Agree Neutral Disagree Strongly Disagree

There should be increased enforcement to confirm waste is being segregated (e.g. impose fines or not accept mixed wastes).

Strongly Agree Agree Neutral Disagree Strongly Disagree

The Regional District should hold "round-up" events for residents to safely recycle or dispose of household hazardous waste (i.e., solvents, pesticides, smoke alarms, fire extinguishers, etc.).

Strongly Agree Agree Neutral Disagree Strongly Disagree

My local waste management facility is convenient and works well for me.

Strongly Agree Agree Neutral Disagree Strongly Disagree

The Regional District is currently working with the Ministry of Transportation, Conservation Officer Service and First Nations to address illegal dumping through education and awareness, signage, and surveillance. This is a sufficient level of effort to address illegal dumping.

Strongly Agree Agree Neutral Disagree Strongly Disagree

Newly constructed multi-family residences and businesses should be designed to provide a designated space for managing waste.

Strongly Agree Agree Neutral Disagree Strongly Disagree

Policies that encourage deconstruction of buildings, rather than demolition, should be established to improve recovery of reusable materials.

Strongly Agree Agree Neutral Disagree Strongly Disagree

Single use items that are typically landfilled, such as plastic bags, Styrofoam take-out containers, straws and cups, are a leading source of pollution; The Regional District should explore options for reducing single use items.

Strongly Agree Agree Neutral Disagree Strongly Disagree

As a strategy to reduce the amount of waste we produce, the Regional District should lobby the province to amend regulations (i.e., the Recycling Regulation) that will require manufactures to rethink the type and quantity of packaging they use for their products.

Strongly Agree Agree Neutral Disagree Strongly Disagree

As a strategy to reduce the amount of waste we produce, the Regional District should lobby the province to amend regulations (i.e., the Recycling Regulation) that will require manufactures to rethink the type and quantity of packaging they use for their products.

Strongly Agree Agree Neutral Disagree Strongly Disagree

Over one third of the food produced and distributed in Canada is never consumed. Strategies, such as participation in a national food waste reduction campaign, should be explored to reduce food waste.

Strongly Agree Agree Neutral Disagree Strongly Disagree

Currently the RDKS accepts municipal-type solid waste from industry (i.e., mines, work camps) with a 25% surcharge. Limits should be established on the amount of waste that can be disposed by industry.

Strongly Agree Agree Neutral Disagree Strongly Disagree

Did we miss anything? What else should our Solid Waste Plan cover?
Tell us what you think.

To be entered into the draw, the best way to contact me is:

Contact information will not be publicized. Only prize winners or those requesting to be on the distribution list will be contacted.

By email. My name and email address is: _____

By phone. My name and phone number is: _____

By addressed mail. My name and mailing address is: _____

Please do not contact me.

Please add me to the Solid Waste Management Plan email distribution list

Return this survey by mail to: **Regional District of Kitimat-Stikine**
300-4545 Lazelle Ave.
Terrace, BC V8G 4E1

Submit this survey to your local Municipal or Band Office.

Complete this survey online at: jitsutech.ca/solidwasteplan

COMPLETE THE SURVEY FOR YOUR CHANCE TO WIN A \$100 VISA GIFT CARD!



TERRACE & AREA SOLID WASTE SURVEY

(INCLUDES KITIMAT AND THE NASS VALLEY)

COMPLETE THE SURVEY FOR YOUR CHANCE TO WIN A \$100 VISA GIFT CARD!

Complete this survey online at: jitsutech.ca/solidwasteplan

The Regional District of Kitimat-Stikine is developing a new Solid Waste Management Plan to provide direction for how we will reduce, reuse, recycle and dispose of waste for the next decade. The new Plan will focus on improving operational efficiency and expanding service delivery to more rural communities.

The RDKS anticipates that about 20 major topics will be addressed within the new Plan. You can suggest additional topics by completing this survey. Please visit www.rdks.bc.ca/solidwasteplan for the full list of topics.

A Public and Technical Advisory Committee (PTAC) has been formed to advise on development of the Solid Waste Plan.

Would you like higher level of involvement in how we manage waste? Join our **Involved Working Group** to be kept informed of PTAC business via email (agendas, minutes and reports) and participate in focused meetings regarding waste management topics of interest to you.

For information, contact the Environmental Services Coordinator at (250) 615-6100 or solidwasteplan@rdks.bc.ca, or visit www.rdks.bc.ca/solidwasteplan.

Please return this survey by **April 1st** to be entered into the draw.

We appreciate you taking 10 to 15 minutes of your valuable time to share your thoughts on garbage and recycling in our region. We need your input for our Solid Waste Plan to be successful.

I am replying to this survey as [pick one]:

- A Resident A Business Seasonal Resident

I live or run a business in [check your answer]:

- City of Terrace Thornhill Kitsumkalum Kitamaat Village Usk
 Jackpine Flats Copperville Rosswood District of Kitimat Gitaus
 Lakelse Lake Old Remo Dutch Valley Chimdemash Gossan
 Brauns Island New Remo Nass Valley Other _____
 North Terrace Kleanza Cedarvale

I contribute to the reuse of quality items and materials [check all that apply]:

- I give my used items away (i.e., to family/friends, thrift stores). No, I do not.
 I use online or other resources (i.e., buy and sell websites).
 I would like to see more reuse opportunities in my community, such as: _____

I divert my organics (i.e., compost) [check all that apply]:

- I compost at home. I keep for mine or other's farm/garden/animals.
 I use curbside organics collection. No, I do not compost.
 I do not have curbside organics collection; I would use it if available.
 I do not have curbside organics collection; I would not use it if available.

I divert my recyclable materials [check all that apply]:

- I use curbside collection of recyclables.
 No, I do not recycle. I bring my recycling to the depot.
 I do not have curbside recycling collection; I would use it if available.
 I do not have curbside recycling collection; I would not use it if available.

I recycle the following items through businesses or recycling depots:

Paper & plastic packaging	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> I didn't know I could recycle that <input type="checkbox"/> Not Applicable
Electronics	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> I didn't know I could recycle that <input type="checkbox"/> Not Applicable
Batteries	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> I didn't know I could recycle that <input type="checkbox"/> Not Applicable
Beverage containers	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> I didn't know I could recycle that <input type="checkbox"/> Not Applicable
Paints, solvents and pesticides	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> I didn't know I could recycle that <input type="checkbox"/> Not Applicable
Used oil and oil filters	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> I didn't know I could recycle that <input type="checkbox"/> Not Applicable
Lightbulbs and fixtures	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> I didn't know I could recycle that <input type="checkbox"/> Not Applicable
Smoke detectors and alarms	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> I didn't know I could recycle that <input type="checkbox"/> Not Applicable
Small appliances	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> I didn't know I could recycle that <input type="checkbox"/> Not Applicable
Tires	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> I didn't know I could recycle that <input type="checkbox"/> Not Applicable

Please rate your agreement with these statements:

- Education programs have changed the way I manage my waste; I now separate my recycling and organics from the rest of my garbage.
 Strongly Agree Agree Neutral Disagree Strongly Disagree
- More items should be prohibited from the landfill (e.g. Styrofoam, textiles/fabric, furniture and mattresses) as recycling opportunities become available.
 Strongly Agree Agree Neutral Disagree Strongly Disagree
- I would pay increased taxes to have more recyclables picked up through curbside collection.
 Strongly Agree Agree Neutral Disagree Strongly Disagree
- The curbside collection programs are convenient and provide good value.
 Strongly Agree Agree Neutral Disagree Strongly Disagree Not Applicable
- Residential curbside waste should be inspected before being collected to confirm that households are separating their organics and recycling from garbage.
 Strongly Agree Agree Neutral Disagree Strongly Disagree
- Garbage bins at businesses and institutions (i.e., hospitals) should be inspected to confirm that the organization is separating their organics and recyclables from garbage.
 Strongly Agree Agree Neutral Disagree Strongly Disagree
- There should be increased enforcement to confirm waste is being segregated (e.g. impose fines or not pick up mixed curbside wastes).
 Strongly Agree Agree Neutral Disagree Strongly Disagree
- The Thornhill Transfer Station is convenient and works well for me.
 Strongly Agree Agree Neutral Disagree Strongly Disagree Not Applicable
- The Regional District is currently working with the Ministry of Transportation, Conservation Officer Service and local First Nations to address illegal dumping through education and awareness, signage, and surveillance. This is a sufficient level of effort to address illegal dumping.
 Strongly Agree Agree Neutral Disagree Strongly Disagree
- The new Solid Waste Management Plan should review the current cost recovery model for the Terrace Service Area (facility costs currently covered 50% through property taxes and 50% through tipping fees).
 Strongly Agree Agree Neutral Disagree Strongly Disagree
- Newly constructed multi-family residences and businesses should be designed to include a designated space for managing waste.
 Strongly Agree Agree Neutral Disagree Strongly Disagree
- Policies that encourage deconstruction of buildings, rather than demolition, should be established to improve recovery of reusable materials.
 Strongly Agree Agree Neutral Disagree Strongly Disagree
- Single use items that are typically landfilled, such as plastic bags, Styrofoam take-out containers, straws and cups, are a leading source of pollution. The Regional District should explore options for reducing single use items.
 Strongly Agree Agree Neutral Disagree Strongly Disagree

Appendix 17 – Advertising for the 2019 Solid Waste Survey



Regional District of
Kitimat-Stikine



Love this place.
Reduce your waste.



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jitsutech.ca/solidwasteplan

Complete
the survey for
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Submit the survey by **April 1st**

In person: *At your local municipal or band office.*

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We appreciate you taking 10 to 15 minutes of your valuable time to share your thoughts
on garbage and recycling in our region.

SPORTS

Smithers provincial snowboard sweep

By Chris Gareau

Smithers Secondary School (SSS) had home mountain advantage during the BC High School Sports (BCHSS) provincial championships, and made it count with a snowboarding banner sweep

The girls and boys both placed first in the snowboard team combined, which with the overall banner for both teams gave them three to hang up. This was a first for Smithers.

Competition was plenty, with 229 students from all over B.C. travelling to Hudson Bay Mountain last week to compete.

Collingwood School from West Vancouver dominated the ski categories, winning the girls team combined and overall banner with the boys getting third.

The Smithers girls took all three spots on the podium for individual snowboarding, with Brianna Belisle in first, Megan Fraser in second and Kaitlyn Peterson in third.

The boys took second (Cole Pali) and third (Heiko Krause). Zakk Harman of Seycove Secondary took first.

Top skiers for SSS were Darcy Fraser and Ava MacDougall.

The North had a strong showing overall as there were many top finishers from Fort St. James Secondary and Lakes District Secondary School out of Burns Lake. The Fort St. James girls snowboard team earned third, and Lakes District girls and boys snowboarding teams each got second.

SSS sent a thank-you to the generous businesses and community members who donated or contributed to the success of this event. Thank you, as well, goes to the Smithers Ski and Snowboard Club for running an excellent race and Hudson Bay Mountain for the outstanding service they provided.

"We, the coaches, are very proud of all our racers and look forward to continued success in the years to come."



Mike Daniels flexing after his Smithers team's big performance at the B.C. High School Provincial Championships March 6. He said this was his last year. (Chris Gareau photo)



Smithers Secondary on Hudson Bay Mountain with their medals and banners from the B.C. High School Provincial Championships March 6. (Chris Gareau photo)



Thank You

Regional District of Bulkley Nechako
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The Hazeltons • Smithers • Houston & District • Lakes District •

SPORTS / Leisure

Coastal Classic hockey showcases Tim Bit skills

By Gareth Millroy

Coastal Classic PRMHA Novice Hockey Tournament was held over the weekend at the Jim Ciccone Civic Centre from Mar. 1-3 with teams from Prince Rupert, Hazelton, Smithers, Terrace and Kitimat.

The Tim Bit hockey players are ages seven to nine years old and the event is organized by coaches and parents from the various teams on a volunteer basis.

One-hour games are played on half-ice and two games are played simultaneously. At the end of each game, an MVP and a Heart and Hustle Puck is awarded to players. Score sheets are kept, but no scores are recorded.

James Witzke, coach for Prince Ru-

pert Grey, was interviewed and said: "The teams are participating in our fourth and penultimate tournament."

When asked who the favourite team to win is, he said: "there are no winners or losers in this tournament, score clocks are kept to zero and nets are smaller too so that the keepers aren't overwhelmed."

Sitting in the stands and watching the games was great fun. The players showcased some budding skill with the puck and one game, for example, the Prince Rupert Greys vs. Kitimat Winterhawks, was a hard-fought game with some body contact and checking.

Parents were heard cheering their kids from the crowd stands and one

mom said that Phenix Mackereth (No. 11) had scored some goals, but was tired in the game because he had been next door at the Children's Festival during the break to climb walls.

Kitimat played some impressive hockey and kept the puck in Prince Rupert Grey's half.

"Most teams get four practice sessions per week but Kitimat has to travel to Smithers to use their ice rink and only get one practice a week," said Roy Morgan who had made the trip from Kitimat to come watch his granddaughter Hannah Morgan play.

The Smithers team was awarded a trophy for 'best dancers' on the ice at the end of the tournament.



View from the bench at Terrace Blacks (Gareth Millroy / The Northern View).

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Deadline March 22!!
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This is **always** a very popular feature which will publish in the **Northern Sentinel's Kitimat Connector** ... just the place to **show-off your pride & joy** and to cherish as a keepsake. **Proudly display your baby/grandchild/niece/nephew or any beautiful baby** you love or know.

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Northern Sentinel Connector
Publishing date **Thursday March 28**

Call today to be part of this delightful feature - 250-632-6144. Email your baby's photo, along with their name, date of birth, and the parent's names to: office@northernsentinel.com or drop by the: **Northern Sentinel, 626 Enterprise Ave., Kitimat - Ph. 250-632-6144**

2019 FRANCO-FUN FESTIVAL
held Feb 24 in Kitimat

L'Association des Francophones et Francophiles du Nord-Ouest would like to Thank Everyone who helped in making this year's Franco-fun Festival the best ever!

A special "merci beaucoup" goes out to Danielle Dalton, Barb Wood and Cooper Jackson; our Executive members Marie-line (and her friend Christine), Marie-Jacques, Dorine, Estelle and Pierre; Winston, Sam, Kyle, Sonja and the entire crew at Hirsch Creek Golf & Winter Club; Virginia and her staff at the Kitimat Public Library; Guy Dufresne and Cary Dalton; Janelle, Emily and everyone at Kildala Elementary School; Caroline Colins at MESS; Sage Benet, Hannah Francoeur and their fellow students; Mary and Steve at CFNR; Chad with Bell Media; the staff at the Northern Sentinel, Tony and the entire crew at Sight & Sound, and of course, all of our volunteers!!!

Merci à nos commanditaires

Central Mountain Air, Northern Sentinel, Kitimat Canadian Parents for French, KITIMAT, BRITISH COLUMBIA The New Pictorial Guide, KITMAT LODGE, ez ROCK 97.7, Canada, Kitimat Public Library Association

Merci to our supporters

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NDP to start candidate search for the Skeena-Bulkley Valley

Follows decision by Nathan Cullen to retire from politics

By Rod Link

Federal New Democrats in the Skeena - Bulkley Valley riding are set to do something they haven't

had to do in 15 years — find a candidate for the next election now that NDP MP Nathan Cullen has decided to retire from federal

politics.

Party officials expect to have the machinery in place within a few months to select a candidate leading up to the Oct. 19 federal election date, says Smithers resident Dan Mesec, the president of the NDP's Skeena - Bulkley Valley federal riding association.

The plan is to have a candidate in place before summer, he said. "It's going to be a big decision," Mesec said of the challenge to find a replacement for Cullen who became a national presence for the NDP as well as a strong riding representative.

Mesec's hoping the party will attract strong nomination candidates.

"What will happen is that each candidate [for the nomination] will be encouraged to sign up members for the party and to have those members then support them," he said.

Still to be worked out is how the actual vote will take place — whether there will be one central voting location on one specific day or whether there will be a travelling ballot box covering several communities, Mesec continued.

The latter method takes into account the large size of the riding and its spread out population.

Cullen was first elected in 2004, ending a federal drought for the NDP that began in 1993 after another veteran NDP MP veteran, Jim Fulton, retired.

Reform Party candidate Mike Scott won the 1993 election and was re-elected in 1997 before he decided not to run again in the 2000 election. Conservative Andy Burton won the 2000 election, only to be defeated by Cullen in 2004.

Of Cullen's five election wins, he captured more than 50 per cent in the last two elections of 2011 and 2015, continuing a tradition of NDP federal representation in the region. Frank Howard, first with the Co-operative Commonwealth Federation before it became the New Democratic Party, won six elections beginning 1957 and Fulton won four elections, the first of which took place in 1979.

Several names quickly surfaced as possible candidates for the NDP nomination following Cullen's announcement, with one acknowledging he's thinking about it.

Taylor Bachrach, elected to a third term as Smithers mayor last year, said he and his family are giving the possibility "some careful thought" stressing it has to be the right decision for his wife and two daughters, one 11 years old and the other 14.

"Since Nathan's announcement several prominent people from across the region have approached me about the opportunity," he said.

Bachrach described the position of being the MP for Skeena - Bulkley Valley

as "tremendously challenging for anyone who fills the seat."

"It's a riding the size of Poland and it's a long way from Ottawa. People who live in this region deserve a strong voice and a representative that works hard for them," said Bachrach.

A second northwest mayor, Prince Rupert's Lee Brain, said that while he is being encouraged to enter federal politics he has no intention to do so "given the number of exciting initiatives underway in Prince Rupert."

Those initiatives include far reaching plans at replacing the city's aging infrastructure and improving its citizens' quality of life, framed building up its profile as a growing global port of call.

"Mr. Cullen will be a difficult person to replace on many fronts. For any new prospective candidate to build credibility and trust in the region, I would encourage them to focus on achieving results that will enhance the economic, social and environmental prospects of Northwest BC," Brain said.

North Coast NDP MLA Jennifer Rice's name also surfaced as a potential candidate but she also quickly took her name off the list.

While saying she was flattered, Rice said she is "passionate about my role as MLA and Parliamentary Secretary for Emergency Preparedness and

Continued on A20

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WORLD WATER DAY
MARCH 22

Bulkley Browser Office Hours

Monday	Open 9-1pm
Tuesday	Closed- 5pm ad deadline
Wednesday	Open 9-1pm
Thursday	Print day
Friday	Delivery
Saturday	Delivery



Skeena T.V. Association
Channel List

7-1 Family Channel	11-1 TSN (HD)
7-2 CFTK	11-2 CBC
7-3 APTN	11-3 CTV
7-4 BBC	13-1 Knowledge
9-1 HGTV	13-2 Discovery
9-2 Food Network	13-3 TCM
9-3 History	13-4 (blank)
9-4 Movie Time	13-5 Global BC

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2. Go to your TV menu
3. Select Channel Setup (or similar option)
4. Choose "Antenna" and/or "Air"
5. Run "Auto-program"

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What's On at your library this month...

Pre-school Story Time – Date and Place Change – now Mondays, **March 4** and **March 11** at **Little Flowers** Early Learning Hub at the Meeting Place in **New Hazelton** across the street from the elementary school, (instead of at the library on Wednesdays) 10:30 – 11:30 am. Stories, crafts and activities for pre-schoolers.

Scrabble Challenge – Tues., March 5, 1 – 3 pm. Everyone is welcome to share in the Fun, Food, and Prizes at the library's monthly Scrabble Challenge.

Armchair Traveller –Join local travellers as they share pictures and stories of their foreign adventures. Wed. March 6, Brigitta Van Heek will tell us about Myanmar; Wed. March 13, Mo and Marilee Yee present "China." Programs run 7 – 8 pm followed by refreshments and conversation.

Baby Time – Thurs., March 7, at Starting Smart (Grace Lynn Family Centre) 1 – 2 pm. For infants and toddlers and their loved ones. Support your baby's language development through chants, rhymes, tickle games and more.

Pi Day – It's come around again! Thurs., March 14 (3.14) Support your library and celebrate Pi (e) Day at the same time. Pie and coffee \$5, pie auction for everyone, and STEM activities featuring circles for the kids.

Spring Break Drop-ins – Tues., March 19 through Fri., March 22 and Tues. March 26 through Fri. March 29, school-aged children are welcome to drop-in and try their hand at various STEAM (Science, Technology, Engineering, Arts, Math) activities from 11 am – 5 pm. Check out our selection of STEM books for kids.

New Books – *Canada Reads* selections are available, as are new books by Ian Hamilton, Bill Gaston and more.

Memberships – are free and **overdue fines have been eliminated.**

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The contributed items in this paper are not necessarily the opinions of the Editor. Since this is a community paper, it is the peoples' paper, and occasionally their concerns will be published. (Thumbs up & Down)

These articles are not intended to offend, but rather to draw attention to a problem or situation that needs to be rectified; this sometimes can only be done by making it public.

We reserve the right to edit & print or not print them.
THE BULKLEY BROWSER

Roses are red/Violets are blue/Happy birthday from me to you. March 21 Brandie Hill in Kitwanga. From Auntie Carol, Ocean, Summer & all your friends & family

A&E

Strike the right chord



Broadway Music Studio's Alana Butler (right) with student Shaelyn Radu who earned silver performing in the classical sonata category at the Lakes District Festival. (Contributed photo)

The Lakes District Festival is a great opportunity for the students to learn and share their music in an encouraging yet competitive atmosphere. The students are evaluated and then given valuable tips on their playing by the adjudicator to help further their skills.

Odin Vetsch and Kaison Paquette were invited to the 62nd Honours Concert Saturday to play and receive scholarships.

"I couldn't be any prouder of my students; they all put in many hours to prepare for this event and I admire each of them for their courage, dedication and hard work," said Broadway Music Studio's Alana Butler. *-Submitted by Broadway Music Studio.*

Leaving a legacy at LD arts festival



Sarona Mynhardt (back) next to Lillica Pacquette. Front from left to right are Samantha Love, Chloe Sear, Lori Koop and Khyrin Collier. (Contributed photo)

This year marks the 62nd annual Lakes District Festival of the Performing Arts in Burns Lake. The festival brings in performers from Terrace in the west to Prince George in the East in the four disciplines of Vocals, Piano, Instrumental and Speech Arts.

Adjudicators from all over British Columbia are tasked to listen and provide commentary on a performer's strengths and challenges. And while it is nerve-racking for young performers to get up there and do their stuff, the beauty of this festival is that performers compete only against themselves and their own progression in their chosen genres: meaning, everyone can get gold, or everyone can get silver. Thus, the festival is not a traditional competition in which there is only one gold, one silver, but rather a motivator for each performer to do their best and be recognized for their contribution in that moment in time.

Smithers and Telkwa have once again sent a talented young group of performers from all disciplines and from several studios.

Vocals took place on Thursday, March 7, with performances in Classical Voice and Musical Theatre.

From Lori K. E. Koop's Legacy Music Studio: Chloe Sear, Khyrin

Collier, Samantha Love, Lillica Pacquette, Bryer Maclean, Taya de Groot, and Sara Torunski.

All received Gold for their performances! Samantha Love was selected by adjudicator, Sarona Mynhardt from Vancouver, to represent this festival in Classical Junior Vocals at the provincials in Chilliwack in May. Lillica and Samantha were invited to perform at the Gala Concert on Saturday, March 16.

Instrumentals followed on Friday, March 8. Khyrin Collier, violin, and Nicholas Collier, violin (teacher, Laura Hols-Wimbush) received golds for their performances and were invited to the Gala Concert.

Piano, with adjudicator Angela Alba from Prince George, took place on Monday and Tuesday, March 11 and 12. Students from Wolfgang Loschberger's Music Studio Vienna took home a mix of gold and silver: Lexa Steenhof, Nicholas Collier, Khyrin Collier, Avery Sosnowski.

Students from Legacy Music Studio took home silvers: Jordys Bowman, Norah Bowman and Sarah Blackburn.

Khyrin Collier was asked to perform one of his pieces in the Gala on Saturday.

Finally, Speech Arts, with adjudicator Mike Stack (well know to the SSS theatre students) took place on Wednesday, March 13, and had only one participant from Smithers/Telkwa: Nicholas Collier. Nicholas carried the audience along in his story telling of *Where the Wild Things Are* (by Maurice Sendak), received gold and the request to entertain once more at the Saturday Gala.

-Submitted by Legacy Music Studio.

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Terrace basketball dreams big with tournament

Organizer hopes first-year rebounds city reputation as regional host

By Brittany Gervais

The Terrace Basketball Association wanted see the city join other Northwest communities when it comes to hosting major basketball tournaments, so they began planning one of their own.

Four years ago, organizers laid the foundation for what they hope will become the city's first annual River Boat Days Open Basketball Tournament. Eighty-four teams from B.C. and as far away as Sask. could be travelling into Terrace to compete in across six divisions between August 5-10.

Organizer and association president Keith Azak says the tournament could rebound the city's reputation as a host for major sporting events.

"The challenge is getting the notion out there that we can host the tournament because it's so new. [People] didn't realize Terrace was big enough," Azak says.

"Once they can get that mindset and know that this tournament exists and it will for years, it's going to be a big one."

Forty teams have been confirmed so far, including a team from Regina, Sask., Gitwinksihlkw, the Nass Rebels, Gitmidiik and Terrace Titans.

The intermediate and senior divisions will play at the Sportsplex, the U18 boys and girls divisions, masters, and women's divisions will be hosted at the Thornhill Elementary, Caledonia Secondary and Skeena Middle schools. All divisions will then play in the Sportsplex from the quarterfinals on.

He estimates a minimum of 500 active players, not including their families, could be coming into Terrace for the tournament, potentially bringing millions of dollars in revenue for the city.

"The [Prince Rupert] All-Native Basketball Tournament (ANBT) generates around \$3.5 million with 50 teams, and I'm already at 40. If I get to 84, it's almost double," he says.

Approximately \$22,500 of the \$30,000 tournament has been raised so far, with applications to sponsors including Tsetsaut Ventures Ltd., Rio Tinto, and LNG Canada. Organizers also joined with the Kermode Friendship Society to function as a team.

"People wanted to see a new tournament, not just for a long weekend, but something huge," Azak says. "I wanted to try and do something spectacular."

But where will all these people stay? Athletes competing in other regional basketball tournaments and their families often rely on accommodating hosts as hotel rooms are in high demand — usually, visitors need to book a year in advance for the Prince Rupert ANBT.

Azak says with three hotels in Terrace and the potential for the Sunshine Inn to open before the summer, there will be accommodation available, though it may not be as needed for local teams.

"This is going to be another perfect reason why Terrace is a good area to host. Kitimat, Gitksan, Nisga'a Nation — they're all going to be able to travel home," he says, mentioning



Terrace Basketball Association president Keith Azak's goal to bring an open basketball tournament to Terrace was a plan four years in the making. (Brittany Gervais photo)

most of the teams that have committed so far are from Northwest communities.

Azak also believes there will be more vacancies available with the tournament bringing up the tail-end of River Boat Days.

The real game-changer was when organizers secured the purchase of a portable NBA-regulated court used in Prince Rupert's All-Native Basketball Tournament.

The hardwood basketball court was put up for sale as Prince Rupert's ANBT committee pursued a new floor for their tournament. The court can be put together and taken apart like a puzzle overtop an arena surface, and is originally worth around \$200,000.

At first, Azak says the Prince Rupert committee tried to donate it to local First Nations communities, but all of them already had high-quality facilities available.

Through an agreement with ANBT Prince Rupert organizers, Terrace's committee negotiated the price down to \$10,000.

The court is being used this week in the

Junior All-Native tournament in Kitimat, but would primarily belong to Terrace to host large-scale events like this in the future.

On Monday, council agreed to waive \$3,386 — 30 per cent — of the \$12,287 Sportsplex rental fees for the tournament.

The city says this amount is similar to other amounts given to tournaments in the past, and had only \$9,000 remaining in council unbudgeted.

The committee is still looking for a heated storage facility to keep the court in the meantime.

Azak says all of the facilities in town were booked almost immediately after LNG Canada made their final investment decision for their project in Kitimat.

Overall, Azak says he's excited to see the years of hard work pay off.

"If it works out, we'll have 84 teams running around the city for one week," he says. "We're very excited to show Terrace that this is going to be a great time during River Boat Days."

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Pacific Northwest Music Festival readies for 54th year

Many performers in speech arts and public speaking



CONTRIBUTED PHOTO

Thirteen students from Mountain View Christian Academy will be performing in the speech arts and public speaking categories at the 54th annual Pacific Northwest Music Festival.

By Natalia Balcerzak

The pressure is on for many as the Pacific Northwest Music Festival (PNMF) makes its final preparations for its 54th year in Terrace.

From March 28 to April 13, the city will have more than 4,000 performers showcase their talents in a variety of art forms, including dance, piano, strings, guitar, band, choral, public speaking and speech arts.

There were 1,327 entries submitted this year, with some acts showcasing bands of up to 25 people.

"It's a huge event because the school teachers get involved with it and word definitely gets around," says Bonnie Juniper, president of PNMf.

She says participants young and old come from all over the Northwest for the festival, as it's an important opportunity for many to grow as performers on stage.

For the first time, the festival has

an adjudicator to evaluate the speaking components, which Juniper says they've received a high number of entries for.

"It's interesting because as soon as you get interest in one area, it switches around. Lots of people this year are doing public speaking, so we had to get a separate adjudicator for that," says Juniper.

Adjudicators come from all over the province and sometimes from the U.S. to evaluate each individual performance. To keep standards high, the panel of nine judges rotates every two years to make sure assessments remain objective.

In speech arts, performers use prose, monologues and literature to tell a story while public speaking, and it's up to the person to decide what they want to talk about.

"I think school teachers are really using this venue as a way of development for their students," says Juniper. "There's a lot of people out there who don't want to speak... so this is great for them to try."

Tamara Ewald is a drama teacher at Mountain View

Christian Academy and will have 13 of her students, ages six to 16, perform this year in speech arts and public speaking at the PNMf.

"Everybody has a gift and a talent, and I think it's important that we learn to try the hard things," says Ewald. "Sometimes people are able to express things on stage they wouldn't be able to on their own, and convey messages that need to be said through the art of speech, which can motivate their peers and society in general."

For many months, her students have been practicing their speeches by learning how to emphasize, use proper pronunciation, improvisation and even how to use their body to convey a message.

"They've been also exploring a range of emotion, feelings, perspective and topics through different activities," she adds.

She says all her students excited to take part in the festival and are looking forward to getting on stage in front of a crowd.

"It's so much fun seeing them reach a potential they never knew they had."

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Solid Waste Survey

Box Dropped?		Organization Name					Dropped box off with	Email	Phone
Yes	03-05-19	Gitanmaax Band	4240 Field Street	Hazelton, BC V0J 1Y0	Ph. 250-842-5297	Diane Shanoss, Executive Director	Jerry		
Yes	02-28-19	Gitanyow Band	1348 First Ave.	Kitwanga, BC V0J 2A0	Ph. 250-849-5222	Jenebi Morgan, Band Manager			
Yes	03-05-19	Gitsegukla Band	710 Ray Charles Ave.	Gitsegukla, BC V0J 2J3	Ph. 250-849-5490	Dharmesh Makwana, Band Manager	Phil or Darrell		
Yes	02-28-19	Gitwangak Band Council		Kitwanga, BC V0J 2A0	Ph. 250-849-5591	(Allen) Jeff Ross, Band Manager			
Yes	03-05-19	Gitxsan Government Commission	4125 River Road	Hazelton, BC V0J 1Y0	Ph. 250-842-2248	Diane McRae, Executive Director	Heather Barnes, Registry Administ	hbarnes@gitxsangc.ca	250.842.2248
Yes	03-05-19	Glen Vowell Band - Sik-e-Dakh	7900 Sik-e-dakh Road	Hazelton, BC V0J 1Y3	Ph. 250-842-5241	Shane Gibson, Band Manager	Mary Jane Maitland, Finance	finance@glenvowell.ca	250.842.5241
Yes	14/03/19	Hagwilget Village Council	6 Hwy. 62	New Hazelton, BC V0J 2J0	Ph. 250-842-6258	Barbara McRae, Village Administrator			
		Haisla Nation Council		Kitamaat Village, BC V0T 1	Ph. 250-639-9361	Jason Majore, Executive Director			
		Iskut Band		Iskut, BC V0J 1K0	Ph. 250-234-3331	Maggie Dennis, Band Manager			
Yes	03-05-19	Kispiox Band	1336 Kispiox Valley Road	Hazelton, BC V0J 1Y4	Ph. 250-842-5248	Keith Morgan, Band Manager	Didn't get name	reception@kispioxband.ca	?
Yes	12-03-19	Kitselas Band	2225 Gitaus Road	Terrace, BC V8G 0A9	Ph. 250-635-5084	Joe Bevan, Chief	Matilda Henry	LR.Reception@kitselas.com	250.634.3517
Yes	12-03-19	Kitsumkalum Band		Terrace, BC V8G 4B5	Ph. 250-635-6177	Steve Roberts, Band Manager	Sandra	schristiansen@kitsumkalum.bc.ca	
No box necessary; sent envelope	12-03-19	Witset First Nation (Moricetown Band)	205 Beaver Road Suite #3	Smithers, BC V0J 2N1	Ph. 250-847-2133	Darlene Glaim, Economic Developmen	Melinda Naziel; Monica Michell	mtb.reception@morictown.ca ; <a href="mailto:monica.michell@morictow</td> <td></td> </tr> <tr> <td></td> <td></td> <td>Tahltan Band</td> <td></td> <td>Telegraph Creek, BC V0J 2</td> <td>Ph. 250-235-3151</td> <td>Shana Dennis, Band Manager</td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td>Nisga'a Lisims Government</td> <td>2000 Lisims Drive</td> <td>New Aiyansh, BC V0J 1A0</td> <td>Ph. 250-633-3000</td> <td>Eva Clayton, President</td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td>Gitlaxt'aamiks Nisga'a Village Government</td> <td>5200 Skateen Ave</td> <td>Gitlaxt'aamiks (New Aiyansh)</td> <td>Ph. 250-633-3100</td> <td>Darlene Morgan, CAO</td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td>Gitwinksihlkw Nisga'a Village Government</td> <td>3004 Ts'ooohl Ts'ap Ave</td> <td>Gitwinksihlkw, BC V0J 3T0</td> <td>Ph. 250-633-2294</td> <td>Linda Morven, CEO</td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td>Gingolx Nisga'a Village Government</td> <td>607 Front Street</td> <td>Gingolx, BC V0J 1B0</td> <td>Ph. 250-326-4212</td> <td>Les Clayton, Chief Administrative Officer</td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td>Laxgalts'ap Nisga'a Village Government</td> <td></td> <td>Greenville, BC V0J 1X0</td> <td>Ph. 250-621-3212</td> <td>Andrew Robinson, CAO</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Yes</td> <td>03-05-19</td> <td>District of New Hazelton</td> <td>3026 Bowser Street</td> <td>New Hazelton, BC V0J 2J0</td> <td></td> <td>Wendy Hunt</td> <td>Joanne de Vries</td> <td>jdevries@newhazelton.ca	250.842.6571
Yes	03-05-19	Village of Hazelton	4310 Field Street	Hazelton, BC			Dominique Melanson, Deputy Co	dmelanson@hazelton.ca ; <a href="mailto:kgreen@haz</td> <td>250.842.5991</td> </tr> <tr> <td>Yes</td> <td>11-03-19</td> <td>City of Terrace</td> <td></td> <td></td> <td></td> <td></td> <td>Debbie Shaw</td> <td>dshaw@terrace.bc	
Yes	27/02/2019	Regional District of Kitimat-Stikine							
No box necessary; sent envelope	13/03/2019	District of Kitimat					Shelley Hill; Holly	shill@kitimat.ca	250.632.8900
No box necessary		District of Stewart					Jennifer Larson	finance@districtofstewart.ca	
Yes	03-05-19	Kitwanga General Store	1587 Kitwanga Road N	Kitwanga	Ph. 250-849-5587	Thys Jaarsmas, Owner	Sue		
Yes	03-05-19	Skeena Bakery			Ph. 250-842-0010	Braunwyn, Owner	Braunwyn		
Yes	03-05-19	Bulkley Valley Credit Union	10 Ave.	New Hazelton, BC	Ph. 250-842-2255	Andrea Nikkel	Tamia Hatler, Branch Manager	thatler@bvcu.com	250.842.2257
Yes	03-05-19	Wrinch Memorial Hospital - Doctor's Clinic	2510 Hwy. 62	Hazelton, Bc	Ph. 250-842-5211	Shirley	Sylvia		
Yes	03-05-19	Coast Mountain College	4815 Swannell Dr,	Hazelton BC V0J 1Y0	Ph. 250.842.5291	Bridie O'Brien	Christie		
Yes	13/03/19	Coast Mountain College							
Yes	12-03-19	Terrace Aquatic Center					Pick up on April 2nd		
Yes	12-03-19	Terrace Public Library					Pick up on April 2nd		
Yes	12-03-19	Terrace Sportsplex					Pick up on April 2nd		
Yes	13/03/19	University of Northern BC							
Yes	02-28-19	Kitwanga Post office							

Appendix 18 - Solid Waste Survey Results and RDKS Response

Solid Waste Management Plan

2019 Solid Waste Survey Results and RDKS Response

V. 1.0; June 2019

The Regional District of Kitimat-Stikine (RDKS; Regional District) is developing a new Solid Waste Management Plan (SWMP; the Plan) to provide direction for how we will reduce, reuse, recycle and dispose of our waste for the next decade. Development of the new Plan will follow the four-step process described in the *Guide to Solid Waste Management Planning* (BC Ministry of Environment, 2016). The Plan is being developed in consultation with the public and regional stakeholders.

1. March 2019 Solid Waste Survey

In March 2019, a Solid Waste Survey was published to:

- Gauge user satisfaction with the current solid waste system(s),
- Provide awareness regarding solid waste management services (i.e., EPR depots),
- Discover how citizens perceive and prioritize the topics proposed within the SWMP, and
- Solicit feedback and comments from citizens.

The survey was developed in consultation with the Public and Technical Advisory Committee (PTAC), whom advise on development of the new SWMP. Upon approval of the survey by the Regional District Board, the survey was publicized as follows:

- On February 27, 2019, the Solid Waste Survey was published online at <https://jitsutech.ca/solidwasteplan>;
- On February 27 and 28, 2019, Administration sent out 14,200 printed surveys to all households within the Regional District;
- From March 3 to 8, 2019, Administration delivered 36 survey collection boxes and/or self-addressed envelopes to municipal and band offices, educational institutions, public centers, and high-traffic businesses. These locations distributed and collected completed surveys and returned the completed surveys to the RDKS on April 2, 2019; and
- From March 14 to 28, 2019, advertisements were run in the Terrace Standard, Kitimat Connector, Smithers Interior News, and Bulkley Browser directing citizens to complete the online survey.

The print-version of the survey is contained in Appendix A. All print copies of the survey received were input into the online survey software, Jitsutech, for data analysis.

2. Survey Results and Response

The survey received a total of 875 responses. 697 responses were from the Terrace Service Area; 178 responses were from the Hazelton and Highway 37 N Service Area.

The following figures graphically present the results of the Solid Waste Survey. Please note that the survey results presented herein are the compiled results from both service areas. Survey results tallied by service area are presented within the tables in Appendix B.

The RDKS Administration drafted a response to the Solid Waste Survey results, summarizing and addressing the common themes heard through the survey comments. This response, entitled *What we heard from you: RDKS Response to Solid Waste Survey*, is contained in Appendix C.

SOLID WASTE MANAGEMENT PLAN
Solid Waste Survey Results, June 2019

Figure 1. Demographic of survey respondents.

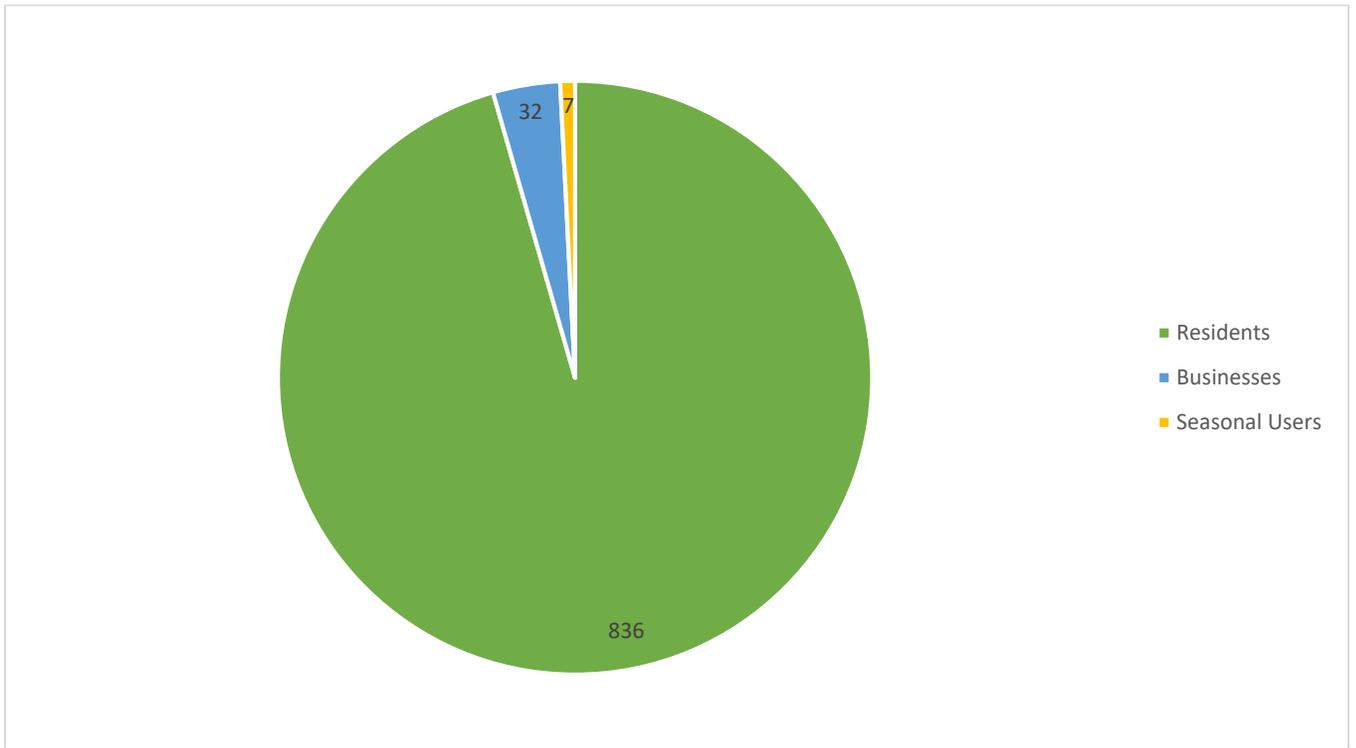
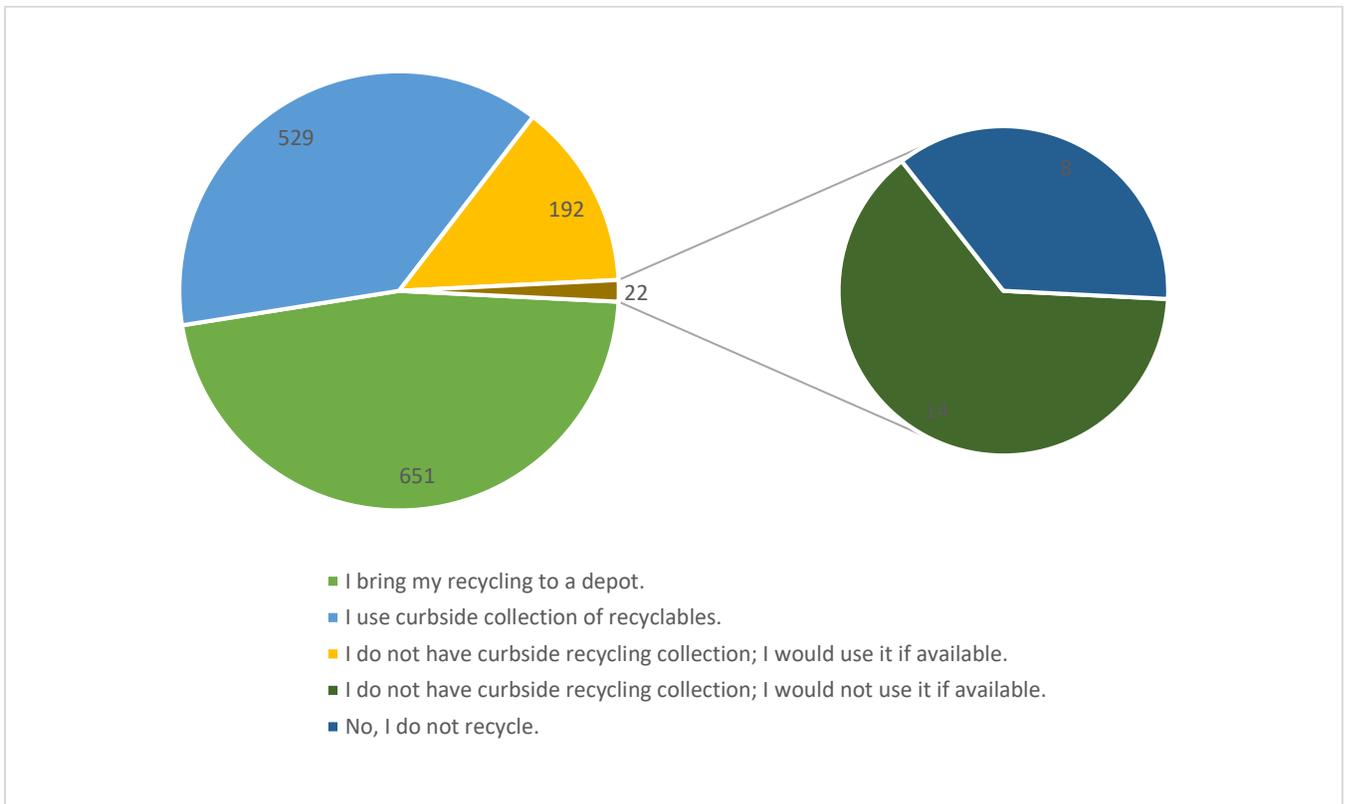


Figure 2. Reported recycling participation (respondents could select multiple responses).



SOLID WASTE MANAGEMENT PLAN

Solid Waste Survey Results, June 2019

Figure 3. Reported participation in organics diversion (respondents could select multiple responses; the “other responses category” represents the responses that differed between the two service areas).

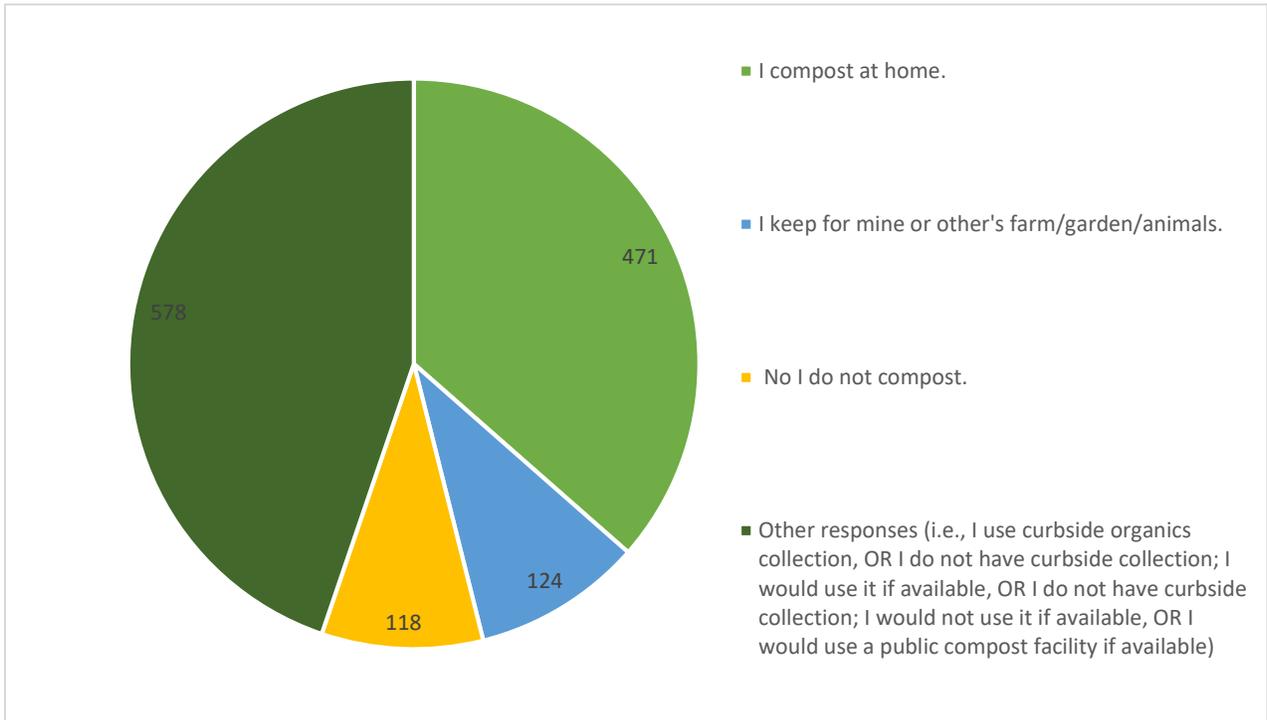


Figure 4. Reported participation in reuse initiatives (respondents could select multiple responses).

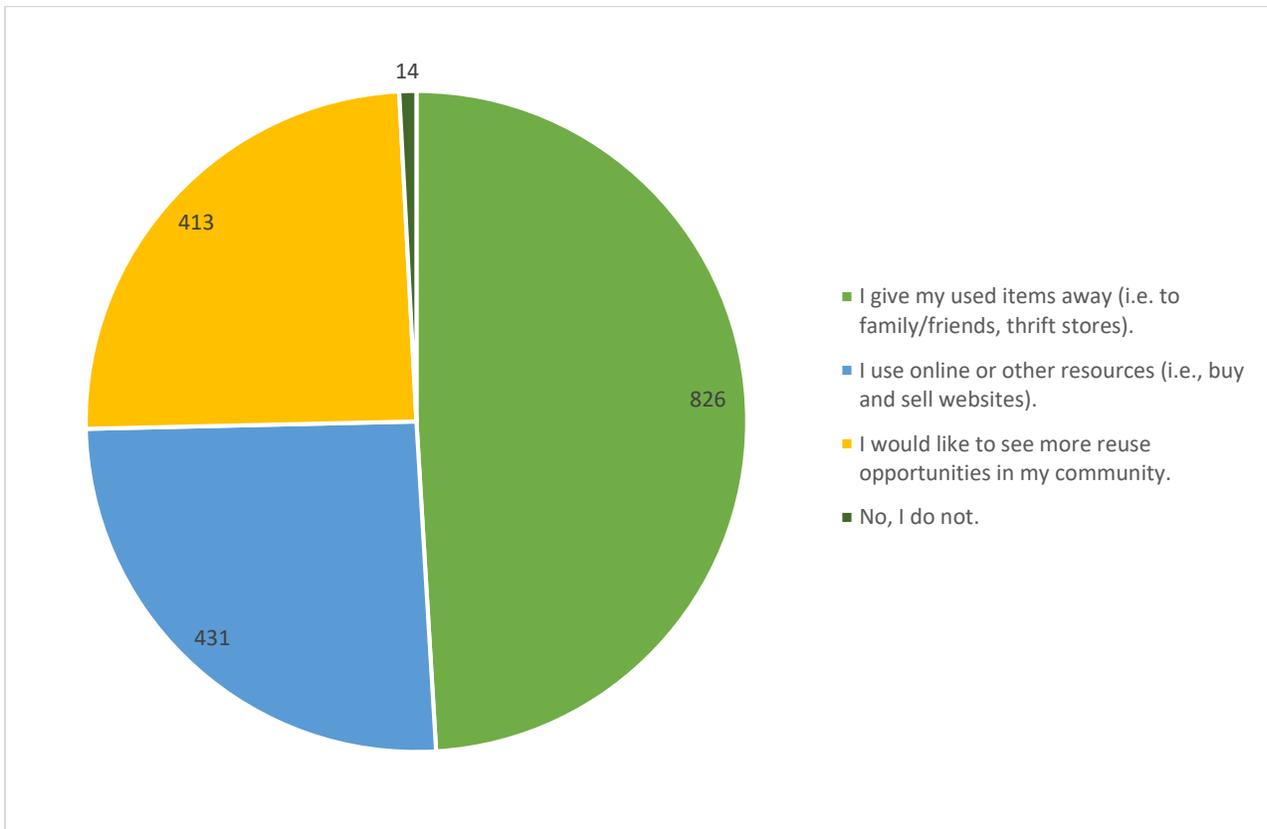


Figure 5. Terrace Service Area respondents' participation in recycling (Extended Producer Responsibility) programs (note that the Hazelton and Highway 37 North Service Area survey did not ask this question, as not all citizens in the service area have access to all recycling programs).

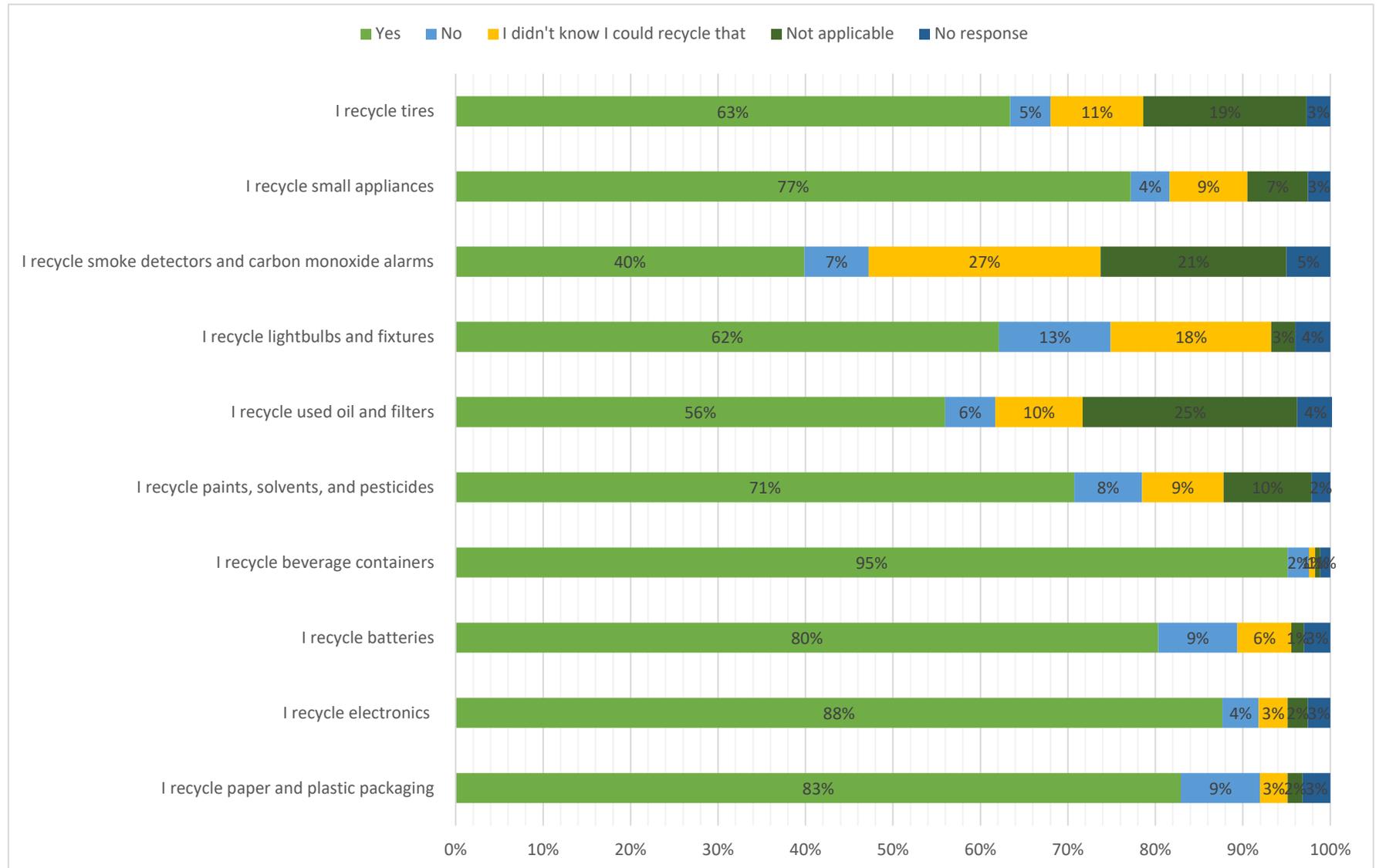


Figure 6. Respondents' agreement with waste management statements related to the Solid Waste Management Plan.

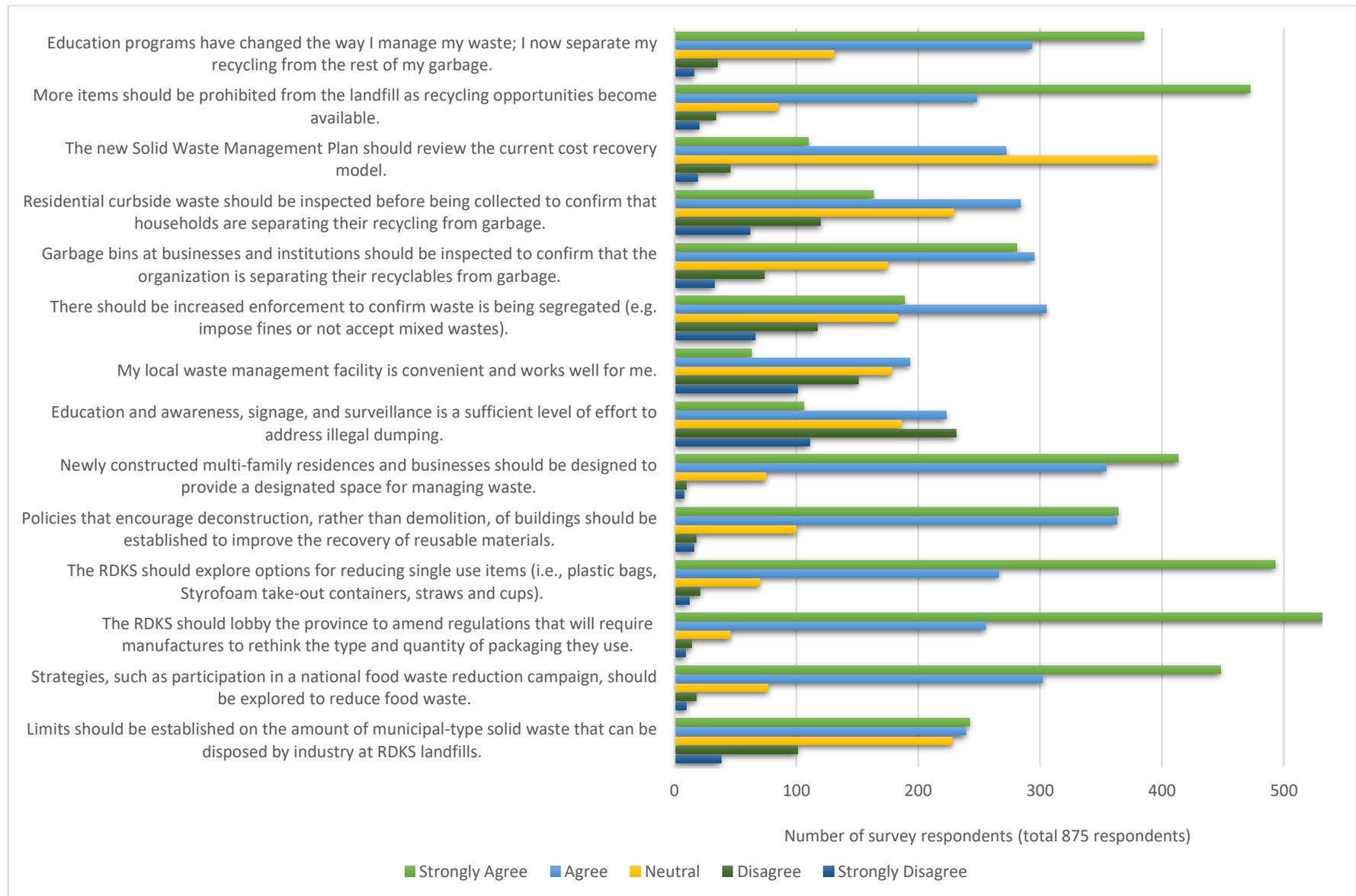
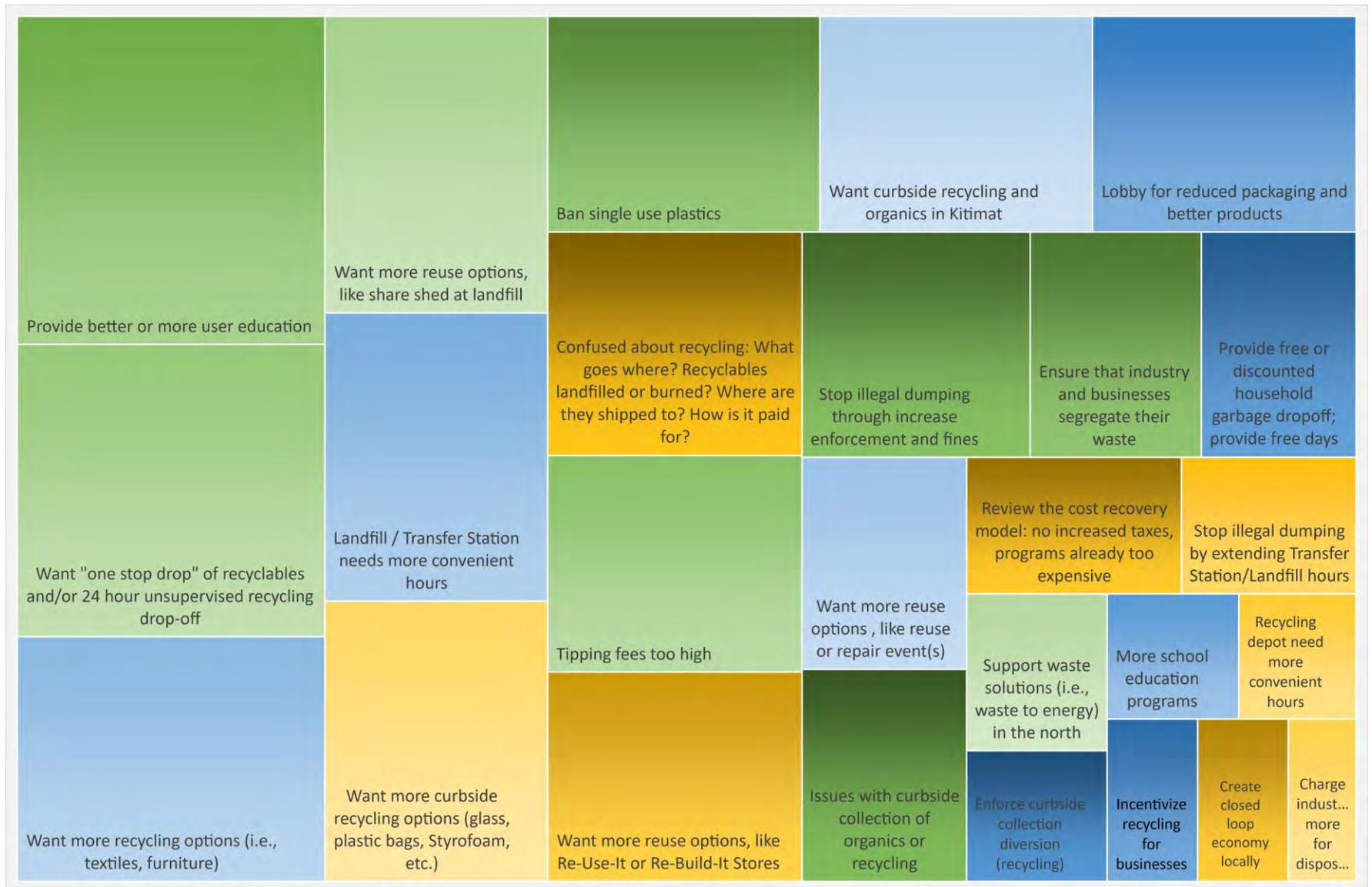


Figure 7. Proportion of respondents' agreement with waste management statements related to the Solid Waste Management Plan.



Figure 8. Summarized respondents' comments (weighted by the number of common comments received).



Appendix A. Solid Waste Surveys:

Terrace Service Area Solid Waste Survey 2019

Hazelton and Highway 37 North Service Area Solid Waste Survey 2019

As a strategy to reduce the amount of waste we produce, the Regional District should lobby the province to amend regulations (i.e., the Recycling Regulation) that will require manufactures to rethink the type and quantity of packaging they use for their products.

Strongly Agree Agree Neutral Disagree Strongly Disagree

Over one third of the food produced and distributed in Canada is never consumed. Strategies, such as participation in a national food waste reduction campaign, should be explored to reduce food waste.

Strongly Agree Agree Neutral Disagree Strongly Disagree

Currently the RDKS accepts municipal-type solid waste from industry (i.e., mines, work camps) with a 25% surcharge. Limits should be established on the amount of waste that can be disposed by industry.

Strongly Agree Agree Neutral Disagree Strongly Disagree

Did we miss anything? What else should our Solid Waste Plan cover? Tell us what you think.

To be entered into the draw, the best way to contact me is:

Contact information will not be publicized. Only prize winners or those requesting to be on the distribution list will be contacted.

By email. My name and email address is: _____

By phone. My name and phone number is: _____

By addressed mail. My name and mailing address is: _____

Please do not contact me.

Please add me to the Solid Waste Management Plan email distribution list

Return this survey by mail to: **Regional District of Kitimat-Stikine**
300-4545 Lazelle Ave.
Terrace, BC V8G 4E1

Submit this survey to your local Municipal or Band Office.

Complete this survey online at: jitsutech.ca/solidwasteplan

COMPLETE THE SURVEY FOR YOUR CHANCE TO WIN A \$100 VISA GIFT CARD!



TERRACE & AREA SOLID WASTE SURVEY

(INCLUDES KITIMAT AND THE NASS VALLEY)

COMPLETE THE SURVEY FOR YOUR CHANCE TO WIN A \$100 VISA GIFT CARD!

Complete this survey online at: jitsutech.ca/solidwasteplan

The Regional District of Kitimat-Stikine is developing a new Solid Waste Management Plan to provide direction for how we will reduce, reuse, recycle and dispose of waste for the next decade. The new Plan will focus on improving operational efficiency and expanding service delivery to more rural communities.

The RDKS anticipates that about 20 major topics will be addressed within the new Plan. You can suggest additional topics by completing this survey. Please visit www.rdks.bc.ca/solidwasteplan for the full list of topics.

A Public and Technical Advisory Committee (PTAC) has been formed to advise on development of the Solid Waste Plan.

Would you like higher level of involvement in how we manage waste? Join our **Involved Working Group** to be kept informed of PTAC business via email (agendas, minutes and reports) and participate in focused meetings regarding waste management topics of interest to you.

For information, contact the Environmental Services Coordinator at (250) 615-6100 or solidwasteplan@rdks.bc.ca, or visit www.rdks.bc.ca/solidwasteplan.

Please return this survey by **April 1st** to be entered into the draw.

We appreciate you taking 10 to 15 minutes of your valuable time to share your thoughts on garbage and recycling in our region. We need your input for our Solid Waste Plan to be successful.

I am replying to this survey as [pick one]:

- A Resident A Business Seasonal Resident

I live or run a business in [check your answer]:

- City of Terrace Thornhill Kitsumkalum Kitimaat Village Usk
 Jackpine Flats Copperville Rosswood District of Kitimat Gitaus
 Lakelse Lake Old Remo Dutch Valley Chimdemash Gossan
 Brauns Island New Remo Nass Valley Other _____
 North Terrace Kleanza Cedarvale

I contribute to the reuse of quality items and materials [check all that apply]:

- I give my used items away (i.e., to family/friends, thrift stores). No, I do not.
 I use online or other resources (i.e., buy and sell websites).
 I would like to see more reuse opportunities in my community, such as: _____

I divert my organics (i.e., compost) [check all that apply]:

- I compost at home. I keep for mine or other's farm/garden/animals.
 I use curbside organics collection. No, I do not compost.
 I do not have curbside organics collection; I would use it if available.
 I do not have curbside organics collection; I would not use it if available.

I divert my recyclable materials [check all that apply]:

- I use curbside collection of recyclables.
 No, I do not recycle. I bring my recycling to the depot.
 I do not have curbside recycling collection; I would use it if available.
 I do not have curbside recycling collection; I would not use it if available.

I recycle the following items through businesses or recycling depots:

Paper & plastic packaging	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> I didn't know I could recycle that <input type="checkbox"/> Not Applicable
Electronics	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> I didn't know I could recycle that <input type="checkbox"/> Not Applicable
Batteries	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> I didn't know I could recycle that <input type="checkbox"/> Not Applicable
Beverage containers	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> I didn't know I could recycle that <input type="checkbox"/> Not Applicable
Paints, solvents and pesticides	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> I didn't know I could recycle that <input type="checkbox"/> Not Applicable
Used oil and oil filters	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> I didn't know I could recycle that <input type="checkbox"/> Not Applicable
Lightbulbs and fixtures	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> I didn't know I could recycle that <input type="checkbox"/> Not Applicable
Smoke detectors and alarms	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> I didn't know I could recycle that <input type="checkbox"/> Not Applicable
Small appliances	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> I didn't know I could recycle that <input type="checkbox"/> Not Applicable
Tires	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> I didn't know I could recycle that <input type="checkbox"/> Not Applicable

Please rate your agreement with these statements:

- Education programs have changed the way I manage my waste; I now separate my recycling and organics from the rest of my garbage.
 Strongly Agree Agree Neutral Disagree Strongly Disagree
- More items should be prohibited from the landfill (e.g. Styrofoam, textiles/fabric, furniture and mattresses) as recycling opportunities become available.
 Strongly Agree Agree Neutral Disagree Strongly Disagree
- I would pay increased taxes to have more recyclables picked up through curbside collection.
 Strongly Agree Agree Neutral Disagree Strongly Disagree
- The curbside collection programs are convenient and provide good value.
 Strongly Agree Agree Neutral Disagree Strongly Disagree Not Applicable
- Residential curbside waste should be inspected before being collected to confirm that households are separating their organics and recycling from garbage.
 Strongly Agree Agree Neutral Disagree Strongly Disagree
- Garbage bins at businesses and institutions (i.e., hospitals) should be inspected to confirm that the organization is separating their organics and recyclables from garbage.
 Strongly Agree Agree Neutral Disagree Strongly Disagree
- There should be increased enforcement to confirm waste is being segregated (e.g. impose fines or not pick up mixed curbside wastes).
 Strongly Agree Agree Neutral Disagree Strongly Disagree
- The Thornhill Transfer Station is convenient and works well for me.
 Strongly Agree Agree Neutral Disagree Strongly Disagree Not Applicable
- The Regional District is currently working with the Ministry of Transportation, Conservation Officer Service and local First Nations to address illegal dumping through education and awareness, signage, and surveillance. This is a sufficient level of effort to address illegal dumping.
 Strongly Agree Agree Neutral Disagree Strongly Disagree
- The new Solid Waste Management Plan should review the current cost recovery model for the Terrace Service Area (facility costs currently covered 50% through property taxes and 50% through tipping fees).
 Strongly Agree Agree Neutral Disagree Strongly Disagree
- Newly constructed multi-family residences and businesses should be designed to include a designated space for managing waste.
 Strongly Agree Agree Neutral Disagree Strongly Disagree
- Policies that encourage deconstruction of buildings, rather than demolition, should be established to improve recovery of reusable materials.
 Strongly Agree Agree Neutral Disagree Strongly Disagree
- Single use items that are typically landfilled, such as plastic bags, Styrofoam take-out containers, straws and cups, are a leading source of pollution. The Regional District should explore options for reducing single use items.
 Strongly Agree Agree Neutral Disagree Strongly Disagree

Over one third of the food produced and distributed in Canada is never consumed. Strategies, such as participation in a national food waste reduction campaign, should be explored to reduce food waste.

Strongly Agree Agree Neutral Disagree Strongly Disagree

Currently the RDKS accepts municipal-type solid waste from industry (i.e., mines, work camps) with a 25% surcharge. Limits should be established on the amount of waste that can be disposed by industry.

Strongly Agree Agree Neutral Disagree Strongly Disagree

Did we miss anything? What else should our Solid Waste Plan cover? Tell us what you think.

To be entered into the draw, the best way to contact me is:

Contact information will not be publicized. Only prize winners or those requesting to be on the distribution list will be contacted.

By email. My name and email address is: _____

By phone. My name and phone number is: _____

By addressed mail. My name and mailing address is: _____

Please do not contact me.

Please add me to the Solid Waste Management Plan email distribution list

Return this survey by mail to: **Regional District of Kitimat-Stikine**
300-4545 Lazelle Ave.
Terrace, BC V8G 4E1

Submit this survey to your local Municipal or Band Office.

Complete this survey online at: jitsutech.ca/solidwasteplan

COMPLETE THE SURVEY FOR YOUR CHANCE TO WIN A \$100 VISA GIFT CARD!



HAZELTONS & HIGHWAY 37 NORTH AREA SOLID WASTE SURVEY

COMPLETE THE SURVEY FOR YOUR CHANCE TO WIN A \$100 VISA GIFT CARD!

Complete this survey online at: jitsutech.ca/solidwasteplan

The Regional District of Kitimat-Stikine is developing a new Solid Waste Management Plan to provide direction for how we will reduce, reuse, recycle and dispose of waste for the next decade. The new Plan will focus on improving operational efficiency and expanding service delivery to more rural communities.

The RDKS anticipates that about 20 major topics will be addressed within the new Plan. You can suggest additional topics by completing this survey. Please visit www.rdks.bc.ca/solidwasteplan for the full list of topics.

A Public and Technical Advisory Committee (PTAC) has been formed to advise on development of the Solid Waste Plan. PTAC is still looking for individuals that live in the following areas to represent their community on the committee:

- Electoral Area A (Stewart, Nass Valley)
- Electoral Area D (Telegraph, Iskut)
- Electoral Area F (Dease Lake)
- District of Stewart
- Village of Hazelton

If you live in one of these communities and would like to participate in PTAC, please contact the RDKS Environmental Services Coordinator.

Would you like higher level of involvement in how we manage waste? Join our **Involved Working Group** to be kept informed of PTAC business via email (agendas, minutes and reports) and participate in focused meetings regarding waste management topics of interest to you.

For information, contact the Environmental Services Coordinator at (250) 615-6100 or solidwasteplan@rdks.bc.ca, or visit www.rdks.bc.ca/solidwasteplan.

Please return this survey by _____ to be entered into the draw.

April 1st

We appreciate you taking 10 to 15 minutes of your valuable time to share your thoughts on garbage and recycling in our region. We need your input for our Solid Waste Plan to be successful.

I am replying to this survey as [pick one]:

A Resident A Business Seasonal Resident

I live or run a business in:

New Hazelton Kispiox Hagwilget Two Mile Iskut
 South Hazelton Meziadin Gitsegukla Gitanyow Glen Vowell
 Telegraph Creek Witsset Gitwangak Kitwanga Stewart
 Village of Hazelton Dease Lake Gitanmaax Other _____

I contribute to the reuse of quality items and materials [check all that apply]:

I give my used items away (i.e., to family/friends, thrift stores). No, I do not.
 I use online or other resources (i.e., buy and sell websites).
 I would like to see more reuse opportunities in my community, such as: _____

I divert my organics (i.e., compost) [check all that apply]:

I compost at home. I keep for mine or other's farm/garden/animals.
 No, I do not compost. I would use a public compost facility if available.

I divert my recyclable materials [check all that apply]:

I bring my recycling to a depot. I use curbside collection of recyclables.
 I do not have curbside recycling collection; I would use it if available.
 I do not have curbside recycling collection; I would not use it if available.
 No, I do not recycle.

Please rate your agreement with these statements:

Education programs have changed the way I manage my waste; I now separate my recycling from the rest of my garbage.

Strongly Agree Agree Neutral Disagree Strongly Disagree

More items should be prohibited from the landfill (e.g. Styrofoam, textiles/fabric, furniture and mattresses) as recycling opportunities become available.

Strongly Agree Agree Neutral Disagree Strongly Disagree

Current recycling options in my community are sufficient.

Strongly Agree Agree Neutral Disagree Strongly Disagree

Recycling depots are convenient for drop-off of recyclable materials.

Strongly Agree Agree Neutral Disagree Strongly Disagree Not Applicable

Recycling programs can be expensive, particularly in northern rural communities where haul distance leads to high transportation costs. A spending cap for recycling programs should be established.

Strongly Agree Agree Neutral Disagree Strongly Disagree

Curbside collection of garbage should be provided for all residents (with a fee for service).

Strongly Agree Agree Neutral Disagree Strongly Disagree

Curbside collection of recycling should be provided for all residents (with a fee for service).

Strongly Agree Agree Neutral Disagree Strongly Disagree

The new Solid Waste Management Plan (SWMP) should review the current cost recovery model for the Hazelton and Highway 37 North Service Area (service costs covered through taxes, user fees and community contributions).

Strongly Agree Agree Neutral Disagree Strongly Disagree

Where curbside collection programs exist, residential curbside waste should be inspected before being collected to confirm that households are separating their recycling from garbage.

Strongly Agree Agree Neutral Disagree Strongly Disagree

Garbage bins at businesses and institutions (i.e., clinics) should be inspected to confirm that the organization is separating their recyclables from garbage.

Strongly Agree Agree Neutral Disagree Strongly Disagree

There should be increased enforcement to confirm waste is being segregated (e.g. impose fines or not accept mixed wastes).

Strongly Agree Agree Neutral Disagree Strongly Disagree

The Regional District should hold "round-up" events for residents to safely recycle or dispose of household hazardous waste (i.e., solvents, pesticides, smoke alarms, fire extinguishers, etc.).

Strongly Agree Agree Neutral Disagree Strongly Disagree

My local waste management facility is convenient and works well for me.

Strongly Agree Agree Neutral Disagree Strongly Disagree

The Regional District is currently working with the Ministry of Transportation, Conservation Officer Service and First Nations to address illegal dumping through education and awareness, signage, and surveillance. This is a sufficient level of effort to address illegal dumping.

Strongly Agree Agree Neutral Disagree Strongly Disagree

Newly constructed multi-family residences and businesses should be designed to provide a designated space for managing waste.

Strongly Agree Agree Neutral Disagree Strongly Disagree

Policies that encourage deconstruction of buildings, rather than demolition, should be established to improve recovery of reusable materials.

Strongly Agree Agree Neutral Disagree Strongly Disagree

Single use items that are typically landfilled, such as plastic bags, Styrofoam take-out containers, straws and cups, are a leading source of pollution; The Regional District should explore options for reducing single use items.

Strongly Agree Agree Neutral Disagree Strongly Disagree

As a strategy to reduce the amount of waste we produce, the Regional District should lobby the province to amend regulations (i.e., the Recycling Regulation) that will require manufactures to rethink the type and quantity of packaging they use for their products.

Strongly Agree Agree Neutral Disagree Strongly Disagree

Appendix B. March 2019 Solid Waste Survey Results:

Table 1. Terrace Service Area Solid Waste Survey Results

Table 2. Hazelton and Highway 37 North Service Area Solid Waste Survey Results

Table 3. Combined Survey Results: Terrace and Hazelton and Highway 37 North Service Areas

Table 4. Categorized Respondents' Comments: Combined comments from the Terrace and Hazelton and Highway 37 North Service Areas

Table 1. Terrace Service Area Solid Waste Survey Results

I am replying to this survey as:		Residents	Businesses	Seasonal Users	Total Terrace Area Survey Respondents	
	# Respondents	669	24	4	697	
% Respondents	96%	3%	1%			
I live or run a business in:	# of Respondents by community	City of Terrace	Thornhill	Kitsumkalum	New Remo	Old Remo
		331	107	7	3	8
		Dutch Valley	North Terrace	Jackpine Flats	Copperside	Gossan
		3	32	18	3	1
		Chimdemash	Kleanza	Gitaus	Cedarvale	Rosswood
		0	3	0	0	4
		Brauns Island	Usk	Nass Valley	Lakelse Lake	Other
		5	1	2	14	9
District of Kitimat	Kitamaat Village					
143	3					
I contribute to the reuse of quality items and materials check all that apply.		I give my used items away (i.e. to family/friends, thrift stores).	I use online or other resources (i.e., buy and sell websites).	I would like to see more reuse opportunities in my community.	No, I do not.	Other
	# Respondents	665	362	334	9	103
	% Respondents	95%	52%	48%	1%	15%
I divert my organics (i.e. compost) check all that apply.	I compost at home.	I use curbside organics collection.	I do not have curbside collection; I would use it if available.	I do not have curbside collection; I would not use it if available.	I keep for mine or other's farm/garden/animals.	No I do not compost.
	373	398	97	19	98	67
	54%	57%	14%	3%	14%	10%
I divert my recyclable materials [check all that apply]:		I bring my recycling to the depot.	I use curbside collection of recyclables.	I do not have curbside recycling collection; I would use it if available.	I do not have curbside recycling collection; I would not use it if available.	No, I do not recycle.
	# Respondents	505	491	130	7	5
	% Respondents	72%	70%	19%	1%	1%
I divert my recyclable materials check all that apply:		Yes	No	I didn't know I could recycle that	Not applicable	No response
I recycle paper and plastic packaging	% Respondents	83%	9%	3%	2%	3%
I recycle electronics		88%	4%	3%	2%	3%
I recycle batteries		80%	9%	6%	1%	3%
I recycle beverage containers		95%	2%	1%	1%	1%
I recycle paints, solvents, and pesticides		71%	8%	9%	10%	2%
I recycle used oil and filters		56%	6%	0%	25%	4%
I recycle lightbulbs and fixtures		62%	13%	18%	3%	4%
I recycle smoke detectors and carbon monoxide alarms		40%	7%	27%	21%	5%
I recycle small appliances		77%	4%	9%	7%	3%
I recycle tires		63%	5%	11%	19%	3%

Table 1. Terrace Service Area Solid Waste Survey Results

		Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Education programs have changed the way I manage my waste; I now separate my recycling and organics from the rest of my garbage.	# Respondents	313	231	106	25	12
	% Respondents	45%	33%	15%	4%	2%
More items should be prohibited from the landfill (e.g. Styrofoam, textiles/fabric, furniture and mattresses) as recycling opportunities become available.	# Respondents	387	191	70	22	16
	% Respondents	56%	27%	10%	3%	2%
I would pay increased taxes to have more recyclables picked up through curbside collection.	# Respondents	153	196	149	92	95
	% Respondents	22%	28%	21%	13%	14%
The curbside collection programs are convenient and provide good value.	# Respondents	290	235	78	35	24
	% Respondents	42%	34%	11%	5%	3%
Residential curbside waste should be inspected before being collected to confirm that households are separating their organics and recycling from garbage.	# Respondents	129	211	195	103	50
	% Respondents	19%	30%	28%	15%	7%
Garbage bins at businesses and institutions (i.e., hospitals) should be inspected to confirm that the organization is separating their organics and recyclables from garbage.	# Respondents	225	231	149	59	24
	% Respondents	32%	33%	21%	8%	3%
There should be increased enforcement to confirm waste is being segregated (e.g. impose fines or not pick up mixed curbside wastes).	# Respondents	157	233	152	95	52
	% Respondents	23%	33%	22%	14%	7%
The Thornhill Transfer Station is convenient and works well for me.	# Respondents	47	118	138	122	86
	% Respondents	7%	17%	20%	18%	12%
The Regional District of Kitimat-Stikine (RDKS) is currently working with the Ministry of Transportation, Conservation Officer Service and local First Nations to address illegal dumping through education and awareness, signage, and surveillance. This is a sufficient level of effort to address illegal dumping.	# Respondents	89	162	143	196	95
	% Respondents	13%	23%	21%	28%	14%
The new Solid Waste Management Plan (SWMP) should review the current cost recovery model for the Terrace Service Area (facility costs currently covered 50% through property taxes and 50% through tipping fees).	# Respondents	75	205	344	35	15
	% Respondents	11%	29%	49%	5%	2%
Newly constructed multi-family residences and businesses should be designed to provide a designated space for managing waste.	# Respondents	351	266	54	7	8
	% Respondents	50%	38%	8%	1%	1%
Policies that encourage deconstruction, rather than demolition, of buildings should be established to improve the recovery of reusable materials.	# Respondents	302	280	75	14	14
	% Respondents	43%	40%	11%	2%	2%
Single use items that are typically landfilled, such as plastic bags, Styrofoam take-out containers, straws and cups, are a leading source of pollution. The Regional District should explore options for reducing single use items.	# Respondents	404	202	56	16	10
	% Respondents	58%	29%	8%	2%	1%
As a strategy to reduce the amount of waste we produce, the Regional District should lobby the province to amend regulations (i.e., the Recycling Regulation) that will require manufactures to rethink the type and quantity of packaging they use for their products.	# Respondents	433	200	38	8	8
	% Respondents	62%	29%	5%	1%	1%
Over one third of the food produced and distributed in Canada is never consumed. Strategies, such as participation in a national food waste reduction campaign, should be explored to reduce food waste.	# Respondents	363	236	61	16	7
	% Respondents	52%	34%	9%	2%	1%
Currently the RDKS accepts municipal-type solid waste from industry at a 25% surcharge rate (i.e., mines, work camps). Limits should be established on the amount of waste that can be disposed by industry.	# Respondents	191	174	198	85	30
	% Respondents	27%	25%	28%	12%	4%

Table 2. Hazelton and Highway 37 North Service Area Solid Waste Survey Results

I am replying to this survey as:		Residents	Businesses	Seasonal Users	Total Hazelton & Hwy. 37 N Area Survey Respondents	
	# Respondents	167	8	3	178	
% Respondents	94%	4%	2%			
I live or run a business in:	# of Respondents by community	New Hazelton	Kispiox	Hagwilget	Two Mile	Iskut
		32	17	17	15	2
		South Hazelton	Meziadin	Gitsegukla	Gitanyow	Glen Vowell
		21	2	2	5	3
		Telegraph Creek	Moricetown	Gitwangak	Kitwanga	Stewart
		0	0	5	9	21
		Village of Hazelton	Dease Lake	Gitanmaax	Other	
14	4	2	8			
I contribute to the reuse of quality items and materials [check all that apply].		I give my used items away (i.e. to family/friends, thrift stores).	I use online or other resources (i.e., buy and sell websites).	I would like to see more reuse opportunities in my community.	No, I do not.	
	# Respondents	161	69	79	5	
	% Respondents	90%	39%	44%	3%	
I divert my organics (i.e. compost) [check all that apply].		I compost at home.	I keep for mine or other's farm/garden/animals.	No I do not compost.	I would use a public compost facility if available.	
	# Respondents	98	26	51	64	
	% Respondents	55%	15%	29%	36%	
I divert my recyclable materials [check all that apply]:		I bring my recycling to a depot.	I use curbside collection of recyclables.	I do not have curbside recycling collection; I would use it if available.	I do not have curbside recycling collection; I would not use it if available.	
	# Respondents	146	38	62	7	
	% Respondents	82%	21%	35%	4%	
					No, I do not recycle.	
					3	
					2%	

Table 2. Hazelton and Highway 37 North Service Area Solid Waste Survey Results

		Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Education programs have changed the way I manage my waste; I now separate my recycling from the rest of my garbage.	# Respondents	72	62	25	10	4
	% Respondents	40%	35%	14%	6%	2%
More items should be prohibited from the landfill (e.g. Styrofoam, textiles/fabric, furniture and mattresses) as recycling opportunities become available.	# Respondents	85	57	15	12	4
	% Respondents	48%	32%	8%	7%	2%
Current recycling options in my community are sufficient.	# Respondents	13	51	30	42	34
	% Respondents	7%	29%	17%	24%	19%
Recycling depots are convenient for drop-off of recyclable materials.	# Respondents	34	67	27	27	19
	% Respondents	19%	38%	15%	15%	11%
Recycling programs can be expensive, particularly in northern rural communities where haul distance leads to high transportation costs. A spending cap for recycling programs should be established.	# Respondents	26	60	41	29	17
	% Respondents	15%	34%	23%	16%	10%
Curbside collection of garbage should be provided for all residents (with a fee for service).	# Respondents	30	66	34	24	17
	% Respondents	17%	37%	19%	13%	10%
Curbside collection of recyclables should be provided for all residents (with a fee for service).	# Respondents	34	66	34	20	18
	% Respondents	19%	37%	19%	11%	10%
The new Solid Waste Management Plan should review the current cost recovery model for the Hazelton and Highway 37 North Service Area (service costs covered through taxes, user fees and community contributions).	# Respondents	35	67	52	11	4
	% Respondents	20%	38%	29%	6%	2%
Where curbside collection programs exist, residential curbside waste should be inspected before being collected to confirm that households are separating their recycling from garbage.	# Respondents	34	73	34	17	12
	% Respondents	19%	41%	19%	10%	7%
Garbage bins at businesses and institutions (i.e., clinics) should be inspected to confirm that the organization is separating their recyclables from garbage.	# Respondents	56	64	26	15	9
	% Respondents	31%	36%	15%	8%	5%
There should be increased enforcement to confirm waste is being segregated (e.g. impose fines or not accept mixed wastes).	# Respondents	32	72	31	22	14
	% Respondents	18%	40%	17%	12%	8%
The Regional District should hold round-up events for residents to safely recycle or dispose of household hazardous waste (i.e., solvents, pesticides, smoke alarms, fire extinguishers, etc.).	# Respondents	83	76	12	2	1
	% Respondents	47%	43%	7%	1%	1%
My local waste management facility is convenient and works well for me.	# Respondents	16	75	40	29	15
	% Respondents	9%	42%	22%	16%	8%
The Regional District is currently working with the Ministry of Transportation, Conservation Officer Service and First Nations to address illegal dumping through education and awareness, signage, and surveillance. This is a sufficient level of effort to address illegal dumping.	# Respondents	17	61	43	35	16
	% Respondents	10%	34%	24%	20%	9%
Newly constructed multi-family residences and businesses should be designed to provide a designated space for managing waste.	# Respondents	62	88	21	3	0
	% Respondents	35%	49%	12%	2%	0%
Policies that encourage deconstruction, rather than demolition, of buildings should be established to improve the recovery of reusable materials.	# Respondents	62	83	25	4	2
	% Respondents	35%	47%	14%	2%	1%
Single use items that are typically landfilled, such as plastic bags, Styrofoam take-out containers, straws and cups, are a leading source of pollution. The Regional District should explore options for reducing single use items.	# Respondents	89	64	14	5	2
	% Respondents	50%	36%	8%	3%	1%
As a strategy to reduce the amount of waste we produce, the Regional District should lobby the province to amend regulations (i.e., the Recycling Regulation) that will require manufacturers to rethink the type and quantity of packaging they use for their products.	# Respondents	101	55	8	6	1
	% Respondents	57%	31%	4%	3%	1%
Over one third of the food produced and distributed in Canada is never consumed. Strategies, such as participation in a national food waste reduction campaign, should be explored to reduce food waste.	# Respondents	85	66	16	2	3
	% Respondents	48%	37%	9%	1%	2%
Currently the RDKS accepts municipal-type solid waste from industry (i.e., mines, work camps) with a 25% surcharge. Limits should be established on the amount of waste that can be disposed by industry.	# Respondents	51	65	30	16	8
	% Respondents	29%	37%	17%	9%	4%

Table 3. Combined Survey Results: Terrace Service Area and Hazelton and Highway 37 North Service Areas

I am replying to this survey as:	Residents		Businesses		Seasonal Users		Total Survey Respondents		Total Responses ¹
	# Respondents	836	32	7	Total Survey Respondents		875	875	
	% Respondents	96%	4%	1%	875		100%		
I contribute to the reuse of quality items and materials [check all that apply].		I give my used items away (i.e. to family/friends, thrift stores).	I use online or other resources (i.e., buy and sell websites).	I would like to see more reuse opportunities in my community.	No, I do not.				
	# Respondents	826	431	413	14		1684		
	% Respondents	49%	26%	25%	1%		100%		
I divert my organics (i.e. compost) [check all that apply].		I compost at home.	I keep for mine or other's farm/garden/animals.	No I do not compost.	Other responses ² .				
	# Respondents	471	124	118	578		1291		
	% Respondents	36%	10%	9%	45%		100%		
I divert my recyclable materials [check all that apply]:		I bring my recycling to a depot.	I use curbside collection of recyclables.	I do not have curbside recycling collection; I would use it if available.	I do not have curbside recycling collection; I would not use it if available.	No, I do not recycle.			
	# Respondents	651	529	192	14	8		1394	
	% Respondents	47%	38%	14%	1%	1%		100%	
		Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree			
Education programs have changed the way I manage my waste; I now separate my recycling from the rest of my garbage.	# Respondents	385	293	131	35	16		860	
	% Respondents	45%	34%	15%	4%	2%		100%	
More items should be prohibited from the landfill (e.g. Styrofoam, textiles/fabric, furniture and mattresses) as recycling opportunities become available.	# Respondents	472	248	85	34	20		859	
	% Respondents	55%	29%	10%	4%	2%		100%	
The new Solid Waste Management Plan should review the current cost recovery model for the Service Areas. ³	# Respondents	110	272	396	46	19		843	
	% Respondents	13%	32%	47%	5%	2%		100%	
Where curbside collection programs exist, residential curbside waste should be inspected before being collected to confirm that households are separating their recycling from garbage.	# Respondents	163	284	229	120	62		858	
	% Respondents	19%	33%	27%	14%	7%		100%	
Garbage bins at businesses and institutions (i.e., clinics) should be inspected to confirm that the organization is separating their recyclables from garbage.	# Respondents	281	295	175	74	33		858	
	% Respondents	33%	34%	20%	9%	4%		100%	
There should be increased enforcement to confirm waste is being segregated (e.g. impose fines or not accept mixed wastes).	# Respondents	189	305	183	117	66		860	
	% Respondents	22%	35%	21%	14%	8%		100%	
The Thornhill Transfer Station or my local waste management facility is convenient and works well for me. ³	# Respondents	63	193	178	151	101		686	
	% Respondents	9%	28%	26%	22%	15%		100%	
The Regional District is currently working with the Ministry of Transportation, Conservation Officer Service and First Nations to address illegal dumping through education and awareness, signage, and surveillance. This is a sufficient level of effort to address illegal dumping.	# Respondents	106	223	186	231	111		857	
	% Respondents	12%	26%	22%	27%	13%		100%	
Newly constructed multi-family residences and businesses should be designed to provide a designated space for managing waste.	# Respondents	413	354	75	10	8		860	
	% Respondents	48%	41%	9%	1%	1%		100%	
Policies that encourage deconstruction, rather than demolition, of buildings should be established to improve the recovery of reusable materials.	# Respondents	364	363	100	18	16		861	
	% Respondents	42%	42%	12%	2%	2%		100%	

Table 3. Combined Survey Results: Terrace Service Area and Hazelton and Highway 37 North Service Areas

Single use items that are typically landfilled, such as plastic bags, Styrofoam take-out containers, straws and cups, are a leading source of pollution. The Regional District should explore options for reducing single use items.	# Respondents	493	266	70	21	12	862
	% Respondents	57%	31%	8%	2%	1%	100%
As a strategy to reduce the amount of waste we produce, the Regional District should lobby the province to amend regulations (i.e., the Recycling Regulation) that will require manufactures to rethink the type and quantity of packaging they use for their products.	# Respondents	534	255	46	14	9	858
	% Respondents	62%	30%	5%	2%	1%	100%
Over one third of the food produced and distributed in Canada is never consumed. Strategies, such as participation in a national food waste reduction campaign, should be explored to reduce food waste.	# Respondents	448	302	77	18	10	855
	% Respondents	52%	35%	9%	2%	1%	100%
Currently the RDKS accepts municipal-type solid waste from industry (i.e., mines, work camps) with a 25% surcharge. Limits should be established on the amount of waste that can be disposed by industry.	# Respondents	242	239	228	101	38	848
	% Respondents	29%	28%	27%	12%	4%	100%

1. Total responses for each question do not equal the total number of survey respondents, as respondents could select multiple answers for the first three questions, and the remaining questions were not mandatory, so some respondents did not provide an answer. Percentages for each response were calculated using the total responses to each question.
2. The responses to "I use curbside organics collection," "I do not have curbside collection; I would use it if available," "I do not have curbside collection; I would not use it if available" and "I would use a public compost facility if available" have been omitted from the combined survey results, as Hazelton and Highway 37 N Service Area and Terrace Service Area do not offer consistent organics collection and composting services.
3. Questions that differed slightly in wording, but had the same intent, have been combined. These include the questions regarding a review of the cost recovery model(s) and the convenience of the local waste management facilities and Thornhill Transfer Station.

Hazelton and Highway 37 N Survey Questions omitted from the combined results:

- Current recycling options in my community are sufficient.
- Recycling depots are convenient for drop-off of recyclable materials.
- Recycling programs can be expensive, particularly in northern rural communities where haul distance leads to high transportation costs. A spending cap for recycling programs should be established.
- Curbside collection of garbage should be provided for all residents (with a fee for service).
- Curbside collection of recyclables should be provided for all residents (with a fee for service).
- The Regional District should hold round-up events for residents to safely recycle or dispose of household hazardous waste (i.e., solvents, pesticides, smoke alarms, fire extinguishers, etc.).

Terrace Area Survey Questions omitted from the combined results:

- I divert my recyclable materials check all that apply:
- I would pay increased taxes to have more recyclables picked up through curbside collection.
- The curbside collection programs are convenient and provide good value.

Table 4. Categorized Respondents' Comments: Combined comments from the Terrace and Hazelton and Highway 37 North Service Areas

Comment Themes	Survey Respondents' Comments (categorized)	Terrace Service Area		Hazelton and Highway 37 N Service Area	
		Number of Comments	Proportion of total survey respondents (697)	Number of Comments	Proportion of total survey respondents (178)
Positive feedback	Appreciate the waste management program	11	1.6%	3	1.7%
Education	Need better / more user education	41	5.9%	14	7.9%
	More school education programs	6	0.9%	3	1.7%
Illegal Dumping	Stop illegal dumping - extend Transfer Station/Landfill hours	12	1.7%	1	0.6%
	Stop illegal dumping - increase enforcement and fines	26	3.7%	2	1.1%
	Provide free or discounted household garbage dropoff, provide free days	17	2.4%	2	1.1%
	Need clean-up efforts for illegal dumping; Unsightly premises issues (neighbors garbage)	3	0.4%	1	0.6%
Costs	Cost recovery model review - no increased taxes/ issue with taxation, programs already too expensive	8	1.1%	8	4.5%
	Decrease taxes for seasonal users	4	0.6%	0	0.0%
	Run facilities more cost efficiently	2	0.3%	1	0.6%
	Decrease tipping fees and increase taxes	3	0.4%	0	0.0%
	Tipping fees too high	21	3.0%	3	1.7%
Hours	Landfill / Transfer Station need more / better hours	27	3.9%	8	4.5%
	Recycling depot needs more hours	4	0.6%	4	2.2%
Reduction	Ban single use plastics	26	3.7%	6	3.4%
	Lobby for reduced packaging and better products	25	3.6%	6	3.4%
	Reduce food waste; fine grocery stores	3	0.4%	1	0.6%
Reuse Options	Need more reuse options - Re-Use-It Store or Re-Build-It Store	16	2.3%	13	7.3%
	Need more reuse options - share shed at landfill or transfer station	11	1.6%	18	10.1%
	Need more reuse options - host reuse event(s)	10	1.4%	1	0.6%
	Need more reuse options - allow landfill salvaging	1	0.1%	6	3.4%
	Need more reuse options - host repair event(s)	4	0.6%	4	2.2%
Curbside Collection	Provide segregated waste bins in public spaces	0	0.0%	1	0.6%
	Need more curbside recycling options (glass, plastic bags, Styrofoam, etc.)	31	4.4%	3	1.7%
	Provide free cans and recycling bags	2	0.3%	1	0.6%
	Issue with curbside collection - organics	7	1.0%	2	1.1%
	Issue with curbside collection - recycling	8	1.1%	2	1.1%
	Want curbside enforcement (can tipping)	8	1.1%	2	1.1%
	Want collection of all recyclables with manual sorting of curbside recyclables provided	1	0.1%	0	0.0%
	Against curbside enforcement (can tipping)	4	0.6%	1	0.6%
	Wildlife concerns re: curbside organics	1	0.1%	1	0.6%
Recycling and compost	Want household hazardous waste roundup event	4	0.6%	0	0.0%
	Confused about recycling - What goes where? EPR issues	13	1.9%	1	0.6%
	Confused about recycling - Recyclables landfilled or burned? Where are they shipped to? How is it paid for?	6	0.9%	0	0.0%
	Uninformed or misinformed about current program (concerns already addressed under current services)	10	1.4%	1	0.6%
	Want "one stop drop" of recyclables	41	5.9%	4	2.2%
	Want 24 hour unsupervised recycling drop-off	2	0.3%	2	1.1%
	Want more recycling options (i.e., textiles, furniture)	34	4.9%	7	3.9%
	Want compost provided to the community	6	0.9%	0	0.0%
	Promote more composting and organics	2	0.3%	0	0.0%
Industry Disposal	Industry disposal - Do not support if shortens landfill life	1	0.1%	0	0.0%
	Industry disposal - Charge more to industry (in addition to 25% surcharge)	3	0.4%	1	0.6%
	Industry disposal - Ensure waste segregation	9	1.3%	1	0.6%
ICI	Subsidize or incentivize recycling for ICI	6	0.9%	0	0.0%
	ICI and multi-fam - Ensure waste segregation	9	1.3%	2	1.1%
	Provide waste collection for businesses (consistent with residential curbside)	2	0.3%	0	0.0%
	Cost concerns from ICI	2	0.3%	0	0.0%
	Create closed loop economy locally with private sector	4	0.6%	4	2.2%
Recover waste	Support waste incineration in the north	5	0.7%	1	0.6%
	Support waste solutions (i.e., waste to energy) in the north	2	0.3%	4	2.2%
Kitimat	Kitimat waste management issues / concerns	7	1.0%	0	0.0%
	Want status quo (leave existing system)	1	0.1%	0	0.0%
	Want curbside organics	9	1.3%	0	0.0%
	Want curbside recycling	23	3.3%	0	0.0%

Appendix C. “What We Heard From You”: RDKS Response to Solid Waste Survey

What We Heard From You: RDKS Response to Solid Waste Survey

A big thank-you to the 875 citizens that completed the Regional District of Kitimat-Stikine (RDKS) Solid Waste Survey in March! Here's what we heard from you:

Recycling is too confusing

Yes, recycling can be confusing. Here are some answers to a few of the common recycling questions we've heard:

- **Who Manages and Pays for Recycling?**

Recycling in BC is mandated by the provincial Recycling Regulation under the Environmental Management Act and is managed through various Product Stewardship programs. Product Stewardship programs are funded through eco-fees (such as electronics), deposits (such as beverage containers), and fees paid by producers & manufactures that sell goods in BC.

- **Why Do I Have to Bring My Non-Curbside Recyclables to Several Different Places?** There are about 20 Stewardship Programs in BC managing different materials. All of these Programs require supervised recycling drop-off, which is why there are no drop-off locations with 24-hour unsupervised access. Stewardships programs coordinate with private-sector businesses to act as depots. That is why there are so many different businesses that collect recyclable items.

- **Why Can't I Recycle the Same Things at Work That I Can at Home?**

RecycleBC is the Stewardship Program that manages residential Printed Paper and Packaging (PPP) recycling (i.e. typical household recycling). They collect PPP through either curbside collection or resident drop-off depots. Businesses and institutions do not receive services from RecycleBC, as the provincial Recycling Regulation currently only requires RecycleBC to accept recycling from residential households. Our Bylaws require businesses to recycle paper and cardboard. Businesses can voluntarily recycle all other packaging materials through a contracted collection service or by bringing it to a depot themselves, which the Regional District does encourage.

A note on RecycleBC:

The City of Terrace is currently the only location within the RDKS that receives financial compensation from RecycleBC for its curbside recycling collection program. The Regional District continues to campaign RecycleBC to include all curbside recycling collection programs in their financial compensation model. RecycleBC depot drop-off services are available at Do-Your-Part Recycling, the Hazelton Bottle Depot, KUTE depot in Kitimat and the Stewart Transfer Station. The Regional District also accepts PPP materials at the Kitwanga Transfer Station, though currently without support from RecycleBC.

- **Where Does My Plastic Go?**

All plastic collected through RecycleBC is processed for recycling at Merlin Plastics in the Lower Mainland of BC.

Put a stop to illegal dumping!

People throwing their garbage (and recycling) in our beautiful backcountry is something that frustrates all of us. Illegal dumping falls outside of the Regional District's jurisdiction for enforcement; however, we are working with Conservation Officers and other provincial partners to identify strategies to stop the

issue. Possible strategies include; a combination of increased enforcement, fines, publicizing identified offenders, education campaigns, neighborhood watch programs, restricting access and installing game-cams at popular dumping sites, and dump-site clean-ups. If you see anyone dumping waste illegally call the Provincial RAPP line at 1-877-952-7277.

Transfer Station / Landfill Facilities Need Better Hours

We want your facilities to be convenient for you. That being said, what works for one person may not work for another. User convenience must be balanced with operational costs. For example, opening the Thornhill Transfer Station by one more hour per week would cost an additional \$20,000 per year to our taxpayers. Over the next year, we'll be looking ways to make facilities more convenient for our users while trying to keep taxpayers' costs down.

We Need Less Packaging and Disposable Items

We all generate waste. Even the most conscious consumer may buy over-packaged items because there are often no alternatives. Through our Solid Waste Management Plan, we will be looking at ways to reduce the amount of product packaging and single-use disposable items that we generate. Strategies may include; lobbying the provincial government to require manufactures to change the type and quantity of packaging they use, mandate adoption of "green" procurement guidelines, and looking at ways to limit distribution of certain single use items, such as plastic bags.

We Need Ways to Recover Reusable Items

One person's waste could be another's treasure. Reusing items is a great way to keep things out of the landfill. Through our Solid Waste Plan, we will be looking at ways to help our communities recover reusable items, such as promoting or incentivizing private or non-profit organizations to operate reuse facilities (i.e., Re-Use-It or Re-Build-It Center) or hosting reuse events, such as a "Junk in the Trunk" event.

Why Are There So Many Changes to Waste Management Lately?

The global waste management industry is evolving. Many countries and jurisdictions are now banning single use items and trying to reduce waste generation. Over the past few years, the Regional District has worked hard to upgrade and update our facilities and programs to meet provincial regulatory requirements, align with current waste management industry practices, and ensure that our facilities are protecting the environment. We now have a similar waste management system to what larger centers like Vancouver and Victoria put into place over 20 years ago. The changes here happened quite quickly, and we expected a few "growing pains." We are currently developing a new Solid Waste Management Plan. Throughout the Plan process it is important to hear from you on how we can continue to improve our facilities and programs.

Your input will help guide our regional waste management strategies for the next decade. If you have any questions, please call the RDKS Environmental Services Coordinator at 250.615.6100 or visit our website at www.rdks.bc.ca/solidwasteplan.

Appendix 19 – July 18, 2019, Terrace Standard Article re: Waste Management



The RDKS had 875 responses to their survey that will help them figure out how to provide better direction for their new Solid Waste Management Plan. (Natalia Balcerzak/Terrace Standard)

RDKS moves towards modernizing waste management

Survey conducted to help improve disposal of trash

NATALIA BALCERZAK / Jul. 18, 2019 5:00 p.m. / LOCAL NEWS / NEWS

The Regional District of Kitimat-Stikine (RDKS) has received a high response to their solid waste survey this year to help improve the disposal of trash.

With 875 respondents across the region, the survey was conducted to hear feedback and understand how to provide better direction as they move towards developing a new Solid Waste Management Plan (SWMP) for the next decade.

Following a shift towards modernizing the waste management system, the RDKS in 2016 introduced the four-step process outlined by the BC Ministry of Environment to better reduce, reuse, recycle and dispose of waste. This survey also followed up on how residents and businesses were doing with the changes.

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Overall, there were 697 responses from the Terrace service area, and 178 responses from the Hazeltons and Highway 37 N service area.

“The biggest takeaway is I think that people want to do good. People inherently want their waste to be recycled and they want to reuse things as much as possible,” says RDKS environmental services coordinator Nicki Veikle.

“But a lot of people have a different understanding of the way that waste is managed and that sort of confusion sometimes leads to people to become frustrated... there’s been a steep learning curve.”

READ MORE: Terrace resident asks council to consider city-wide ban of single-use plastics

She says the current waste management system in place is similar to the larger centres in Vancouver and Victoria, and that residents here in comparison have adjusted very well to the changes with few “growing pains”.

“Within a year, our citizens were performing on par with what’s going on down south and although there’s always room for improvement everywhere for waste management, it’s pretty impressive that [our] results are similar to what’s happening in Vancouver,” says Veikle. “People here are actually doing really great... a big thumbs up from the Regional District to the community.”

Highlights of the survey revealed that the majority of respondents either composted at home or used the curbside collection to get rid of their compost. And when it comes to used items, citizens often seek alternative ways to keep them out of landfills such as donating them or using buy and sell markets online.

[Read more below](#)



Almost 50 per cent responded that they didn’t know they could or weren’t recycling smoke detectors and carbon monoxide alarms.

READ MORE: Local store in Terrace encourages other businesses to be more eco-friendly

She says there have been many changes in the global waste management system industry as it evolves, which not only affects residents but presents challenges to the RDKS as well.

Trying to update facilities and programs that meet provincial regulatory requirements and environmental standards can be difficult to keep up with, especially as they serve approximately 40,000 residents in 10 different locations — which all have different needs regarding geography and resources.

In the survey, many points were brought up by their respondents, including transfer station hours, improving ways to recover reusable items, illegal dumping and having less single-use disposable items.

Viekle says to extend operating transfer station and landfill facilities hours would be an added cost to taxpayers. For example, by keeping the Thornhill Transfer Station an extra hour per week would cost an additional \$35,000 for the year as that requires extra labour costs. Moving forward, the RDKS will be looking for alternative ways to make the facilities more accessible for users such as having alternating windows of time for drop-off.

“If they were to be open from nine to five, Monday to Friday, it’s not like it’s very busy so we just basically try to consolidate the hours and encourage people to use those hours... maybe not even extend them, but change them to work better for our citizens,” she says.

As for recycling, she says it’s important for people to be aware of cross-contamination when sorting out their waste. It’s important to rinse out any food from plastic containers as that can easily become a health hazard to the facilities and deem an entire bag of recycles as unusable.

“I’ve had a lot of people say, ‘Do you want me to wash my garbage now?’ Well, no, it’s not garbage, it’s actually a resource that can be turned into something new again,” Viekle says. “Contamination is an issue and that’s part of why China closed its borders to North American recycling because we don’t do a good enough job of managing that yet.”

READ MORE: Malaysia to send back plastic waste to foreign nations

The survey also showed that most respondents indicated they wanted to be provided with “better or more user education” and want a “one stop drop of recyclables”, along with lobbying for reduced plastic packaging.

[Read more below](#)

Although it will take some time to implement waste management changes that cater to both citizens and the province, Viekle says they are happy with the high number of responses as it now gives them a chance to move forward with a better strategy.

To view the full 2019 Solid Waste Survey Results and RDKS Response, the document can be found online or at the regional district office.

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*Appendix 20 – Memo 1: Efficiency for RDKS Solid Waste Programs and Facilities
(February 2019)*



Regional District of
Kitimat-Stikine

TO: The Public and Technical Advisory Committee (PTAC)

FROM: Administration

DATE: February 1, 2019

RE: **Draft Technical Memorandum #1: Efficiency**

ATTACHMENTS:

- ***Draft Technical Memorandum #1: Efficiency within RDKS Solid Waste Management Functions***

Recommendation (s):

That the Public and Technical Advisory Committee (PTAC):

- 1. Review format and content and provide feedback to Administration regarding the attached memo;**
- 2. Receive for information the *Draft Technical Memorandum #1: Efficiency within RDKS Solid Waste Management Functions.***

Background:

Administration has established a draft approach to addressing topics under the development of the Solid Waste Management Plan (SWMP; Plan). On January 15, 2019, PTAC reviewed and approved the proposed meeting schedule, which specified topics to be addressed at each meeting. At this time, Administration and Planning Consultants have identified 20 topics to be addressed within the Plan. Additional topics may be added based on the results of public and stakeholder consultation. These topics will be presented to PTAC as technical memos that define the scope and context, identify the stakeholders, analyze options and provide a recommended management approach. Technical memos will be used to inform and consult the public and stakeholders on SWMP topics.

The attached Efficiency memo is the first of approximately 20 technical memos that will be presented to PTAC during the SWMP development process. Note that this memo does not present options or provide a recommended management approach. As “Efficiency” applies to all solid waste services, programs and facilities and will be an overarching theme of the SWMP, initiatives developed under the Plan should all support efficient management approaches.

SOLID WASTE MANAGEMENT PLAN

Technical Memo 1: Efficiency within RDKS Solid Waste Management Functions

The Regional District of Kitimat-Stikine (RDKS) is developing a new Solid Waste Management Plan (SWMP) to provide direction for how to reduce, reuse, recycle and dispose of our waste for the next decade. The SWMP will be developed in consultation with stakeholders; a Public and Technical Advisory Committee (PTAC) will advise the Regional District Board on the development of plan targets and strategies. The primary focus of the SWMP will be to improve the operational efficiency of existing programs, services and facilities. Multiple topics have been identified for discussion and policy development. Each topic requires scope and context, problem formulation, research to close information gaps, consultation with stakeholders, evaluation of options and recommended implementation approach(es). This information will then be presented to the PTAC for recommendations on how the RDKS should proceed with each issue or topic.

This technical memo presents information to confirm efficiency objectives in the context of RDKS Solid Waste Management facilities and programs.

1. Scope and Context

A wide range of facilities were built under the previous SWMP, including engineered landfills with leachate collection and treatment, transfer stations, Industry, Commercial and Institutional (ICI) cardboard facility, and an in-vessel composting system. Programs and policies to support the facilities were also implemented, including extensive waste diversion programs and supporting education and outreach.

The RDKS has identified the following objectives to efficiently operate facilities and programs:

- Users are continually well-informed on servicing programs and expectations;
- Facilities and programs are reasonably convenient for most users;
- Facility contractors are well trained and familiar with the service standards and standard operating procedures (SOPs) to reduce RDKS staff supervision time;
- Expectations and requirements for RDKS staff are clear and well documented so staff utilize their time efficiently;
- RDKS staff have the training and skills needed to perform their duties competently;
- Contractor and administrative operations are streamlined, so workload and wait times for customers are minimal;
- Information needed to guide program and policy development is available when required (e.g. waste audits, inventory of waste management systems for large generators, solid waste tracking information, site visits to industrial, commercial and institutional (ICI) users, load audits, etc.);
- Clear policies and guidelines are established for routine occurrences to empower staff to address situations without requiring management or Board guidance;
- Clear policies and guidelines are established for situations, such as reduced servicing revenues and/or increased operational costs; and
- Servicing standards and plans for future programs are established and approved, so resources can be allocated accordingly.

Technical Memo 1: Efficiency within RDKS Solid Waste Management Functions

2. Problem Formulation

Multiple new facilities, programs and policies have been introduced in the Terrace Service Area and Hazelton and Highway 37 North Service Area over the past two years. Users of the service, RDKS staff, and contractors providing services, must continue to become accustomed to new operations and expected standards of service. The RDKS has identified that optimizing operations to get maximum benefit from the infrastructure and services is a priority. One way to do this is to ensure that all aspects of the operations are efficient (i.e. achieve performance standards without extra resources). This memo describes the current situation and the target operational objectives. Strategies to achieve efficiency goals will be developed under the Plan.

2.1. Service Delivery Method

The current service delivery method for the operation of facilities (Transfer Stations and Landfills) and some components of service (i.e., operation of Transfer Stations and Landfills, ICI cardboard facility, and curbside collection) within the RDKS is through contracted services. During the commissioning of new facilities and programs, contracting operations was the historically used and most easily implemented method of running facilities. Since the time of commissioning, RDKS has had sufficient time to evaluate operational considerations. The RDKS may review the service delivery method as contract terms with service providers expire. This review may include a cost-benefit analysis of operating facilities and programs, or certain components thereof, utilizing in-house RDKS resources.

2.2. Contractor Performance

Contractors operating RDKS facilities may, at times, be inconsistent with Standard Operating Procedures (SOPs), resulting in failure to meet the standards expected by the RDKS. Currently, RDKS staff are required to provide more supervision and interventions than initially anticipated, leading to increased cost and reduced capacity.

Servicing plans and ongoing training will better support contractors to comply with required SOP's, bylaws, and contract expectations. Contractors will be able to operate with reduced supervision, freeing up RDKS resources.

2.3. RDKS Staff

Staff roles within the RDKS have been evolving to meet the needs of the new systems. Several new staff have been hired, and responsibilities of existing staff have changed. As a result, senior staff have been required to spend more time providing direction on operational details.

Existing servicing plans should be regularly reviewed and updated. This will support RDKS staff in ensuring they have the appropriate knowledge needed to administer services and implement projects.

2.4. Operations

Staff and contractors may be unsure of certain procedures to operate solid waste facilities and services. This leads to potential confusion about responsibilities and timelines required for some interactions. The goal is to ensure responsibilities (individual, team and contractor) will be well understood.

SOLID WASTE MANAGEMENT PLAN

Technical Memo 1: Efficiency within RDKS Solid Waste Management Functions

As a method of clarifying roles and tasks, and to extend the life of solid waste infrastructure, the Regional District has recently developed a proactive Preventative Maintenance Program. A web-based Computerized Maintenance Management System (CCMS) program (HIPPO) is currently used track the preventative maintenance tasks for all RDKS facilities. This program includes required and anticipated maintenance tasks and will assist the RDKS in proactively and efficiently managing facility maintenance.

The new waste management facilities have been operational for approximately two years. Some users have expressed opinion on facility convenience (i.e., hours of operation). During consultation, the Regional District will solicit feedback regarding facility and program convenience. Any revisions to the service would be an outcome of the SWMP.

2.5. Information Availability

Historically, there has been limited data available about the kinds of materials diverted and disposed and the amount generated by each sector. This has impeded policy development on waste diversion and made it difficult to develop a more accurate cost recovery model.

Weigh scales at the Thornhill Transfer Station, Forceman Ridge Waste Management Facility and Do-Your-Part Recycling enable collection of accurate waste disposal and diversion data in the Terrace Service Area. Waste volumes now being tracked manually at the Hazelton and Meziadin Landfills will provide better data for the Hazelton and Highway 37 North Service Area. Moving forward, waste diversion programs will target high-volume materials and larger waste generators. In addition, accurate data collection will support the adjustment of fees, taxes and/or community contributions to balance the established cost recovery model.

Waste audits also support targeted education/awareness on specific materials.

2.6. Policies and Guidelines

Clear policies and guidelines help reduce delays in decision making and provide for consistent responses to stakeholder issues.

Policies and guidelines will continue to be established to cover most routine and foreseeable events, reducing the time for response. Since the policies/guidelines and resulting impacts will be part of the overall SWMP, the Board and other stakeholders will have opportunities for involvement during the SWMP development and approval process.

2.7. Service Standards and Plans

Clear servicing standards exist for numerous components of the RDKS solid waste programs (i.e., bylaws, organics and cardboard strategies, curbside guides, Recycle Coach and depot guides). However, the service standards may be limited in certain areas. This means questions may arise about how and when to adjust services in response to current conditions. The SWMP can confirm the triggers for specific service changes such as an increase in User Fees or the Tax Requisition.

Although there is more of an overall servicing plan for the Hazelton and Highway 37 North Service Area, the servicing plan does not address issues of the relationship between service level and cost. The SWMP will describe how to adjust services when costs rise (i.e., determining

SOLID WASTE MANAGEMENT PLAN

Technical Memo 1: Efficiency within RDKS Solid Waste Management Functions

a disposal alternative if the cost of recycling rises above a pre-determined threshold). The SWMP will include service plans that describe responses to anticipated scenarios.

2.8. Communication

Clear communication, both internal and external, is critical to the efficient management and operation of RDKS solid waste services and facilities. Regular communication within the RDKS organization, particularly the Solid Waste Management Team, is key to working collaboratively in the development of new projects, operation of existing facilities, management of contractors, and delivery of consistent messaging to stakeholders. Regular (i.e., weekly or biweekly) meetings of the Solid Waste Management Team promotes collaboration and information sharing among team members. Regular meetings (i.e., quarterly) of the Solid Waste, Works and Services, Planning, Finance and Economic Development departments will support the cohesive delivery of programs, common approach to stakeholder engagement, and synergies in messaging to stakeholders.

The RDKS will continue to update and maintain a central stakeholder registry so that each department can see which of their stakeholders are being contacted by other departments. An annual communication plan will be developed for the solid waste department, so information is shared with the right stakeholders at the right time (i.e. with enough lead time). This annual communication plan will be directly linked to the initiatives planned for implementation that year and may be coordinated or cross-referenced with other departments' initiatives. When implementing new services approved under the SWMP, RDKS staff will have a clear understanding of the project stakeholders, messaging and a communication timeline. For example, when recycling costs exceed a pre-determined threshold, thereby triggering the RDKS to compost, burn or landfill the material, citizens will be informed of the rationale for alternate disposal prior to change in service. The Board will have approved the service change in advance under the Plan.

3. Stakeholders

	RDKS	Contractors	Member municipalities	General public	ICI generators	Consultants
1. Contractor Performance						
2. RDKS Administration						
3. Operations		-				
4. Information Availability						
5. Policies and Guidelines						
6. Service Standards and Plans						
7. Communication						

Appendix 21 – Memo 2: Reduction and Reuse Options (April 2019)



Solid Waste Management Plan

DRAFT Technical Memo 2:

REDUCTION AND REUSE OPTIONS

APRIL 8, 2019

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REVISION TRACKING

Revision	Date	Revision by	Purpose	Changes made
Rev. 0	April 5, 2019	Authored by S. Wilmot and J. Coosemans; Reviewed by R. Tooms, M. Daly and N. Veikle	Initial authoring of document	
Rev. 1	To be completed following PTAC meeting on April 16, 2019	N. Veikle	Integrate feedback from PTAC prior to presenting to RDKS Board	

The Regional District of Kitimat-Stikine (RDKS) is developing a new Solid Waste Management Plan (SWMP; the Plan) to provide direction for how to reduce, reuse, recycle and dispose of our waste for the next decade. The SWMP will be developed in consultation with stakeholders; a Public and Technical Advisory Committee (PTAC) will advise the Regional District Board on the development of plan targets and strategies. The primary focus of the SWMP will be to improve the operational efficiency of existing programs, services and facilities. Multiple topics have been identified for discussion and development of management strategies within the Plan. Each topic requires scope and context, problem formulation, and identification and preliminary evaluation of options. This information will be presented to the PTAC to confirm initial content is sufficient to engage stakeholders. Stakeholder engagement will provide an opportunity for additional topics and options to be identified and evaluated. Feedback from stakeholders and PTAC will help the technical team prioritize topics and identify preferred option(s).

This technical memo presents information about options to reduce and reuse waste in the RDKS. Some of the topics and options include:

- Reduce
 - Lobby the province to amend regulations (i.e., the Recycling Regulation) to require manufactures to reduce the quantity of packaging used for their products;
 - Adopt and promote a “Greening Government” strategy;
 - Campaign to promote gifts of experience over material goods; and
 - Campaign to promote reduction of textile waste.
- Reuse
 - Support the establishment of a Re-Use-It store and/or Re-Build-It store by private or non-profit entities;
 - Support private or non-profit organizations in hosting reuse and/or repair café events;
 - Support the establishment of a Zero Waste party supply program; and
 - Develop and distribute a Contractor’s Guide to Reduction, Reuse and Recycling.

1. Scope and Context

Reducing waste generation is fundamental to decreasing the environmental, social, and financial impacts of waste. Waste reduction efforts will become more important as population, and subsequently, overall volumes of waste increase.

Waste reduction is economical compared to the cost of recycling, composting, and disposal. A study commissioned by the BC Ministry of Environment in 2012 estimated the cost of waste management borne by local governments would increase from \$377 million in 2010 to \$450 million in 2025, if waste generation did not decrease (Hood, 2013). In the RDKS, the cost per tonne to recycle and compost is higher than the cost of landfilling. This makes waste reduction, as opposed to recycling and composting, a favourable part of a financially sustainable long-term waste management strategy.

Reducing the production of waste requires changes in both industrial and personal practices. At the regional district level, the focus is on promoting, supporting, and enabling options that reduce the amount of waste local businesses and individuals generate.

Reusing materials that have inherent value and that are no longer needed by the current owner is another important part of reducing the quantity of materials entering the waste stream. Reusing materials, either for their original use or by repurposing, decreases reliance on raw materials and energy needed compared to both recycling and disposal.

Waste reduction and reuse initiatives tend to address small, incremental changes to people's attitudes and behaviours, which set the stage for long-term changes in our consumption practices. Reduced consumption will naturally result in reduced waste generation. However, it is extremely difficult to quantify the impacts of individual reduction and reuse initiatives on an annual basis; as such, no diversion estimates are provided for the initiatives outlined in this memo.

2. Problem Formulation

2.1. RDKS Role

Waste reduction and reuse can impact the amount of waste entering the municipal waste stream. Even with progress towards a circular economy, recycling, composting and residuals management are still necessary. Current RDKS operations focus on establishing and improving recycling, composting and disposal facilities. The RDKS allocates some resources to reduction and reuse efforts, primarily towards education and awareness. However, the RDKS anticipates that other stakeholders may lead the implementation of reuse initiatives, particularly in scenarios where profit may be generated.

The RDKS will provide support for private sector, non-profit organizations and municipalities that wish to provide waste reduction and reuse programming through education and outreach to citizens. The RDKS may also facilitate by creating an environment that enables external stakeholders to operate successfully. This may include passing bylaws or disposal bans to incentivize waste reduction and reuse, setting up a scenarios that provides stability at no net cost to the Regional District (similar to the arrangement for commercial cardboard recycling with Do Your Part Recycling), and/or continuing to support organizations by promoting their activities through existing RDKS outreach channels (e.g. farmers' market booth).

2.2. Information Gaps

The Regional District Solid Waste team anticipates that the following outstanding information will be required to inform decisions regarding reduction and reuse initiatives:

- a. Identify community groups, municipalities or private sector entities that may be interested in hosting, supporting or involvement in reuse initiatives;
- b. Determine the level of local government (i.e., RDKS or municipal) effort and cost associated with supporting reuse facilities or events hosted by other organizations;
- c. Identify potential local industry support to assist with establishing reuse facilities or events;
- d. Evaluate whether a contractors' guide may be an effective method of education regarding waste reduction and reuse on construction sites.

3. Stakeholders

The following organizations and categories of individuals will be impacted by the identified reduction and reuse initiatives:

- RDKS
- Member municipalities
- Residents
- Waste haulers and recycling facilities
- Private or non-profit organizations with an interest in waste reduction and reuse

4. Reduction Options

4.1. Lobby for Reduced Packaging

The provincial Recycling Regulation is the enabling legislation for BC's Extended Producer Responsibility (EPR) programs. The focus of the regulation requires producers to be responsible for their products over their entire lifecycle; in practice this means that producers pay to set up and operate recycling systems. However, legislation should place more emphasis on reducing the amount of waste generated.

Plastics, particularly single use plastics used in packaging, can be harmful to the environment throughout their entire lifecycle, from production to disposal. A 2015 waste composition study in the United States showed that only 9.1 % of the 34.5 million tons of plastic waste generated were recycled; the remainder was landfilled or combusted (US Environmental Protection Agency, 2018). The G7 Ocean Plastics Charter, signed by the leaders of Canada, France, Germany, Italy, the United Kingdom, and the European Union, has committed to "significantly reducing the unnecessary use of single-use plastics" and "using green public procurement to reduce waste" (G7 2018, Charlevoix, 2018). The Canadian Council of Ministers of the Environment released a Strategy on Zero Plastic Waste that identifies ten areas for results, including product design (Canadian Council of Ministers of the Environment, 2018).

The RDKS can support reduction efforts by lobbying the provincial government to require manufactures to rethink the type and quantity of packaging they use for their products. Methods of lobbying for packing reduction may include putting forward resolution(s) to the North Coast Local Government Association (NCLGA) and Union of BC Municipalities (UBCM) for presentation to the provincial government, and discussion with the Product Stewardship Council.

4.2. Adopt and Promote a "Greening Government" Strategy

The Canadian Government has committed to action toward reducing plastics in its operations through the "Greening Government Strategy." Through this strategy, federal government is committed to "divert at least 75% of plastic waste by 2030 from federal operations; eliminate the unnecessary use of single-use plastics in government operations, events and meetings; and when procuring products that contain plastics, promote the procurement of sustainable plastic products and the reduction of associated plastic packaging waste" (Government of Canada, 2019).

The RDKS may also commit to a “Greening Strategy,” similar to federal government operations, and encourage its member municipalities and industries/institutions within the RDKS to adopt similar strategies.



Figure 1. Sample Low Waste Holiday Campaign Collateral from Metro Vancouver

4.3. Low Waste Holiday Campaign

Metro Vancouver provides their “[Create Memories, Not Garbage](#)” campaign to other local governments at no cost. The campaign includes low-waste gift ideas, gift wrapping and decorating suggestions, and food waste reduction tips (Metro Vancouver, 2017). Campaign materials include posters, online materials and print ads (see Figure 2 as an example). This campaign could be promoted by the RDKS, by member municipalities, or by non-profit groups.



Figure 2. Metro Vancouver Textile Waste Reduction Collateral

4.4. Textile Waste Reduction Campaign

Metro Vancouver recently launched a campaign focused on reducing textile waste. The campaign is hosted on the website “[Clothes Aren’t Garbage](#)” (Metro Vancouver, 2019), and Metro Vancouver has committed to making campaign materials (see Figure 3 for an example) available to other local governments at no cost. The campaign includes materials promoting the reduction, reuse, and repair of items. This campaign could also be promoted within the RDKS, by member municipalities, or by non-profit groups.

4.5. Zero Waste Party Supplies

The City of Palo Alto has established a [Zero Waste party supply program](#) that makes available bins and reusable cups, dishware, utensils, and cutlery that residents are able to borrow (City of Palo Alto, 2019). The supplies are distributed through the City’s network of Zero Waste Block Leaders.

5. Reuse Options

A recent Solid Waste Survey run by the RDKS received over 800 responses. 48.6% of the 144 respondents in the Hazelton and Highway 37 North Service Area and 663 Terrace Service Area said that they would like to see more reuse opportunities in their communities.

5.1. Support Re-Use Store(s)

The RDKS does not intend to establish a Re-use store or Share Shed areas within their solid waste facilities at this time due to increased operational expenses. However, recognizing that almost 50% of citizens wish to see more reuse options in their communities, the RDKS will support and facilitate the private sector or non-profit entities in launching and operating reuse facilities. The following are examples of other local governments that have supported other organizations in successfully operating reuse facilities.

- The Resort Municipality of Whistler provides space to Whistler Community Services Society to operate two non-profit retail stores. The Whistler Re-Use-It Centre accepts and sells household goods such as clothes, footwear, accessories, bedding, kitchenware, DVDs, etc. The Whistler Re-Build-It Centre accepts and sells donations of construction and demolition related discards from contractors, including tools, hardware, windows, doors, rugs, light fixtures, toilets, cabinets, flooring, functioning appliances and some furniture. Whistler Community Services society will also be establishing a tool library soon. Whistler Community Services Society uses revenue from the two centres to operate a food bank, outreach workers, drug and alcohol education program, counselling assistance, community kitchens, and other outreach services. The opening of the Re-Build-It Centre was also made possible by \$50,000 in donations from the private sector (Whistler Community Services Society, 2017).
- The Foothills Salvage & Recycling Society (FSRS) is a not-for-profit society that operates a reuse. The facility is located adjacent to the Foothills regional landfill in Okotoks, Alberta. Donations are received at the facility and range from smaller household items such as clothing, books and kitchenware to furniture, building supplies, outdoor equipment and sporting goods. In 2018 the facility generated \$700,000 of revenue and donated \$180,000 to community organizations. The organization has twelve employees and many volunteers. To manage the flow of materials and prevent excess accumulation, the society has implemented guidelines on how to handle donations that do not sell. For example, after 3 months on display, electronics are recycled by a licensed operator. Stained, unusable clothes and clothing that has been on display for more than 3 months are donated to Diabetes Canada. Waste Management takes cardboard, paper and books that don't sell. The Foothills allows the society to dispose of donations that are not sellable at no cost and receives scrap metal to help offset its costs. At the landfill items that are suitable for salvage are stockpiled in a container at the public disposal area and taken to the salvage centre as needed (Foothills Salvage and Recycling Society, 2013).

The RDKS could support the development of reuse facilities by helping to identify suitable sites, connecting volunteers with potential donors, helping volunteers navigate bylaws and other regulations, and promoting the facilities through its communication channels. The RDKS can also do some preliminary work on investigating potential markets for reused items and create an environment conducive to reusing building supplies by incentivizing or requiring deconstruction (see Technical Memo 6 on the topic of deconstruction for more details).

5.2. Support Reuse and/or Repair Events

An alternative to a permanent, physical facility is to host reuse events. There are several different models for events that have been successful elsewhere in British Columbia. Some examples are described below.

- The “Junk in the Trunk” sale in Prince George is held twice per year. It is organized by a local environmental group and sponsored by the Regional District of Fraser-Fort George (RDFFG). People wanting to sell their old goods pay \$10 for a spot to park their car in a designated location and sell goods from the trunk of their car. Vendors set their own prices. Anything not sold may be donated or taken home again. The RDFFG helps to publicize the event. There are minimal costs since there is no construction and no staffing required. The participation fee helps to cover site clean up and moving donated items to thrift stores and/or disposal (Regional District of Fraser-Fort George, 2016).
- At Squamish’s Re-Use It Fair, everything is free. Residents can drop off small appliances in good working order or in need of minor repair, large appliances in good working order, gently used toys, books, clothing, baby supplies, DVD, CDs, furniture, household items, garden tools, and sports equipment in reasonable condition. Leftover goods are recycled or landfilled. In 2013, the fair diverted an estimated 90 tonnes of material (Squamish Climate Action Network, 2019). This event is organized and funded by the Squamish Lillooet Regional District.
- The City of Nanaimo’s annual Reuse Rendezvous allows residents to put reusable goods out on the curb for others to pick up for free on one weekend each spring. Anything that is available to be taken must be labeled with a distinct tag. Tags are provided by the City of Nanaimo. Leftover items must be taken back in by the resident. The cost of this program to the City is limited to promotion and the printing of tags (City of Nanaimo, 2016).
- The Town of Okotoks in southern Alberta hosts quarterly “repair café” events. The repair cafés allow community members to bring broken things from home to be repaired by volunteers, for free. The Okotoks events target small appliances, textiles (housewares and clothing), small pieces of furniture, toys and electronics. Volunteer Fixing Coaches assess each item and fix it if the item is repairable. Visitors may choose to learn to fix this item with the Fixing Coach, or stand by and watch as their item is repaired. Okotoks has established “house rules” that limit the liability of the volunteer fixers and make visitors responsible for taking home items that they bring, whether or not they were repaired (Okotoks, 2019).

These types of events could be hosted in any community within the RDKS. The Regional District could facilitate the organization of these events by assisting in or providing event locations, connecting volunteers with potential donors, helping volunteers navigate bylaws and other regulations, promoting the event on media channels, and providing education and outreach in support of the event.

5.3. Develop a Contractor’s Guide to Reduction, Reuse and Recycling

The RDKS has a [brochure](#) that provides information on Construction Site Waste Management (Regional District of Kitimat-Stikine, 2017). The brochure focuses on recycling by listing which materials are prohibited and restricted from disposal at RDKS facilities, and alternatives to disposal for those materials. The brochure does not address waste reduction and reuse topics. The brochure may be updated to include reduction and reuse. Another brochure could be developed that seeks to educate [customers or project managers involved in construction](#). That

brochure would focus on how customers can follow up with their contractors to make sure waste management best practices are being followed on the job site. Other sources of information include [Construction Canada](#) and a guide developed by the [Columbia Shuswap Regional District](#).

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Appendix 22 – Memo 3: Reduce Single Use Items (April 2019)



Solid Waste Management Plan

DRAFT Technical Memo 3:

REDUCE SINGLE USE ITEMS

APRIL 4, 2019

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Rev. 0	April 5, 2019	Authored by S. Wilmot and J. Coosemans; Reviewed by R. Tooms, M. Daly and N. Veikle	Initial authoring of document	
Rev. 1	To be completed following PTAC meeting on April 16, 2019	N. Veikle	Integrate feedback from PTAC prior to presenting to RDKS Board	

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This technical memo presents information about ways to reduce the distribution of single use items.

1. Scope and Context

Common single use items (SUI) include plastic and paper bags, cups and containers made from expanded polystyrene foam, polycoat and plastic cups, take out containers, utensils and straws.

Many SUI are made from virgin plastic. An estimated 8300 million metric tonnes of virgin plastics have been produced to date. Based on an analysis of plastics generation since 1950 to date, the compound annual growth rate for plastics production is 8.4% (Geyer, Jambeck, & Law, 2017). Of the 34.5 million tons of plastic waste generated in the United States in 2015, only 9% was recycled; 12% was incinerated and 79% was landfilled (US Environmental Protection Agency, 2018) or accumulated in the natural environment.

Plastic waste is a leading source of environmental pollution. A recent study by Environment Canada states that “each year, globally, about 8 million tonnes of plastic waste enter the oceans” and that “plastic waste and marine litter, including microplastics (particles of plastics that are smaller than 5 mm), pose a serious threat to the health of our oceans, waterways and well-being.” This study, entitled “*Moving Canada toward zero plastic waste: what we heard from you*,” found that “Canadians are aware that plastic pollution, waste and heavy consumption of single-use items is an issue that needs to be addressed promptly in Canada and around the world” (Environment Canada, 2018).

Non-plastic SUIs also have environmental consequences that could be mitigated by a reduction in use. Although paper and cardboard products do not persist in the environment, their production consumes non-renewable resources and is energy intensive. The production of disposable paper cups has been found to required about 2.5 times its finished weight of raw wood and require six times more steam, 13 times more power, and twice as much cooling water to produce than a polystyrene foam cup (Hocking, 1991).

Based on our current level of understanding, rationale for banning the distribution of SUI includes:

- Plastic items pollute land and water. Plastic never breaks down, and is harmful to wildlife, including marine life;
- Plastics are made from non-renewable resources and contribute to climate change;
- Compostable plastics are difficult to compost fully, and it is difficult to distinguish between compostable and non-compostable plastics;
- The cost of manufacturing and distributing SUIs is incorporated into the cost of purchased goods. The cost of clean up is much higher and is covered by taxpayers;
- Most SUI are difficult to recycle or cannot be recycled. They are a common form of contamination in other recycling streams and can get caught on recycling equipment.
- SUI are expensive to manage; they make up a large proportion of litter.

Rationale in opposition of banning the distribution of SUI includes:

- SUI are convenient and inexpensive;
- Plastic bags can be reused for other purposes, such as containing household garbage or retrieving pet waste (City of Victoria, 2018);
- Recycled plastic bags have value as feedstock for manufactured lumber that can be made into fencing, decks, playground equipment, etc. (Plastics Make it Possible, 2018);
- If plastic packaging were directly replaced by alternatives with no reduction in packaging volume, we would increase the amount of packaging used by nearly 110 billion pounds per year (Plastics Make it Possible, 2018);
- Health codes and lack of dishwashers in quick-serve and take out restaurants may make switching to reusable items for some establishments difficult.

The following sections describe various types of SUI.

1.1.1. Plastic and Paper Bags

The SUI with the highest level of public awareness are plastic bags. The City of Vancouver estimates that two million plastic shopping bags are disposed by its residents each week. While a portion of those plastic bags are reused as garbage bags, plastic bags are a cause of litter in streets, parks, and public spaces, and also make their way to rivers and oceans, causing harm to aquatic animals (City of Vancouver, 2018).

Life cycle assessments of paper bags indicate that the manufacturing process for a paper bag consumes four times more water, emits 3.3 times more greenhouse gases, and causes 1.9 times more acid rain than the production of its plastic counterpart. Additionally, paper bags are six to 10 times heavier than plastic bags, which leads to higher transportation-related emissions and greater landfill space (if not recycled or composted) (AEA Technology Environment, 2005).

1.1.2. Styrofoam

Expanded polystyrene foam (EPS; trademarked Styrofoam) is another form of plastic that degrades over time into microplastics in the environment. Cups and take-out containers contribute to litter and marine pollution. EPS products are only recyclable if they are not contaminated with leftover food or mixed with other materials like paper, plastics, glass, or grit.

Currently, foam cups and containers used by residents of the RDKS can be dropped off at Recycle BC depots; however, this take-back approach is less convenient than the curbside recycling service offered for other recyclables.

A study conducted in California indicated that only 0.8% of the 377,580 tons of polystyrene waste produced in the state was recycled (California Integrated Waste Management Board , 2004). Although this statistic is not within Canadian jurisdiction, it may be inferred that the recovery rate of Styrofoam products versus the amount distributed is likely to be low, particularly in the RDKS, where residents must return these materials to a depot.

1.1.3. Disposable Cups

Disposable cups include polycoat paper cups (such as coffee cups) and plastic cups. Nearly 50% of garbage collected from public waste bins in Vancouver is disposable cups and take-out containers ,22% of litter on Vancouver streets is made up of disposable cups, lids, and sleeves (City of Vancouver, 2018).

Although Recycle BC accepts polycoat paper cups in its household and apartment recycling programs, large portions of the RDKS are not covered by Recycle BC programs (Recycle BC, 2019). Polycoat paper cups can also be disposed through the RDKS organic waste processing stream in the Greater Terrace service area. The GORE compost facility at Forceman Ridge Landfill is capable of composting polycoat paper.

1.1.4. Takeout Containers

Quick-serve and take-out restaurants including street vendors, generally serve meals in disposable containers. Many of these restaurants do not have space for commercial dishwashers or storage for dishes and their business model is built on take away food in disposable containers. Canadian Health codes currently prevent restaurants from filling take-out orders in containers brought in by customers unless they have a documented procedure, approved by their local Health Authority (City of Vancouver, 2018). As a result, reduction and reuse alternatives for take-out containers are not well developed.

1.1.5. Utensils and Straws

Plastic straws and utensils have negative impacts on marine life and the environment. They can be difficult to recycle because they fall through screens on recycling sorting lines that are designed to remove contaminants. These items are not covered under the Recycle BC stream, as they are not packaging. Plastic straws and utensils also have a potential to contaminate compost, as they are often comingled with organic waste.

1.1.6. Compostable Items

Compostable items are often confused with conventional materials when discarded, contaminating both streams and making them impossible to process, with the contaminated materials ultimately being landfilled. It is often difficult to differentiate between plastic and compostable straws and utensils; therefore, these items may be screened out of composting processes and sent for disposal prior to composting or between the composting and curing stages. Additionally, compost facilities have difficulty processing compostable plastic straws and utensils due to their lengthy decomposition time.

2. Approaches to Reducing Single Use Items in Other Jurisdictions

2.1. City of Victoria

Recently, the City of Victoria became the first city in British Columbia to ban the distribution of plastic bags. The ban applies to “single use plastic checkout bags.” When the bylaw was proposed, some Victoria residents opposed the idea, stating that they use the bags as kitchen waste catchers or for pet waste.

In Victoria, businesses are permitted to sell paper or reusable bags to customers, but only if a customer requests a bag (businesses may not offer). There is a minimum charge of \$0.25 for paper bags and \$2 for reusable bags.

The bylaw in Victoria allows small paper bags or plastic bags to be distributed at no cost for the following purposes:

- Packaging loose bulk items such as fruit, vegetables, nuts, grains or candy;
- Packaging small hardware such as nuts and bolts;
- Containing or wrapping frozen foods, meat, poultry and fish (whether pre-packaged or not);
- Wrapping flowers, potted plants;
- Protecting prepared foods or bakery goods that are not pre-packaged;
- Containing prescription drugs;
- Transporting live fish;
- Protecting bed linens, bedding or any large item that can't easily fit in a reusable bag;
- Protecting newspapers or other printed material left at a residence or business; and
- Protecting clothing after it has been professionally laundered.

The ban also does not apply to plastic bags purchased for a specific use, such as garbage bags.

The bylaw was passed after several years of consideration and research. It came into effect six months after it was passed, to facilitate a period of education and awareness. The city budgeted \$30,000 for education. Enforcement started six months after the bylaw came into effect (i.e. one year after the bylaw was passed) (City of Victoria, 2018).

The Canadian Plastic Bag Association challenged Victoria's bylaw at the BC Supreme Court on the basis that the City had no power to enact the ban as it was an environmental regulation that required provincial approval (Young Anderson Barristers and Solicitors, 2018). The court ruled in favour of the City of Victoria acknowledging the city's authority to regulate businesses within their jurisdiction.

2.2. Capital Regional District

The City of Victoria is a member of the Capital Regional District (CRD). The CRD has been evaluating options to reduce single use plastic bags since at least 2004. Since then, the CRD has evaluated adding plastic bags to the curbside recycling program, lobbying the provincial and federal governments to take action, promoting voluntary adoption of alternatives, and banning the disposal of plastic bags. The CRD lobbied senior governments and ran campaigns urging

residents to “choose to refuse” plastic bags. Banning the disposal of plastic bags was deemed to be too difficult to enforce.

Following the City of Victoria’s bylaw banning plastic bags, the CRD drafted a model bylaw that may be adopted by other member municipalities. The model bylaw differs from the City of Victoria bylaw in that it allows alternatives to single-use plastic bags, such as reusable containers and bags, to be provided free of charge to customers. The model bylaw includes similar exemptions, although exemptions for transporting live fish and protecting bed linens, bedding or any large item that cannot easily fit in a reusable bag are not included in the model bylaw. The model bylaw does not state a dollar value for tickets that could be issued for contravention of the bylaw (Capital Regional District, 2004).

2.3. City of Vancouver

The City of Vancouver is in the midst of implementing bylaws that cover a broader range of SUI. The process has involved extensive research and consultation over the past three years. The first set of bans is scheduled to come into effect on June 1, 2019. Consultation is ongoing, and the bylaws still require final approval from City Council (City of Vancouver, 2018).

Vancouver is taking a different approach to reducing each single use item, as summarized in Table 1.

Table 1. City of Vancouver Approaches to Regulating Single Use Items

Material Type	Planned Approach	Implementation Timeframe
Plastic and paper bags	<p>Require business license holders to have reduction plans for plastic and paper shopping bags, and report to the number of bags they distribute. Reduction plans can include eliminating distribution entirely, making bags available for a fee, or other custom reduction plan.</p> <p>A full distribution ban on single-use plastic bags may be implemented if annual reduction targets are not consistently met by 2021.</p> <p>Compostable packaging must be approved compostable and paper-based packaging must contain a minimum 40% post-consumer content.</p>	2019-2020
Polystyrene cups & containers	Bylaw will prohibit business license holders from serving prepared food in polystyrene foam cups and take-out containers, beginning June 1, 2019.	Jun 1, 2019
Other disposable cups (plastic and polycoat)	The planned approach is the same as plastic and paper bags. In addition, businesses will be	2019-2020

	required in-store collection of recyclable and compostable cups. Office buildings are required to provide recycling or compost collection programs for disposable cups (2021-2025).	
Other takeout containers	<p>Develop bylaw amendments to require compostable packaging to be approved compostable and paper-based packaging to contain a minimum 40% post-consumer content. Later evaluate need for those requirements and require in-store collection of recyclable and compostable containers and require office buildings to provide recycling or compost collection programs for disposable containers (from 2021-2025).</p> <p>Support the development of sharing/exchange programs for reusable items such as a city-wide reusable take-out container exchange program.</p>	2019-2025
Utensils (cutlery, chopsticks, stir sticks etc.)	Bylaw will prohibit business license holders from providing single-use utensils unless requested by customers.	2019-2020
Plastic straws	Bylaw prohibits business license holders from distributing single-use plastic straws beginning June 1, 2019; exemptions will be granted for health care and accessibility needs.	Jun 1, 2019
All material types	Extensive education, outreach and behaviour change programs will support the initiatives. These will include social media campaigns to educate the public and businesses, language-appropriate educational resources about substitute materials, and display material for businesses to help education customers.	Ongoing

2.4. Provincial Efforts

In 2018, the Union of British Columbia Municipalities passed a resolution calling for the Province to work with local governments and retailers to introduce uniform, province-wide business regulations to substantially reduce the volume of disposable plastic packaging in local solid waste streams.

The Ministry of Environment and Climate Change Strategy responded in 2019 as follows (Ministry of Municipal Affairs and Housing, 2019):

“The Ministry greatly appreciates local government interest in addressing, through regulation, disposable plastic packaging.

Disposable packaging is currently regulated through Extended Producer Responsibility (EPR) programs. B.C. is proud to be a leader in North America with more EPR programs with higher capture rates than any other North American jurisdiction.

The Ministry has been focused on pursuing continuous improvement with our 22 existing EPR programs and will consider expanding B.C.’s EPR programs as part of our commitment to the Canadian Council of Ministers of Environment Canada-Wide Action Plan for Extended Producer Responsibility.

The Ministry will continue to engage with local government as ministry staff work towards further strengthening current policies and programs. The Ministry commends the actions taken by local governments to develop single-use item strategies and other related initiatives to reduce plastic in the environment.”

The latest draft stewardship plan from Recycle BC includes many SUIs as forms of packaging that would be covered by their Extended Producer Responsibility (EPR) program (RecycleBC, 2018). However, not all of the Regional District has easy access to Recycle BC’s program, and Recycle BC’s focus is on capturing and recycling materials, rather than reducing their use.

2.5. Federal Status of SUIs

The Federal Government released a [Greening Government Strategy](#) in 2019 that included waste management elements (Government of Canada, 2019). The strategy includes steps to better manage the use and disposal of plastics in its operations. The government’s steps to reduce plastic waste include new commitments to:

- Set explicit targets for diverting plastic waste;
- Eliminate the unnecessary use of single-use plastics in government operations;
- Leverage procurement practices to focus on sustainable plastic products.

Specifically, the Government of Canada has committed to:

1. Divert at least 75% of plastic waste by 2030 from federal operations

This target will support the Ocean Plastics Charter commitments to increase the efficient use of resources while strengthening waste diversion systems and infrastructure to collect and process plastic materials (G7 Summit 2018, Charlevoix, 2018).

2. Eliminate the unnecessary use of single-use plastics in government operations, events and meetings.

Single-use plastic items, such as disposable straws, utensils, beverage bottles, disposable hot and cold drink cups, and plastic bags, are a visible component of the plastic waste stream and constitute a significant portion of the plastic litter in terrestrial and marine environments and can be difficult to collect and recycle. While single-use plastics may sometimes be necessary for accessibility, health, safety or security reasons, in many situations they can be avoided entirely or replaced by more reusable, compostable or recyclable alternatives. Alternatives that serve the accessibility and health needs of public servants, such as disposable bendable straws, will still be provided when needed.

3. Procure sustainable plastics products and reduce plastic packaging waste

Public procurement can be used to support markets for more sustainable plastics products, such as those that can be reused or repaired, are remanufactured or refurbished, are made with recycled plastic content, or can be readily recycled or composted at their end of life.

2.6. Local Context

In 2018, 1,952 tonnes of curbside garbage were collected from residents in the Greater Terrace service area, 733 tonnes of garbage were dropped off at the Thornhill Transfer Station, and 4,181 tonnes of garbage from the institutional, commercial and industrial (ICI) sector were brought to the Transfer Station. A waste composition study conducted in 2017 did not specifically identify SUI but did determine the quantity of several categories of plastics in the waste. Some of those categories could contain SUI, such as recyclable rigid plastic packaging (#1 -7), Styrofoam (#6 PS foam), other film and packaging, other rigid plastics and products and compostable plastics. The proportion and quantity of plastic waste (shown as the percentage waste deposited at the Thornhill Transfer Station) is shown in Table 2

Table 2. Proportion and Volume of Select Plastic Wastes in the Waste Stream, Greater Terrace Area, 2017

Quantity (by proportion of total waste and volume) of Plastic Waste in the Terrace Area	Proportion (%)	Tonnes
Blue box recyclable rigid plastic packaging (#1 -7) plant pots and other	2.4%	167
Styrofoam (#6 PS foam)	1.7%	118
Other film and packaging	5.7%	392
Other rigid plastics and products	3.3%	282
Compostable plastics	<0.1%	392
Subtotal potential SUI waste	13.1%	1,350

From this study we can extrapolate that, of the 8,196 tonnes of waste landfilled, approximately 1,350 tonnes of plastic waste, or 13% of the total waste stream, could have been avoided or directed to recycling facilities.

Plastic SUI that are included in the Recycle BC program are sent to Merlin Plastics in Delta, BC. Plastics are separated, ground, washed, and melted into plastic pellets to be re-sold to manufacturers of new packaging. The majority of SUIs made of paper/fibre materials that are not contaminated with food are sold to markets in Asia; the remaining stays in BC (RecycleBC, 2017). Paper SUI that are contaminated with food waste are not accepted by Recycle BC and may be either composted or landfilled.

Currently, Recycle BC depots in the RDKS accept plastic shopping bags, bulk goods/produce bags, bags for baked goods, paper bags, plastic overwrap and similar soft plastics, Styrofoam and cardboard take-out containers (free of food), cups, plates (clean Styrofoam and cardboard only) (RecycleBC, 2017). Single-Use Items that are not taken at Recycle BC depots include plastic cutlery and plastic straws.

A local advocacy group in Terrace, “Plastic Free Terrace,” has gained support and media attention for the banning of SUIs in the Terrace Area. This group currently has a petition distributed within the community, and has gained support of several local businesses, including two large grocers (Terrace Standard, 2019).

3. Problem Formulation

Should the RDKS take steps to reduce the distribution of single use items? If so, which approach is most appropriate in the RDKS?

As regional districts do not have authority to regulate businesses under the Local Government Act, the RDKS does not have the authority to create bylaws regulating the distribution of single-use items by retailers. The RDKS cannot directly implement bylaws that follow the approach taken by some municipalities in BC. However, as the governing body responsible for regional waste management, municipalities may defer this issue to the RDKS for development of a broader, regional approach.

Currently the RDKS has identified six primary options for management of SUIs, as follows:

1. Draft a model bylaw(s) that municipalities can adopt to eliminate the distribution of SUIs;
2. Ban materials identified as SUIs from disposal in landfills owned by the RDKS;
3. Increase education efforts to encourage voluntary reduction of the use of SUI;
4. Work with local businesses to pilot exchange/reuse programs for dishware, containers or cups; and
5. Lobby the provincial and federal government to enact regulations regarding the distribution of SUI

These options in the RDKS will be explored in more detail in Section 4.

4. Stakeholders

The following organizations and categories of individuals will be impacted by measures taken to reduce the distribution of SUI:

- RDKS
- Businesses
- Customers
- Recycle BC
- Local Governments (municipalities and First Nations)

5. Options Analysis

There are numerous initiatives and projects under review within the new SWMP. The RDKS recognizes that implementation of new initiatives under the SWMP must take into consideration multiple factors. Prioritizing new waste management initiatives must consider:

- The needs of the community;
- Servicing requirements, including provincial regulations, bylaws and contracts;
- Cost and financial implications, such as increases in taxation; and
- Organizational impacts, including capacity and resource limitations.

5.1. Develops Model Bylaw for Member Municipalities

Since the RDKS does not currently have authority to directly regulate distribution of SUI, it can support member municipalities by drafting a model bylaw. Using a model bylaw across the Regional District would help to ensure equitable implementation of the changes. Furthermore, the RDKS may consider implementing a bylaw if, in the future, if the organization regulates business licences. Regional districts may hold business licences if enacted under bylaw. The RDKS would have to pass a bylaw enabling business licensing.

The CRD has taken this approach, and the model bylaw was first presented to the Environmental Services Committee in 2017. The District of Saanich is known to have adapted the bylaw for use and is preparing for adoption (Chek News, 2019). Other member municipalities of the CRD have not begun the adoption process at this time.

In contrast, Metro Vancouver has chosen not to prepare a model bylaw for its municipalities, as past model bylaws were not well received. Metro Vancouver staff noted that, in the past, its member municipalities required substantial legal work to be done to adapt model bylaws for adoption. They believe that their resources can be spent more effectively on behaviour change programs.

If the RDKS decides to pursue the development of a model bylaw, the decision must be made about the scope of the bylaw. Would it address only plastic bags, like the CRD bylaw, or would it be more comprehensive, like the bylaws being drafted by the City of Vancouver?

5.2. Ban Disposal of SUI

The RDKS has the authority to ban or restrict certain items from disposal at its landfills. This authority could be used to regulate the disposal of SUI. This approach has not been taken with SUI at any facilities in British Columbia. There are several reasons why this approach is not considered optimal:

- Most SUI would be hidden from inspectors' view by being inside garbage bags, making the ban difficult to enforce;
- The threshold for banned or restricted items in the waste stream is often higher than the baseline quantity of SUI in the waste stream (e.g. if enforcement starts at 15% and SUI make up an estimated 13% now, then the ban would have no impact); and
- There is no alternative market for many SUI. Restricting disposal without alternatives would lead to mismanagement and potentially increased illegal dumping.

Although this option is aligned with the RDKS's authority, it is not recommended for further consideration because of the difficulty in implementation and lack of alternative disposal streams for SUI.

5.3. Focus on Education/Outreach/Behaviour Change

The RDKS may focus its efforts on implementing a behaviour change campaign to help consumers choose alternatives to SUI. Behaviour change campaigns could follow community-based social marketing techniques, which are proven to be effective at increasing environmentally-friendly behaviour. Outreach campaigns should also include businesses and other distributors of SUI, to encourage them to change their distribution practices. Many large retailers already voluntarily charge for plastic bags; this practice could be extended to smaller retailers and other types of SUI.

Many sample campaigns exist that the RDKS could use as a foundation for their work. For example, a resource guide was recently released by Recycle BC to help retailers encourage customers to bring their own bags. The City of Victoria developed a "retail toolkit" to help businesses understand the new bylaw (City of Victoria, 2018b); portions of this toolkit could be adapted to encourage voluntary implementation of fees for various SUI. Victoria also held a contest for videos that encourage people to bring their own bags (City of Victoria, 2018c). The contest received 24 entries and over 650 votes were cast. A similar contest approach could be used to develop materials related to changing habits around using SUI in the RDKS.

The CRD has also noted that they have been approached by Recycle BC regarding the implementation of a single use plastic bag reduction campaign within the region. If successful, this type of campaign could be replicated throughout the province. The RDKS should follow up with Recycle BC and the CRD to determine what resources are available.

The RDKS would need to decide if the campaign would focus on plastic bags or all SUI. The recommended approach would be to focus on plastic SUIs. Also, the RDKS may evaluate the diversion achieved versus the energy expended on solely implementing an awareness/behaviour change campaign. If implemented concurrently with a ban, a behaviour

change campaign may result in higher diversion while requiring similar expenditure of energy and resources.

5.4. Support pilot projects for exchange of dishware, containers or cups

The City of Vancouver plans to issue a Request for Expressions of Interest for a “Made in Vancouver” single-use item solutions such as a city mug program and reusable straws (City of Vancouver, 2018). Similarly, Metro Vancouver has indicated that it will also find ways to support organizations that set up exchange programs for alternatives to SUI (Metro Vancouver, 2018).

Alternatives to SUI could include travel mugs and reusable take-out containers. Tiffins are stackable stainless-steel containers that are used throughout India. They have achieved a relatively strong following in the Lower Mainland of BC. One business offers a tiffin for \$12 (including the first meal) and charges \$6 for subsequent meals that are served in the same container, which the customer is responsible for cleaning between uses. Another example is the Tiffin Project (Vancouver Foodster, 2012), which was started by a network of restaurants serving a wide variety of food. Tiffins were sold through participating restaurants, many of whom offered a discount on refills. The Tiffin Project operated for about 3 years; the Vancouver Coastal Health Authority refused to take a stance on the safety of consumer-washed containers, and some of the participating restaurants feared that without explicit approval from the health authority, there was increased risk of liability, if a container caused the spread of disease (The Tiffin Project, 2018).

In the RDKS, the relatively small size and high density of the commercial parts of the main communities means that a program to exchange containers or cups could be more feasible than in larger communities. Individual businesses could set up their own exchange system (which would also function as form of loyalty program) or could partner with similar businesses to create a network. It will be important to liaise closely with the local health authority to address health concerns.

The role of the RDKS would be to present the idea to local businesses and facilitate connections between businesses who might be interested in forming a network. The RDKS would not be responsible for acquiring the alternatives to SUI or providing any financial inputs. The RDKS could promote the program through its SUI strategy.

5.5. Lobby Senior Governments

The RDKS can work both independently and as part of larger organizations (such as the Union of British Columbia Municipalities and the North Central Local Government Association) to lobby the provincial and federal governments to require businesses to restrict SUI. It is unclear at this time what restrictions provincial and federal governments would be willing to or have the authority to impose. To date, the provincial government’s focus has been on increasing opportunities to recycle plastic packaging, such as plastic bags and containers.

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DRAFT

Appendix 23 – Memo 4: Food Waste Reduction Strategy (April 2019)



Solid Waste Management Plan

DRAFT Technical Memo 4:

FOOD WASTE REDUCTION

APRIL 4, 2019

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REVISION TRACKING

Revision	Date	Revision by	Purpose	Changes made
Rev. 0	April 5, 2019	Authored by S. Wilmot and J. Coosemans; Reviewed by R. Tooms, M. Daly and N. Veikle	Initial authoring of document	
Rev. 1	To be completed following PTAC meeting on April 16, 2019	N. Veikle	Integrate feedback from PTAC prior to presenting to RDKS Board	

The Regional District of Kitimat-Stikine (RDKS) is developing a new Solid Waste Management Plan (SWMP; the Plan) to provide direction for how to reduce, reuse, recycle and dispose of our waste for the next decade. The SWMP will be developed in consultation with stakeholders; a Public and Technical Advisory Committee (PTAC) will advise the Regional District Board on the development of plan targets and strategies. The primary focus of the SWMP will be to improve the operational efficiency of existing programs, services and facilities. Multiple topics have been identified for discussion and development of management strategies within the Plan. Each topic requires scope and context, problem formulation, and identification and preliminary evaluation of options. This information will be presented to PTAC to confirm initial content is sufficient to engage stakeholders. Stakeholder engagement will provide an opportunity for additional topics and options to be identified and evaluated. Feedback from stakeholders and PTAC will help the technical team prioritize topics and identify preferred option(s).

This technical memo presents information related to food waste reduction strategies and how these strategies may be implemented in the RDKS.

1. Scope and Context

1.1. Background

More than a third of food produced and distributed in Canada never gets eaten (National Zero Waste Council, 2018). In 2014, the value of this wasted food was estimated at \$100 billion annually (Gooch & Felfel, 2014). This waste happens throughout the production cycle as well as at the consumer level. About half occurs during production, transportation and distribution, during processing, and by retailers such as grocery stores and restaurants. The other half occurs once the food reaches consumers, as illustrated in Figure 1. (National Zero Waste Council, 2018).



Figure 1 Food Waste in Canada (source: National Zero Waste Council)

Uneaten, wasted food is only the tip of the iceberg. Resources used in food production are also wasted, as shown in Figure 2. Furthermore, landfilling food waste generates methane gas, which is a greenhouse gas (GHG) 25 times more harmful to the environment than carbon dioxide (US EPA, 2007).

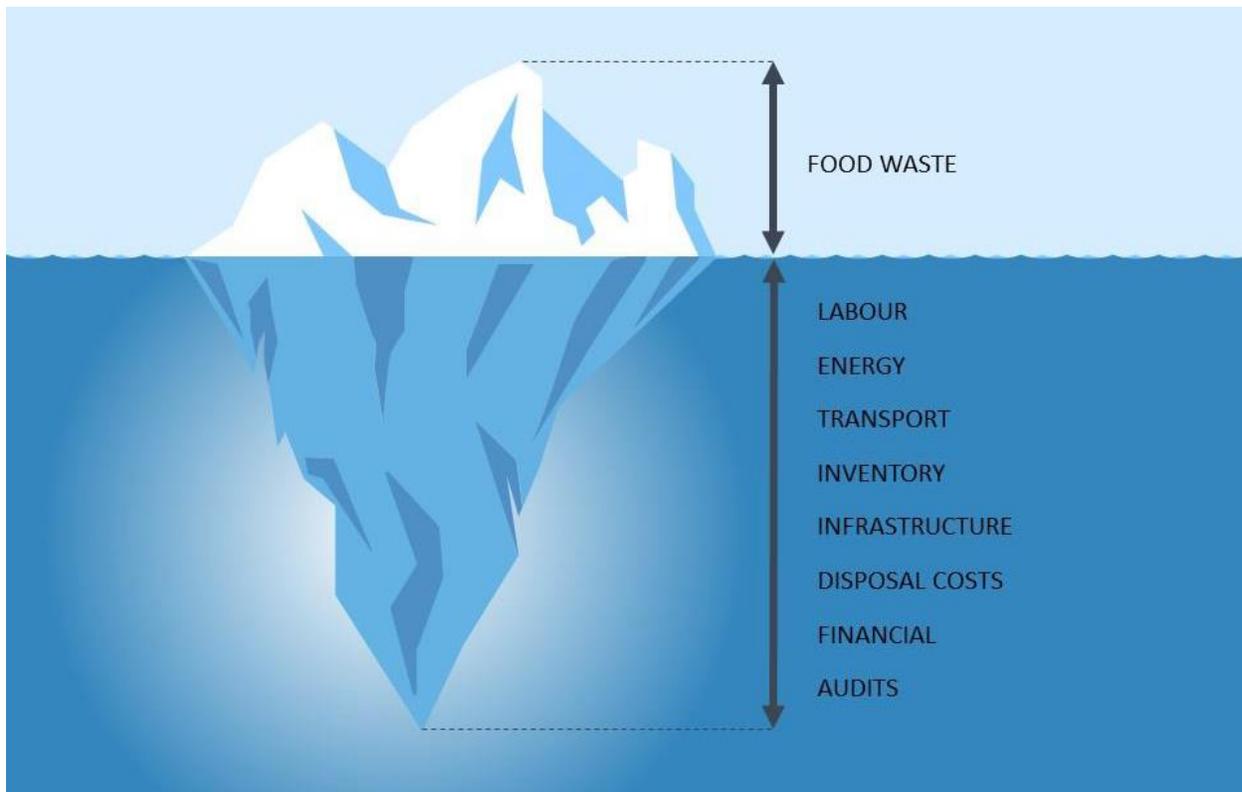


Figure 2. Wasted resources from wasting food (Gooch & Felfel, 2014)

Food waste can be divided into two categories: avoidable and unavoidable (WRAP, 2009). Avoidable food waste is food that could have been eaten. This category includes food some people eat and others do not (e.g. bread crusts), and food that can be eaten when an item is prepared in one way but not another (e.g. potato skins). Unavoidable food waste consists of portions of food that are not eaten under normal circumstances, such as bones, egg shells and tea bags. Food waste reduction efforts focus on avoidable food waste.

A food waste reduction and prevention strategy has the potential to reduce the amount of food entering the municipal waste stream. A successful strategy can save money for both consumers and local governments. The food waste issue has gained national and international attention.

A few notable agencies with food waste reduction campaigns include:

- The National Zero Waste Council of Canada has adopted and adapted the Love Food Hate Waste campaign and supporting materials, as first developed in the United Kingdom;
- The US Environmental Protection Agency (US EPA) has developed a strategy called Food: Too Good To Waste (British Columbia Ministry of Environment, 2015);
- WRAP (Waste & Resources Action Programme) U.K. has multiple campaigns related to food waste prevention.

1.2. Local Context

Within the Terrace Service Area in 2018, 8,196 tonnes of refuse and small loads of construction and demolition material were disposed of through the Thornhill Transfer Station. A study was done in 2017 to assess the composition of waste moving through the Thornhill Transfer Station. This study found that approximately 20% of garbage was composed of compostable organic materials (TetraTech Inc., 2017). Compostable organics were further subdivided into several categories, including unavoidable backyard compostable food waste, unavoidable food waste that is not backyard-compostable, and avoidable food waste. The quantity of food waste within each category (shown as percentages and volumes of waste deposited at the Thornhill Transfer Station) is shown in Table 1.

Table 1. Quantity of food waste in volumes of Food Waste and their corresponding percentages in the Waste Stream, Greater Terrace Area, 2017.

Waste Type:	Volume of Waste (tonnes)	Percentage of Waste (%)
Total waste disposed	8,196	100%
Food waste – backyard compostable (unavoidable)	279	3%
Food waste – non-backyard compostable (unavoidable)	42	1%
Food waste – avoidable	863	11%
Food waste subtotal	1,184	14%

From this study, we can extrapolate that 14% of the waste stream (1,184 tonnes of organics) could have been avoided or directed to the compost facility. Of those 1,184 tonnes of organics, 73% (863 tonnes) was avoidable (i.e., could have been eaten).

In the Terrace Service Area, the focus to date has been on diverting food waste to the composting facility. Organic waste is classified as a Restricted Waste, which means it must be delivered to the Thornhill Transfer Station in separated loads. The tipping fee for organic waste is lower than the tipping fee for garbage (i.e. \$99/tonne for organics; \$110/tonne for garbage), which creates an incentive for commercial generators to separate their food waste. The residential sector is provided with a dedicated collection service for food and yard waste. In 2018, 859 tonnes of food and yard waste were collected from the residential sector; 560 tonnes were collected from the commercial sector. No composition studies have been done to assess the quantity of avoidable food waste within these streams. Differential tipping fees were intended to encourage the reduction the amount of food waste that is sent to the landfill; however, they do not reduce the amount of food waste produced.

As the Hazelton and Highway 37 North service area does not have a compost facility, it may be inferred that the quantity of avoidable food waste in the garbage may be higher than in the Terrace Service Area. There has not been a waste composition study completed for the Hazelton & Highway 37 North Service Area. The absence of weigh scales at the waste

management facilities and waste composition results makes it difficult to estimate the quantity of food being disposed. The calculated volume of food waste generated in the Greater Terrace Area, when converted to a per capita generation rate, can be applied to the population of the Hazelton and Highway 37 North Service Area to produce an estimate of the quantity of food wasted. The results of this analysis are presented in Table 3.

Table 2. Volumes of food waste generated in the Terrace and Hazelton and Highway 37 North Service Areas based on extrapolated volumes from the Terrace Area.

	Population	Waste Volume (tonnes)
Greater Terrace Area Population	19,073	
Total food waste disposed in the Greater Terrace Area, 2018		1,184
Per capita food waste disposed		0.062
Total composted (assumes all ICI organics and half of residential organics are comprised of food waste)		990
Composted per capita		0.052
Total food waste generated per capita		0.114
Hazelton and Highway 37 North Service Area population	6,941	
Estimated food waste volume for Hazelton and Highway 37 North Service Area		791

Figure 3 illustrates the U.S. EPA’s model developed for the management of food waste (United States Environmental Protection Agency, n.d.).

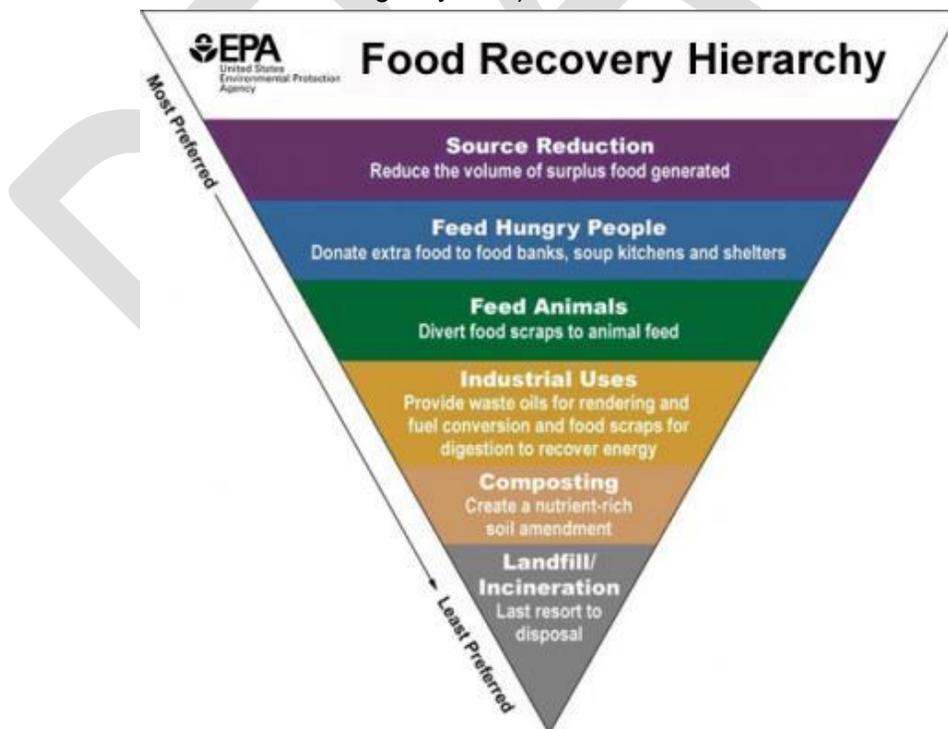


Figure 3. Food Recovery Hierarchy (United States Environmental Protection Agency, n.d.)

An investigation of the current food waste management practices was conducted by the Regional District in September 2018. Staff examined how local food producers, retailers, and food distribution organizations operate in the Greater Terrace Area. The study included grocers and select restaurants. The most common approach to managing food waste is using unsellable food as animal feed or compost. Local grocers are all connected with Food Distribution Organizations (FDOs), although the proportion of food that is given to FDOs rather than composted or disposed of was not specified. Based on the 560 tonnes of food waste composted and 552 tonnes landfilled (as quantified through scale records and the waste characterization study), it is clear that more can be done to strengthen ties between food retailers and FDOs to increase the proportion of food distributed to feed hungry people.

The Regional District is aware of one organization in the Hazelton and Highway 37 North Service Area that is active in food waste reduction. Northwest BC Food Action Network promotes local food security and resilience in the context of food systems.

The City of Terrace's most recent Official Community Plan (City of Terrace, 2017) has stated that Food Waste Reduction initiatives are a priority over the next 5 years. The City intends to work with the Regional District in achieving streamlined waste reduction objectives.

2. Problem Formulation

Is a food waste prevention strategy appropriate throughout the RDKS?

How will a food waste prevention strategy affect organizations that currently distribute excess food to people in need?

Should a food waste prevention strategy target residents, the ICI sector, or both?

2.1. Applicability

The advantage of focusing on food waste reduction is that it is applicable across the Regional District, regardless of infrastructure or service level. It is also applicable to all residents, regardless of income or housing type. Anyone can benefit from shopping carefully, planning meals, and storing food in the right way to maintain freshness.

Food waste prevention is applicable to much of the Industrial, Commercial, and Institutional (ICI) sector, although the specific strategies applicable vary between subsectors. For example, organizations that prepare and serve food such as restaurants, hotels and hospitals can take steps to reduce the amount of food they waste by changing ordering and preparation practices and carefully considering portion sizes. Food retailers can take steps to manage inventory and donate surplus edible food. Recent innovations in technology, such as the new FoodMesh platform – a Canadian platform developed in 2015 that connects businesses, growers, processors, charities, and other consumers to find good food a destination - have increased the ease with which donations can be made (National Zero Waste Council, 2018). Efforts to support food waste reduction in the ICI sector should be tailored to the specific needs of a particular subsector (i.e. food service and food distribution will require specific strategies).

2.2. Influence of the Food Recovery Hierarchy

Food Distribution Organizations (FDOs) including Food banks and soup kitchens may see a reduction in donations if food retailers take significant steps to reduce food waste (e.g. by

ordering less stock). Steps should be taken to maximize donations of edible food that remains after other steps are taken to reduce food waste generation.

The RDKS has recently implemented a compost facility in the Greater Terrace Area. A highly effective food waste reduction program could impact the quantity of feedstock available for the compost facility. However, the substantial portion of food waste being disposed in the landfill indicates that there is potential for reduction without negatively impacting the composting facility. Education and awareness messaging from the RDKS should emphasize the importance of reducing food waste through better planning; secondary messaging should direct citizens to compost unavoidable food waste.

3. Stakeholders

The following organizations and categories of individuals will be impacted by measures taken to reduce food waste:

- RDKS
- Ministry of Environment and Climate Change Strategy (MoE)
- Member municipalities
- Residents
- Businesses (Restaurants, grocers, camps)
- Food Distribution Organizations (FDOs)

4. Options Analysis

There are numerous initiatives and projects under review within the new SWMP. The RDKS recognizes that implementation of new initiatives under the SWMP must take into consideration multiple factors. Prioritizing new waste management initiatives must consider:

- The needs of the community;
- Servicing requirements, including provincial regulations, bylaws and contracts;
- Cost and financial implications, such as increases in taxation; and
- Organizational impacts, including capacity and resource limitations.

4.1. Focus on Residential Sector

At the household level, a food waste prevention campaign typically includes:

- Messaging about the cost of wasting food;
- Messaging about the environmental impacts of wasting food;
- Messaging about the health impacts of wasting fruits and vegetables;
- Tips on how to shop more carefully (e.g. make a meal plan, look in your pantry and fridge first and then make a shopping list);
- Tips on how to store food so that it lasts longer;
- Tips on how to store and use leftovers; and
- Guidance on best before, use by and sell by dates (British Columbia Ministry of Environment, 2015).

Residential food waste prevention campaigns are currently being run in many large jurisdictions such as Metro Vancouver, Toronto, York Region (National Zero Waste Council, n.d.), and more.

Canadian municipalities may design and implement their own campaigns, or they may elect to join a larger national movement called Love Food Hate Waste. In British Columbia, the Ministry of Environment and Climate Change Strategy has entered into an agreement with the Love Food Hate Waste Campaign to provide free access to BC Regional Districts and Municipalities.

The BC Ministry of Environment & Climate Change Strategy is a partner in the National Zero Waste Council, which is the organization responsible for the Love Food Hate Waste campaign in Canada. Through the partnership, tools from the Love Food Hate Waste campaign are available to communities province-wide for free. A [residential food waste prevention toolkit](#) has been published by the Ministry of Environment and Climate Change; a number of other resources are also available on the Ministry's [website](#) (British Columbia Ministry of Environment, 2015).

4.2. Focus on the ICI Sector

As there are far fewer food retailers than households, focussing on ICI sources of food waste may be more feasible, higher impact, and more easily implemented than influencing household behaviour change. The BC Ministry of Environment & Climate Change Strategy has published a [food service food waste prevention toolkit](#) that may support ICI outreach work in the RDKS (British Columbia Ministry of Environment and Climate Change Strategy, n.d.).

4.3. Develop and Implement a Comprehensive Strategy

The SWMP could commit the RDKS to developing a comprehensive food waste reduction strategy. Developing a strategy could take several years, if the RDKS chooses to undertake primary research and material development, and do extensive consultation. However, since significant work has been done in this area already, and there is unlikely to be a significant benefit from developing local materials. If the RDKS leverages work already done and made freely available from the resources described in Section 1.3, 4.1, and 4.2 then a strategy and materials could be developed more quickly.

4.4. Minimal Effort

As an alternative approach, the RDKS may simply include links to the MOE's toolkits on its website and direct residents and organizations to those resources. In this scenario, RDKS staff would continue to spend considerable effort promoting and enforcing compliance with requirements to separate organic waste from the rest of the garbage, for use at the centralized composting facility.

5. Recommended Management Approach

The RDKS should focus its efforts on applying the Love Food Hate Waste Campaign. This will target the residential sector with messaging throughout all service areas. At a minimum, messaging can be delivered through social media and/or the RecycleCoach waste app used by the Regional District. Additional elements of the campaign may include printed posters at event booths (i.e. farmer's markets, business expos, wellness expos, etc.), distribution of fridge magnets and brochures that will nudge residents and businesses to take steps to reduce food waste.

It is important that the food waste management hierarchy be reflected in the messaging, particularly in the Greater Terrace Area, where significant effort has gone into promoting the

mandatory organics separation requirement and accompanying residential service. Generators of food waste need to understand the difference between avoidable and unavoidable food waste and the roles that food waste prevention and composting play in the overall waste management system.

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*Appendix 24 – Memo 5: Waste Management Space Requirements for New ICI
Construction (April 2019)*



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Regional District of
Kitimat-Stikine

Solid Waste Management Plan

DRAFT Technical Memo 5:

Waste Management Space Requirements for New ICI Construction

APRIL 4, 2019

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REVISION TRACKING

Revision	Date	Revision by	Purpose	Changes made
Rev. 0	April 4, 2019	Authored by S. Wilmot and J. Coosemans; Reviewed by R. Tooms, M. Daly and N. Veikle	Initial authoring of document	
Rev. 1	To be completed following PTAC meeting on April 16, 2019	N. Veikle	Integrate feedback from PTAC prior to presenting to RDKS Board	

The Regional District of Kitimat-Stikine (RDKS) is developing a new Solid Waste Management Plan (SWMP; the Plan) to provide direction for how to reduce, reuse, recycle and dispose of our waste for the next decade. The SWMP will be developed in consultation with stakeholders; a Public and Technical Advisory Committee (PTAC) will advise the Regional District Board on the development of plan targets and strategies. The primary focus of the SWMP will be to improve the operational efficiency of existing programs, services and facilities. Multiple topics have been identified for discussion and development of a management strategy within the Plan. Each topic requires scope and context, problem formulation, and identification and preliminary evaluation of options. This information will be presented to the PTAC to confirm initial content is sufficient to engage stakeholders. Stakeholder engagement will provide an opportunity for additional topics and options to be identified and evaluated. Stakeholder and PTAC feedback will help the technical team prioritize topics and identify preferred option(s).

This technical memo presents information about establishing minimum waste management space allocations in the design of newly constructed multi-family and institutional, commercial and industrial (ICI) buildings to facilitate waste segregation and diversion.

1. Scope and Context

A common barrier to establishing recycling and organics diversion programs in multi-family and ICI buildings is the lack of available space for collection containers in common areas. Previously, when multi-family and ICI buildings were constructed, space was allocated only for garbage containers. Accommodating today's multi-stream collection in existing buildings may mean giving up parking spaces or making other difficult trade-offs to accommodate space for recycling and organics containers.

New buildings may be designed to accommodate all current and foreseeable waste streams. Many municipalities in North America now include mandatory minimum space allocations in their building requirements for both new developments and significant re-developments and renovations. Metro Vancouver, in consultation with its member municipalities and the construction community, developed a model bylaw with technical specifications to create consistent space requirements within their regional district and to reduce the amount of work each municipality would have to do to prepare its own policy (Metro Vancouver, 2015). Variations on the model bylaw have been adopted by several municipalities, including the District of Maple Ridge (District of Maple Ridge, 2011) and the City of Richmond (City of Richmond, 2017). Other municipalities, such as the cities of Vancouver and North Vancouver, have taken the approach of developing guidelines that developers can refer to when designing new buildings; the guidelines are not binding but provide developers with an indication of what the municipality expects (City of Vancouver, 2016; City of North Vancouver, 2014).

The 1995 SWMP called for the RDKS to encourage its member municipalities to develop bylaws requiring new ICI and multi-family developments (greater than four units) to include areas for storage of waste, recyclables and organics. Accompanying bylaws were not drafted or approved.

2. Problem Formulation

Requiring more space for waste management in multi-family and commercial dwellings may assist users in better waste segregation and diversion; however, some barriers exist to implementing this requirement, as described herein.

2.1. Jurisdiction

The RDKS does not maintain a building inspection service. The Regional District issues a type of building permit, the Building Declaration and Siting Approval Permit, to ensure all proposed new construction will meet the building requirements of the applicable zoning bylaw (Regional District of Kitimat-Stikine, 2012). This includes checking plans to make sure the proposed new construction will meet requirements, such as setbacks from property lines, maximum gross floor area, and height of a building. A permit is required before construction. There is no charge for a permit but failure to submit a permit application can result in enforcement action, including a fine of \$350. The permit does not approve that the building constructed under the permit will meet the BC Building Code or BC Fire Code.

The Regional District may be able to require identified space for waste management under a Development Permit issued in specified Development Permit Areas, which currently only applies within Thornhill (Electoral Area E). However, the language under the Local Government Act identifies an ability to require that land within a development permit area may include requirements respecting the character of the development, including landscaping, and the siting, form, exterior design and finish of buildings and other structures (Government of BC, 2015, Current to Mar. 27, 2019).

The RDKS cannot require more space for waste management in new construction that is located in a member municipality. Alternatively, the RDKS can encourage municipalities to amend existing building bylaws or adopt new bylaws to require waste management space in new construction.

2.2. Applicable to New Construction Only (Not Retroactive)

Requiring more space for waste management in new construction will not improve the situation in existing buildings. Historically, the rate of new multi-family construction in the RDKS has not been very fast, and a bylaw that only applies to new construction would have limited impact. However, the recent announcement about industrial development in Kitimat may spur some turnover in multi-family housing stock or development of new multi-family units and ICI buildings in the Terrace area (Terrace Standard, 2018). Although it may not impact existing buildings, a new bylaw would ensure that the building stock would start evolving towards having enough space to manage all waste streams.

2.3. Additional Need for In-Unit Space

In addition to having sufficient space for waste storage in common areas, it is also necessary that individual units (whether residential or commercial) have enough space to manage multiple waste streams. This can be more difficult to regulate, since the design of individual units is largely up to the developer, once the external size of the building is established. The City of North Vancouver's guidelines, provide specific dimension requirements and may be used as an example of how in-unit space requirements can be addressed (City of North Vancouver, 2014).

3. Stakeholders

The following organizations and categories of individuals will be impacted by a requirement for minimum waste management space:

- RDKS
- Member municipalities
- Multi-family and ICI building owners
- Developers
- Multi-family and ICI building tenants
- Waste haulers

Some stakeholders may feel that the relatively slow rate of development in the RDKS does not justify adding requirements, and that individual building owners/managers should be left to figure out solutions to having enough space for the storage of all waste streams.

4. Options Analysis

4.1. Set Requirement for RDKS-Regulated Areas

The RDKS may set its own requirement that would apply only to developments in RDKS development permit areas (i.e., Thornhill). This requirement would apply to a very limited scope of construction and would only allow for RDKS to require space to be identified exterior of the building. This would, however, give the RDKS an opportunity to lead by example.

4.2. Encourage Member Municipalities

This option requires the least effort for the RDKS, but the most effort for member municipalities. The RDKS would engage in dialogue with member municipalities about the potential benefits of setting a minimum size requirement for waste management. Each municipality would set its own minimums and determine which developments would be required to comply.

4.3. Develop Model Bylaw and Guidelines

The RDKS could draft technical guidelines that could be adopted both by the Regional District and its member municipalities. Member municipalities would be free to amend existing bylaws to reflect the technical guidelines.

4.4. Educate Members Municipalities and Developers

As opposed to taking a regulatory approach, the RDKS could work to educate municipalities and developers about the importance of providing adequate space for waste management. This approach will require the RDKS and member municipalities to proactively work with developers before designs are completed. As RDKS planning staff would have to be aware of upcoming developments and in contact developers prior to submission of building plans, this scenario would require that the RDKS Planning department work closely with member municipalities to assist in regulating the issuance of building permits. This approach could work for both common area space and in-unit space.

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Appendix 25 – Memo 6: Building Deconstruction vs. Demolition (April 2019)



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Regional District of
Kitimat-Stikine

Solid Waste Management Plan

DRAFT Technical Memo 6:

Building Deconstruction vs. Demolition

APRIL 5, 2019

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REVISION TRACKING

Revision	Date	Revision by	Purpose	Changes made
Rev. 0	April 4, 2019	Authored by S. Wilmot and M. Daly; Reviewed by R. Tooms and N. Veikle	Initial authoring of document	
Rev. 1	To be completed following PTAC meeting on April 16, 2019	N. Veikle	Integrate feedback from PTAC prior to presenting to RDKS Board	

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This technical memo presents information on the practice of building deconstruction in contrast with traditional building demolition.

1. Scope and Context

Demolition of buildings can generate large quantities of waste often destined for landfilling. Building deconstruction is the systematic dismantling of a building so the resulting materials can be reused or recycled (Habitat for Humanity, 2019). The methodical approach to deconstruct building results in many materials being repurposed or managed through established alternative streams, such as used building material stores. A typical home contains about 50 tonnes of potential waste material. Deconstruction salvages reusable materials and segregates recyclable materials. Commonly salvaged materials from deconstructed buildings include structural beams, dimensional lumber, wood flooring, cabinetry, casework, doors, architectural details, hardware, plumbing and electrical fixtures, brick and stone. Salvage operations can range from selective removal of high-value elements to full-scale deconstruction.

The City of Vancouver adopted a green demolition bylaw in 2014 requiring at least 75% of the material in homes built before 1940 to be recycled; the diversion requirement is 90% for heritage or character homes. It has resulted in the diversion of approximately 10,000 tonnes per year of demolition waste. The percentage requirements take into account recycling of plaster, drywall and asphalt roofing shingles (City of Vancouver, 2014). These diversion streams are not currently available in northern BC.

The Local Government Act provides for local governments to regulate construction, alteration, repair and demolition of buildings. However, this section only applies to local governments which provide a building inspection service, which the RDKS currently does not. Within the Regional District, the City of Terrace and the District of Kitimat provide demolition permits.

Under Metro Vancouver's model, the average diversion rate for pre-1940 homes has been 86%, which is significantly higher than the typical rate of 40% to 50% per cent for traditional residential demolitions (City of Vancouver, 2018). This recycling rate is calculated exclusive of any hazardous waste materials. Asbestos drywall, insulation, tiles, and lead paint materials are not counted in the total materials generated from the home demolition; therefore, their disposal does not negatively affect the recycling rate quoted.

Within member municipalities of the RDKS, deconstruction may be supported by adding a new permit category for “advance deconstruction permits,” which are issued before building permits. Demolition and building permits are typically issued simultaneously, which encourages builders to demolish buildings as quickly as possible. By issuing an advance deconstruction permit, builders can take the time necessary to deconstruct, rather than demolish. These types of permits were offered in Vancouver before the green demolition bylaw was introduced (City of Vancouver, 2012). With the green demolition bylaw, a building permit for construction will not be issued until the City receives a report detailing how the demolished home was recycled and/or reused. This applies to all homes built before 1950 (City of Vancouver, 2018).

Deconstruction can also be supported by making a deconstruction permit significantly less expensive than a demolition permit. The savings from the deconstruction permit can be used to offset any additional costs associated with the reuse and recycling of building materials. However, the City of Terrace and District of Kitimat each charge only \$50 for their respective permits (City of Terrace, 2004) (Metro Vancouver, n.d.), with the District of Kitimat also requiring a \$1000 deposit to ensure full clean up of the site (District of Kitimat, 2018). The fee for demolition would have to be significantly increased to realize any offset for the effort to voluntarily choose deconstruction.

2. Problem Formulation

No alternatives to disposal exist for most of the materials that would be generated by deconstruction.

How can the RDKS most effectively support the transition to some level of deconstruction?

2.1. Alternatives to Disposal

In order for demolition materials to be diverted from disposal, alternatives to disposal must exist. Requiring deconstruction will not increase diversion if the deconstructed materials cannot be reused or recycled.

In some larger jurisdictions, waste processors can receive mixed loads of construction and demolition waste and sort the waste into its constituent streams for recycling. While this is preferable to disposal, it is less preferable than deconstruction, as many of the materials will be damaged during demolition and the opportunity for reuse is lost.

The RDKS does not host many of the alternative streams found in other areas of the province, particularly the Metro Vancouver area. For example, drywall and asphalt shingle recycling are not available within the RDKS. Within larger centres, the commercial sector often fills gaps in the reuse market. Enterprises such as the “Habitat for Humanity Re-Store” chain offer a warehouse for a wide range of construction materials, from electrical switches and outlets to doors and wood frame windows, to be resold and diverted from the landfill (Habitat for Humanity, 2019). This commercial market does not exist to any measurable degree in the RDKS.

2.2. Affordability

The building industry may resist the idea of more expensive demolition permits and/or deconstruction requirements and may need assistance in finding markets for reusing and

recycling salvaged materials. If implementing deconstruction initiatives, the RDKS must consult local builders to understand barriers (and perceived barriers) to deconstruction. Increased labour costs may prove the largest barrier to overcome. While a team of two people can demolish a typical home with large equipment in two days, it may take 10 semi-skilled workers as much as two weeks to methodically deconstruct the same structure.

If opting to promote deconstruction under the new Plan, the RDKS will need to work with building construction and private waste reuse industries to overcome barriers. This will likely include incentivizing deconstruction for builders, as well as ensuring that there are sufficient reuse opportunities to support diversion of building materials.

2.3. Authority

Universal implementation of a deconstruction permit is not possible across the entire Regional District. In the absence of a building inspection service, the RDKS does not have the authority to issue demolition permits. Member municipalities which employ a building inspection service may incorporate a demolition or deconstruction permit process. A universal template or sample bylaw may be created to assist with this; however, ultimately, each member municipality must undertake this process on their own if they choose.

One area which may be addressed by the Regional District is the disposal of “clean wood”. Clean wood refers to wood that is not plywood, painted, treated or laminated material. Building materials, such as roof trusses and framing material, are categorized as clean wood. Currently the Regional District encourages the separation of clean wood from the general waste stream; however, it is not identified as a restricted material, nor is there a separate or reduced tipping fee for its disposal. Per Metro Vancouver’s model, the Regional District may choose to identify this as a restricted material and require its separation from the refuse stream.

3. Stakeholders

The following organizations and categories of individuals will be impacted by measures taken to increase deconstruction and reduce demolition:

- RDKS
- Member municipalities
- Construction and demolition industry
- Residents
- Industrial, Commercial and Institutional (ICI) sector

4. Options Analysis

4.1. Pilot Program

Many local governments run a pilot program for deconstruction before launching a full-scale program. The pilot program enables an evaluation of the viability of the market for reusing and recycling salvaged materials. The pilot program could be as small as a few buildings that go through the deconstruction process voluntarily. The anticipated barriers to implementing this pilot program within the RDKS would be the lack of incentive for builders. Without incentivizing deconstruction over demolition (i.e., through lower permit fees for deconstruction, or similar), it is anticipated with few builders would voluntarily participate.

4.2. Increase Tipping Fee Differential

The RDKS can play a more active role in encouraging separation of demolition materials by charging significantly more than the standard tipping fee for mixed loads of demolition waste. Sorted loads of demolition waste can be charged the standard tipping fee or a reduced tipping fee, depending on the cost of managing the materials. Another alternative that may have the same result is levying a surcharge on mixed loads. This is the practice at the Glenmore Landfill in the Regional District of Central Okanagan, where mixed loads of demolition waste are charged an additional \$125 per tonne. If the load contains gypsum, which is designated as an item that must be recycled, the surcharge is \$150 per tonne. Their standard tipping fee is \$95 per tonne (Regional District of Central Okanagan, 2019) The RDKS could employ a similar method aimed at eliminating clean wood from the disposal stream.

4.3. Management Options

Currently, the anticipated barriers to implementing a regulatory approach to require deconstruction of buildings include:

- The RDKS does not hold building permits to regulate builders within the RDKS. Member municipalities would be responsible for the implementation of deconstruction permits;
- There are currently very few options for diversion of construction wastes. In the absence of a used building supply center or recycling options for many building materials, it is currently counterproductive to require diversion of these materials from the waste stream.

Despite these barriers, the RDKS may evaluate a phased approach to promoting deconstruction over the next 10 years. This approach may include:

- Developing a pilot program by working with local residential contractors to explore the viability of the deconstruction model, including evaluating the additional energy expenditure required for deconstruction and resulting diversion rates;
- Supporting and/or working with private sector or non-profit organizations to establish a used building supply store(s) and/or building materials (i.e., asphalt) recycling options within the RDKS; and/or
- Develop an increase tipping fee differential (i.e., decrease the fee for clean wood and introduce a surcharge for demolition loads containing clean wood).

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Appendix 26 – Memo 7: Summary of Reduce and Reuse Options to Consider for Inclusion in the SWMP (December 2019)



MORRISON HERSHFIELD

December 17, 2019

Erin Blaney, BSc., EPt
Environmental Services Coordinator
300-4545 Lazelle Avenue
Terrace, B.C.
V8G 4E1
Email: eblaney@rdks.bc.ca

Dear Ms. Blaney:

Re: System Efficiency, Reduce and Reuse

Under the Environmental Management Act, regional districts are required to have a solid waste management plan (SWMP), which must be developed following the solid waste management planning guidelines provided by the Ministry of Environment and Climate Change Strategy (the Ministry) for content and process.

The Regional District of Kitimat Stikine (RDKS) is in the process of developing a new SWMP. The planning process was initiated in 2017 and steps 1 and 2 of the planning process were completed in 2018. This resulted in the formation of the Public and Technical Advisory Committee (PTAC), assessment of the current system, development of the consultation plan and development of six technical memos covering specific topics. Each of the six technical memos contained a wealth of information that was considered by the PTAC. In November 2019, Morrison Hershfield (MH) was commissioned to provide consulting support to continue developing the SWMP for the RDKS.

MH initiated the project with a thorough background review of the work completed to date and of the feedback gathered from PTAC on specific memo topics. Based on this review it was apparent that consolidation of some the documents would be beneficial to the SWMP development process and the RDKS. The memo attached to this letter is the result of that review and consolidation of potential strategies and actions that the RDKS may want to take on. MH has not made any changes to the six technical memos issued prior to our involvement¹.

We understand that the RDKS places a high importance on improving the operational efficiency of the current solid waste system. This is highlighted in Technical memo 1: Efficiency within RDKS Solid Waste Management Functions (February, 2019) and the main focus of the new SWMP is to improve operational efficiency. System efficiency applies to all solid waste management functions and levels of the waste hierarchy, and the original technical memo has therefore been left as a standalone document. Efficiency and system performance will be

¹ All technical memos can be accessed at www.rdks.bc.ca/content/solid-waste-management.

applied to all of Morrison Hershfield's memos and incorporated into any strategies developed and assessed.

As a first deliverable MH is providing a consolidation memo for the summary of reduce and reuse options to consider for inclusion in the solid waste management plan. This memo was developed by MH and consolidates Technical Memo 2 - 4 and part of Technical Memo 6:

- Technical memo 2: Reduction and reuse options
- Technical memo 3: Reduce single use items
- Technical memo 4: Food waste reduction
- Technical memo 6: Building deconstruction vs. demolition

This consolidated memo is not intended to cover and repeat all information provided in the previous technical memos but rather to focus on the main strategies and action items. The memo includes new information relevant to future strategies and addresses feedback and comments received from the PTAC. The content of Technical memo 5: Waste Management Space Requirements for New ICI Construction, will be addressed in the context of recycling in the next memo (to be presented at the PTAC meeting in February 2020). Optional strategies are highlighted in the consolidated memo. Through interaction with the PTAC, the aim is to narrow down the waste reduction and reuse options in order to articulate Preferred Options in a report that forms the basis of the draft SWMP.

The consolidated memo will be presented to the PTAC on January 7, 2020.

Sincerely,



Veronica Bartlett, M.Sc.
Solid Waste Planner, Environment
Morrison Hershfield Limited

TO: Erin Blaney, Regional District of Kitimat Stikine
FROM: Veronica Bartlett, Regional District of Kitimat Stikine
FROM: Veronica Bartlett, PM
PROJECT No.: 190497600
RE: Summary of Reduce and Reuse Options to Consider for Inclusion in the Solid Waste Management Plan
DATE: December 17, 2019

P:\2019\190497600-RDKS SOLID WASTE MANAGEMENT PLAN\08. WORKING\01 REDUCE AND REUSE OPTIONS MEMO\MEMO-2019-12-17-RDKS REDUCE AND REUSE OPTIONS_RDKS SWMP-190497600_FNL.DOCX

Under the Environmental Management Act, regional districts are required to have a solid waste management plan (SWMP), which must be developed following the solid waste management planning guidelines provided by the Ministry of Environment and Climate Change Strategy (the Ministry) for content and process.

The Regional District of Kitimat Stikine (RDKS) is in the process of developing a new SWMP. The planning process was initiated in 2017 and steps 1 and 2 of the planning process were completed in 2018, resulting in the formation of the Public and Technical Advisory Committee (PTAC), assessment of the current system, development of the consultation plan and development of six technical memos covering specific topics. The PTAC had four meetings in 2019 during which four out of the six Technical memo topics were covered. Review was done of the Reduction and Reuse options presented in Technical memo 2.

Each of the six technical memos contains a wealth of information that was considered by the PTAC. In November 2019, Morrison Hershfield (MH) was commissioned to provide consulting support to continue developing the SWMP for the RDKS.

This memo provides a consolidation of the options presented to the PTAC that relate to the efforts to reduce and reuse waste. The purpose is not to present the same information to the PTAC, but to focus on the main strategies and potential actions the Region can take. The options for reduce and reuse were consolidated based on feedback obtained at previous PTAC meetings as well as public feedback gathered via the public survey conducted in March 2019.

MH has included information on federal and provincial directions aiming to address the plastics issue and the reduction of single use items, which were announced during the summer of 2019. These initiatives may impact the Region's management options for single use items.

CONTEXT

Reducing waste generation is fundamental to decreasing the environmental, social, and financial impacts of waste. It was evident that the 900 citizens who completed the RDKS Solid Waste Survey in March 2019 regard the reduction and reuse of resources as very important for the Region. Reoccurring opinions were the need for less packaging, fewer disposable items, and better ways to recover reusable items.

The RDKS already promotes waste reduction and reuse of resources through outreach and education programs and by supporting non-profit thrift stores by reimbursing tipping fees payed on unsuitable donations received.

In Canada the annual waste generation per person from residential sources increased from 358 kg to 414 kg between 2002 and 2016. The average annual disposal per person increased from 269 to 282 kg over the same time period, meanwhile the amount of residential waste diverted through recycling and organics diversion almost doubled.

The provincial Recycling Regulation is the enabling legislation for BC's Extended Producer Responsibility (EPR) programs. The focus of the regulation requires producers to be responsible for their products over their entire lifecycle; in practice this means that producers pay to set up and operate recycling systems. However, legislation does not require producers to focus on reducing or reusing the waste generated.

So far waste reduction and reuse initiatives tend to address small, incremental changes to people's attitudes and behaviours, which set the stage for long-term changes in our consumption practices. Reduced consumption will naturally result in reduced waste generation. However, it is extremely difficult to quantify the impacts of individual reduction and reuse initiatives on an annual basis; as such, no diversion estimates are provided for the initiatives outlined in this memo.

In terms of the reduction and reuse of waste, the RDKS's role can be to regulate, educate and facilitate.

REDUCTION

This section provides a summary of the five potential new strategies and initiatives that aim to further reduce waste generation.

STRATEGY 1. LOBBY FOR REDUCTION OF SINGLE-USE ITEMS AND PACKAGING

In recent years many local and regional governments across Canada and in BC have been investigating and implementing policies to limit the amount of single-use items being generated and that require management through curbside collection, litter management in public spaces, and disposal. Single-use items include products often made out of plastic, such as shopping bags, straws, utensils and take-out containers, which are intended to be used only briefly before they are thrown away or recycled. Although the waste composition study conducted in 2017 did not specifically identify single-use items, it showed the quantity of several categories of plastics in the landfilled waste. It is estimated that up to 13% of the total waste stream could be single-use plastic items for which use could have been avoided or that could have been directed to recycling facilities.

Plastic waste is a leading source of environmental pollution and poses a serious threat to the health of our oceans, waterways and well-being. Paper and cardboard products do not persist in the environment, however their production consumes non-renewable resources and is energy intensive. Since both plastic and non-plastic single-use items have environmental consequences the reduction of single-use items and packaging is important.

Extended Producer Responsibility (EPR) is a provincial policy tool that aims to shift the responsibility for end-of-life management of products (physically and economically) to the producer and consumer, and away from local governments. This policy is intended to create an incentive for producers to include environmental considerations in design of products.

EPR programs in BC are mandated by Recycling Regulation 449/2004, under the Environmental Management Act.

Producers of designated products often appoint a stewardship agency to collect EPR products.

Many Canadian municipalities including Victoria, Vancouver, Montreal and Toronto have begun implementing restrictions on the use, distribution and sale of certain single-use items. However, in July 2019 the B.C. Court of Appeal ruled that the City of Victoria's proposed ban on single-use plastics is primarily environmental legislation that require the approval of the Minister of Environment¹.

The National Zero Waste Council recently pointed out that restrictions enforced at a municipal level are problematic for retailers and industries which are operating across many different locations with different requirements². Wherever possible, the National Zero Waste Council recommended these should to be coordinated or harmonized at a provincial or federal level.

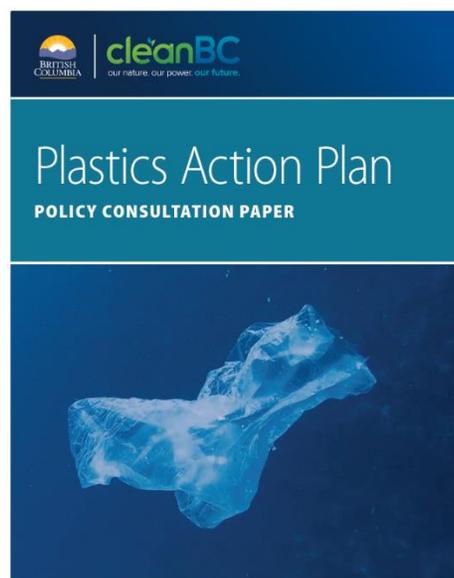
In June, 2019, the Prime Minister announced that the Government of Canada is taking additional steps to reduce this type of plastic waste coming from the use of single-use items. In particular, the government is committed to partnering with businesses and other levels of government to:

- ban harmful single-use plastics as early as 2021, where supported by scientific evidence and warranted, and take other steps to reduce pollution from plastic products and packaging, and
- work with provinces and territories to introduce standards and targets for companies that manufacture plastic products or sell items with plastic packaging so they become responsible for their plastic waste.

The first phase in the Canada-wide Action Plan on Zero Plastic Waste involve priority areas including extended producer responsibility, identifying sustainable alternatives to single-use items, national performance requirements and standards, incentives for a circular economy, infrastructure and innovation investments and public procurement and green operations³.

In July 2019, The BC Ministry of Environment and Climate Change Strategy (the Ministry) issued the Plastics Action Plan⁴, a policy consultation paper on how the province is intending to address plastic waste. The Ministry proposes to expand existing EPR programs by including single-use items and packaging-like products⁵ under the Recycling Regulation to ensure that these items are being managed responsibly through EPR programs prior to any potential federal bans coming into force (estimated for 2021 and beyond).

The RDKS provided feedback to the Ministry on the Plastics Action Plan and commented that restrictions or bans on the sale or use of single-use items would most effectively be executed at provincial and federal levels to ensure consistencies for consumers and producers.



¹ <https://www.theglobeandmail.com/canada/british-columbia/article-bc-municipalities-intent-on-banning-single-use-plastic-bags-asking/>

² <http://www.nzwc.ca/Documents/RegulatoryApproachesforPriorityPlasticWastes.pdf>

³ https://www.ccme.ca/en/current_priorities/waste/index.html

⁴ https://engage.gov.bc.ca/app/uploads/sites/121/2019/07/CleanBC_PlasticsActionPlan_ConsultationPaper.pdf

⁵ The packaging-like products are materials that are sold as a product but are in turn used as packaging, such as reusable plastic containers, freezer/sandwich bags, canning jars, wrapping paper, and moving boxes. Single-use items are materials that are not necessarily packaging but similarly serve a one-time purpose, such as plastic straws, stir sticks, cutlery and 'disposable' items purchased in multiples, such as plates, bowls, cups, and party supplies that could be easily diverted in a manner similar to packaging and packaging-like products.

Possible options to incorporate in the SWMP include:

- 1A. Lobby for the implementation of a provincial EPR program for single-use items and packaging-like products via suitable organizations (e.g. the Union of British Columbia Municipalities, the North Central Local Government Association, the Provincial Recycling Roundtable that govern recyclable materials and products in association with EPR programs).
- 1B. Lobby the Federal government to enact regulations and regarding the distribution of single-use items.

STRATEGY 2. SUPPORT MEMBER MUNICIPALITIES WITH IMPLEMENTATION OF BYLAW(S) TO ELIMINATE THE DISTRIBUTION OF SINGLE-USE ITEMS

If supported by the Ministry, the RDKS can support member municipalities with developing and implementing reduction strategies and bylaw(s) to eliminate the distribution of single-use items. The support could include providing educational information and outreach resources to implement bylaws.

Possible options to incorporate in the SWMP include:

- 2A. Support member municipalities with developing and implementing reduction strategies and bylaw(s) to eliminate the distribution of single-use items, provided it is supported at a provincial level.

STRATEGY 3. ENCOURAGE VOLUNTARY REDUCTION OF SINGLE-USE ITEMS BY BUSINESSES

Although this is a priority area for the Ministry, it will take time to develop provincial measures to reduce the distribution and use of single-use items. Meanwhile businesses can be encouraged to voluntarily change their distribution practices and find alternatives to using single-use items. Outreach can include organizing a workshop in which the RDKS can facilitate a discussion on the issue and find common solutions. Outreach material from the RDKS can also include guidance on how organizers of large events can eliminate the use of single-use plastics and promote alternatives. The RDKS has been discussing the option to support member municipalities in developing a zero waste guidance document and other material to be made available to organizers of events such as farmers markets, smaller music festivals and the annual trade fairs.

There may be interest amongst businesses to set-up a local exchange of dishware, containers or cups to reduce the use of single-use takeaway cups. Food safety needs to be carefully considered and the RDKS may want to coordinate with Northern Health to develop a guidance document for dish share programs or bring your own container, or so called BYOC programs.

Possible options to incorporate in the SWMP include:

- 3A. Encourage businesses to voluntary commit to a reduction of the use of single-use items by developing and implementing outreach campaigns.
- 3B. Support member municipalities to encourage events free of single-use items.



Possible options to incorporate in the SWMP include:

- 3C. Collaborate with Northern Health to develop a guidance document how to set up a BYOC program.

STRATEGY 4. ADOPT A PREFERENTIAL PURCHASING POLICY FOR GREEN PROCUREMENT THAT SUPPORTS REDUCE, REUSE AND THE USE OF RECYCLED CONTENT

There are many examples in Canada of local governments using their purchasing powers to promote reduction and reuse of waste materials and encourage a circular economy with increased use of recycled materials in purchased products. The Federal Government released a Greening Government Strategy⁶ in 2019 that included waste management elements. The strategy includes steps to better manage the use and disposal of plastics in its operations.

The RDKS and its member municipalities purchase significant volumes of products. Recognizing the influence that government can have within the marketplace, the RDKS may want to commit to reducing products such as single-use plastic items in its operations. Though no official policy exists, the RDKS is currently aiming to “walk the talk” by, for example, using reusable dishware at meetings and events. To help support the markets for recycled products, the RDKS can also include procurement requirements that demand a minimum amount of recycled content in material purchases, where the quality required will not be compromised. The RDKS can also develop a procurement policy that requires contractors used by the RDKS to have environmental sustainability built into their business models.

Possible options to incorporate in the SWMP include:

- 4A. Adopt a preferential purchasing policy for green procurement that supports the 3Rs (reduce, reuse and recycling) and encourage member municipalities to follow its example.

STRATEGY 5. PROMOTE WASTE REDUCTION IDEAS THROUGH TARGETED CAMPAIGNS

Metro Vancouver has developed waste reduction campaigns for “[Create Memories. Not Garbage](#)” and for textile waste reduction through the Think Thrice campaign. These are available for other local governments to use at no or very low cost.

In British Columbia, the MOE has entered into an agreement with the national “[Love Food Hate Waste](#)” Campaign to provide free access to BC Regional Districts and Municipalities. Food waste prevention toolkits for residents and the ICI sector have been made available via the Ministry’s website with many resources. The RDKS has already signed on for this initiative and promotion of the campaign will begin in early 2020.

Possible options to incorporate in the SWMP include:

- 5A. Promote waste reduction ideas using some of the readily available campaigns. The campaigns can be promoted within the RDKS with support from member municipalities, and/or by non-profit groups.

⁶ <https://www.canada.ca/en/treasury-board-secretariat/services/innovation/greeninggovernment/government-canada-actions-plastic-waste-federal-operations.html>



REUSE

Reuse is the second preferred option in the 5R pollution prevention hierarchy. Reuse includes use of materials and products as originally intended without any modification (e.g. furniture, electronics) or repurposing of materials, such as used lumber and other building materials or reclaimed wood or textile through so called up-cycling. Reuse in this context also includes repair or refurbishing of items to retain their value, usefulness and function.

There is a strong interest for more reuse opportunities in the region. Almost half of all respondents in the April 2019 Public Solid Waste Survey expressed their support for more reuse opportunities in their communities. Landfill scavenging is prohibited at all RDKS solid waste facilities unless written approval is given by the solid waste service coordinator. Approval is generally given a few times a year granted removal can be done safely. The support for reuse is particularly strong in the Hazelton area where limited reuse options exist. There are three secondhand stores in Terrace and usable items are also sold and donated through local groups on social media.

The RDKS maintains recycling directories including reuse options (e.g. secondhand stores) for all communities within the RDKS service areas. There are no directories for areas outside, such as Kitimat and Dease Lake.

This section provides a summary of four potential new strategies and initiatives for reuse in the region.

STRATEGY 6. SUPPORT REUSE THROUGH SHARE SHEDS AND REUSE STORES

There are many examples of regional districts and municipalities establishing or supporting share sheds or reuse stores. Share sheds, or free stores, are usually smaller sheds or Sea Cans located on, or adjacent to, waste management facilities for residents to drop of usable items that they no longer need or want. Anyone can pick up the donated items for free. Bulky items, such as furniture, typically are not accepted due to space limitations. Figure 1 shows an example of share sheds established at the majority of manned transfer stations in the Peace River Regional District.

Reuse stores, also called secondhand stores or thrift stores, are operated similar to a share shed but the donated items are sold, often to generate revenue for community or social outreach programs. Reuse stores are less often located on, or adjacent to, waste management facilities. Both facility types could accept products (clothing, household items etc.) and/or materials (building materials and hardware etc.). Materials accepted at share sheds and reuse stores are generally not pulled from garbage or recycling streams but are diverted beforehand.



Figure 1. Share shed in Peace River Regional District

There are many different models for reuse facilities which can be divided into three categories based on RDKSs desired involvement:

- The RDKS could build and operate share sheds such as done by the Peace River Regional District and Sunshine Coast Regional District.
- The RDKS could collaborate with the private industry where, for example, the RDKS could provide the site for privately operated facility. Examples of this model are the Re-Use-It and Re-Build-It Centers in Whistler, BC and the Foothills Salvage & Recycling Society Reuse Store in Oktoke, AB.
- The RDKS could provide administrative support such as helping not-for profit organizations identify suitable sites, connecting volunteers with potential donors, helping volunteers and staff navigate bylaws and other regulations, or promoting the facilities through its communication channels.
- The RDKS could promote local reuse options through its website. A directory of reuse options and facilities could be set up and event promoted through the event calendar.

The RDKS Waste Regulation Bylaw 671 and 688 state that “no person shall remove, scavenge or salvage Solid Waste from a Waste Management Facility except with the prior written approval of the Solid Waste Services Coordinator”. This limits reuse of solid waste at the RDKS waste management facilities. However, recognizing the strong public support for more reuse options, the RDKS intends to explore different options and to support and facilitate the private sector or non-profit entities in launching and operating reuse facilities.

Scavenging is prohibited from the active landfill face under the BC Landfill Criteria. Scavenging is defined as “unauthorized and/or uncontrolled removal of MSW or recyclable material from a landfill site” under the Criteria and does not encompass material recovery within the buffer zone of the landfill site. Hence, separation of reusable goods and materials or the operation of a reuse store or share shed is not prohibited under the criteria which allows the RDKS to amend their Solid Waste Regulation Bylaw should it be preferred and deemed financially and practically feasible to operate or facilitate operation of a reuse facility at their current waste management facility(ies).

Operation of a share shed is only recommended at manned facilities. Items would need to be approved and/or inspected by attendant prior to donation. This screening would be necessary to ensure health and safety and to avoid illegal dumping. The benefit of such a program is that it is free to use, and accessible to anyone. Drawbacks with share sheds include additional RDKS staff time, potential need for bylaw amendment and limited diversion achieved as bulky items unlikely would not be accepted. To promote reuse of bulky items, the share shed could be equipped with a “share board”, where visitors could advertise larger items for sale or donation on a notice board that is kept up-to date.

Feedback from the April 16, 2019 PTAC meeting suggests that Skeena Bakery and Skeena Supported Employment Society are willing to implement a reuse store in Hazelton. This should be investigated further to gain an understanding of the level of involvement requested of the RDKS.

For any of the options the RDKS should consider the monetary investment and staffing allocation that may be required.



Possible options to incorporate in the SWMP include:

- 6A. Assess the feasibility to operate a share shed, including the liability and resource requirement.
- 6B. Consider allowing space at the waste management facilities for private collection of reusable goods to be sold at separate location.
- 6C. Partner with or support private industry in the operation of a reuse store, such as Skeena Supported Employment Society.
- 6D. Support and promote existing reuse organizations, by, for example, including those in Dease Lake and Kitimat not currently included in the RDKS directory of reuse options.
- 6E. If deemed necessary to support reuse initiatives, and considering public safety, amend the RDKS Solid Waste Regulation Bylaw to facilitate the reuse of waste materials at the current waste management facilities.

STRATEGY 7. SUPPORT REUSE AND/OR REPAIR EVENTS

An alternative to a permanent, physical facility is to host, support or promote reuse and repair events throughout the Regional District. There is strong movement toward reuse, repair and community sharing of resources throughout BC.

Reuse and repair events could be hosted in any community within the Region, with or without involvement of the RDKS. There are several different models for events that have been successful elsewhere in British Columbia. Many of these events are either organized or sponsored by local governments.

Sale or trading of goods can be done in many ways. Flea markets or trunk sales are two versions of large garage sales where several sellers set up for a day or two and sell their gently used, but no longer wanted items. The “Junk in the Trunk” sale in Prince George and the trunk sale in the Regional District of Central Okanagan (RDCO) are two examples of such events. The RDKS could support such events through, sponsorship, advertisement or by providing a site (e.g. parking lot or community center). Sellers generally pay a small fee which is used to cover setup and take down, as well as waste management during the event.

Annual or bi-annual reuse events could be organized by the RDKS with limited involvement or investment. For example the Squamish Lillooet Regional District (SLRD) and City of Nanaimo organize reuse events where all items are free to residents. Donations are collected in one location at the SLRD event whereas donations are set out at the curb in Nanaimo. Donations not claimed at the SLRD event are managed by the regional district whereas Nanaimo residents are responsible for bringing unclaimed items back to dispose or recycle them properly. If reuse events were to be hosted at any of the RDKS waste management facilities consideration must be given to the applicable solid waste bylaws which may need to be amended.

So called “repair cafés” are becoming popular. The premise of the events is that community members bring broken things from home to be repaired by volunteers, for free. Items accepted could include small appliances, textiles, small pieces of furniture, electronics and bicycles. Repair cafés also aim to teach community members basic repair skills so that these activities and thoughts are incorporated into everyday life. Repair Café Foundation is a not-for-profit organization founded in the Netherlands currently offering 1,500 workshops worldwide. A café starter kit is offered for a small, voluntary fee, which is aimed to help promote and organize an event or event series. Repair cafés are organized at



the Smithers Public Library as well as in Okotoks, AB, the Regional District of Central Okanagan, BC, and throughout the lower mainland.

Possible options to incorporate in the SWMP include:

- 7A. Organize, sponsor or promote reuse through local flea markets or trunk sales.
- 7B. Apply for provincial or federal funding to run a pilot for a regional reuse event to assess community uptake and feasibility for a wider implementation Plan. The pilot can identify if items are most suited to be collected at the curb or at set locations such as waste management facilities.
- 7C. Promote local repair cafés and similar events through sponsorship or marketing.

STRATEGY 8. DEVELOP A CONTRACTOR'S GUIDE TO REDUCTION, REUSE AND RECYCLING

The RDKS published a brochure in 2017 that provides information on Construction Site Waste Management. The brochure focuses on recycling by listing which materials are prohibited and restricted from disposal at RDKS facilities, and alternatives to disposal for those materials. Reduction and reuse are not addressed in the brochure.

The current brochure could be updated or a new one developed to promote reduction and reuse. An updated guide could also highlight the opportunity for reuse during renovation, construction and demolition by both contractors and homeowners, granted these opportunities are available in the local community.

Possible options to incorporate in the SWMP include:

- 8A. Update the current information brochure to include reduce and reuse options for renovation, construction and demolition contractors and home owners.

STRATEGY 9. REUSE OF CONSTRUCTION AND DEMOLITION MATERIALS THROUGH DECONSTRUCTION

Demolition of buildings generates large quantities of waste often destined for landfilling. The alternative -building deconstruction is the systematic dismantling of a building so that materials can be reused or recycled. The Local Government Act provides for local governments to regulate construction, alteration, repair and demolition of buildings. However, this strategy option only applies to local governments which provide a building inspection service, which the RDKS currently does not. In 2018 three demolition permits were issued by the District of New Hazelton and four permits by the City of Terrace.

There are different models for encouraging or requiring building deconstruction. In the City of Vancouver for example the diversion requirement for demolition material (either through recycling or reuse) is tied to the age of the property which makes deconstruction a requirement in many cases. Another model, which can be combined with diversion requirements, is to issue a deconstruction permit in advance of issuing a construction permit, allowing time for deconstruction.

Deconstruction can also be supported by making a deconstruction permit significantly less expensive than a demolition permit. However, the overall cost benefit has to outweigh the additional cost associated with deconstruction.



Most deconstruction models focus on diversion, which includes diversion and reuse. A large portion of the material removed isn't suitable for reuse. As PTAC members pointed out on April 16, 2019, building materials may not be suitable for new construction and do often need to be graded (beams etc.) to meet building code. Many older homes in the lower mainland have reusable and sought after building materials but this may not be the case in the RDKS region.

There are currently limited options in the RDKS for reuse and recycling of renovation, construction and demolition materials. Reuse of building and deconstruction materials could be encouraged through reuse stores and share sheds. The market for building materials would have to be assessed. Based on feedback from the public and the PTAC there is more likely to be a market for building material reuse in the Hazelton area than the Terrace area. The model for reuse of building materials, reuse stores or share shed and the level of RDKS involvement would have to be assessed as discussed in Strategy 7 above.

Contractors may be less likely to reuse building materials than the handy homeowner. Considering the few demolition permits issued in the RDKS in 2018, the benefit and resulting diversion of deconstruction should be assessed. This can either be done through some basic desktop calculations or through a more comprehensive deconstruction pilot.

Possible options to incorporate in the SWMP include:

- 9A. Facilitate reuse through deconstruction by promoting markets for reusable building materials.
- 9B. Encourage local reuse of demolition materials by updating the Construction Site Waste Management information brochure.
- 9C. Assess the feasibility of having member municipalities require building deconstruction through a cost benefit analysis and support implementation if deemed feasible.

The opportunity for diversion through recycling of building materials is also addressed in the recycling memo being developed by Morrison Hershfield in the spring of 2020. This includes opportunities for more segregated streams and markets as well as potential mechanisms to encourage or enforce segregation of certain materials such as clean wood and asphalt shingles.

SYSTEM EFFICIENCY

If any of the explored programs are supported it will be important to incorporate mechanisms for system efficiency at an early stage. This would include but not limited to defining roles and responsibilities, standards of service and developing an operating plan. It would also be important to assess risks associated with the program and a based on that assessment develop a mitigation strategy and actions plan.

IMPACTS OF POTENTIAL REDUCE AND REUSE STRATEGIES

Table 1 provides an overview of the anticipated financial impacts if the strategies are implemented in the region. The table is followed by Table 2 which shows which stakeholder groups are affected by the strategies outlined in this memo.



Table 1. Anticipated financial impact related to the identified reductions and reuse strategies.

#	Strategy	Operational costs	Capital Costs	Comments
1	Lobby for reduction of single-use items and packaging	Low	Low	
2	Support member municipalities with implementation of bylaw(s) to eliminate the distribution of single-use items	Low	Low	
3	Encourage voluntary reduction of single-use items by businesses	Low-Medium	Low	Depending on the involvement of the public, this strategy may require significant RDKS attention and resource allocation.
4	Adopt a preferential purchasing policy for green procurement that supports reduce, reuse and the use of recycled content	Low	Low	
5	Promote waste reduction ideas through targeted campaigns	Low	Low	
6	Support reuse through share sheds and reuse stores	Low-Medium	Low-High	Cost depends on the desired involvement from the RDKS.
7	Support reuse and/or repair events	Low	Low	Low capital cost as permanent location is required. Promotion of temporary events require limited resources and operating cost.
8	Develop a contractor's guide to reduction, reuse and recycling	Low	Low	Development and maintenance of the guide is low cost. However, consideration should be taken to the cost associated with the reduce, reuse and recycling options promoted in the guide.
9	Reuse of construction and demolition materials through deconstruction	Low-High	Low-High	The cost depends in the desired involvement from the RDKS. Supported infrastructure for management of the reusable material and processing options for the recyclable portion would be required should, for example, an enforcement be selected.

Table 2. Organizations and categories of individuals impacted by the identified reduction and reuse strategies.

#	Strategy	RDKS	Member municipalities	Residents	Waste haulers and recycling facilities	Industrial, commercial & constitutional sector	Non-profit organizations	Comments
1	Lobby for reduction of single-use items and packaging							The majority of stakeholder groups are affected if the Province regulates single-use items.
2	Support member municipalities with implementation of bylaw(s) to eliminate the distribution of single-use items							
3	Encourage voluntary reduction of single-use items by businesses							
4	Adopt a preferential purchasing policy for green procurement that supports reduce, reuse and the use of recycled content							All contractors are potentially impacted.
5	Promote waste reduction ideas through targeted campaigns							
6	Support reuse through share sheds and reuse stores							Stakeholder involvement depend on owner operator model chosen.
7	Support reuse and/or repair events							Stakeholder involvement depend on the level of RDKS involvement.
8	Develop a contractor's guide to reduction, reuse and recycling							
9	Reuse of construction and demolition materials through deconstruction							Stakeholder involvement depend on the level of RDKS involvement.

*Appendix 27 – Memo 8: Recycling Options to Consider for Inclusion in the SWMP
(February 2020)*

TO: Erin Blaney, Regional District of Kitimat Stikine

FROM: Veronica Bartlett
and Eva
Robertsson,
Morrison Hershfield

PROJECT No.: 190497600

RE: Recycling Options to Consider for Inclusion in the Solid
Waste Management Plan

DATE: February 3, 2020

\\MH.LOCAL\DATA\PROJ\2019\190497600-RDKS SOLID WASTE MANAGEMENT PLAN\08. WORKING\02 RECYCLING MEMO\MEMO-2020-02-04 RDKS RECYCLING OPTIONS_RDKS SWMP-190497600_ FNL.DOCX

Under the Environmental Management Act, regional districts are required to have a solid waste management plan (SWMP), which must be developed following the solid waste management planning guidelines provided by the Ministry of Environment and Climate Change Strategy (the Ministry) for content and process.

The Regional District of Kitimat Stikine (RDKS) is in the process of developing a new SWMP. The planning process was initiated in 2017 and steps 1 and 2 of the planning process were completed in 2018, resulting in the formation of the Public and Technical Advisory Committee (PTAC), assessment of the current system, development of the consultation plan and the development of six technical memos, which mainly focused on reduction and reuse of waste materials.

The RDKS commissioned Morrison Hershfield (MH) to support the last steps of the planning process and the final development of a new Solid Waste Management Plan (SWMP). In January 2020, MH produced a memo that presented a comprehensive summary of the potential reduce and reuse options highlighted in previous memos. These were discussed and prioritized by PTAC.

This is Morrison Hershfield's second technical memo in a series of five, each presenting potential management options on key solid waste related topics:

- Summary of Reduce and Reuse
- **Recycling and Composting**
- Residuals Management at Existing Facilities
- New Service Areas for RDKS
- Cost Recovery

The content of each memo will be presented to the PTAC. The feedback on these memos will be considered as MH develops a last final memo outlining Preferred Options to be included in the new draft SWMP, which will be brought to the public for consultation.

This memo provides context with respect to recycling and composting: current initiatives undertaken by the RDKS, key challenges and opportunities that should be considered. The memo outlines a number of potential strategies and options the RDKS may want to take to improve recycling and organics diversion through composting.

CONTEXT

This memo provides an overview of current recycling initiatives and challenges in the region and potential new strategies to improve and increase waste diversion through recycling and composting. The memo covers the third R of the 5R waste pollution prevention hierarchy (Figure 1).

The per capita disposal rate in the RDKS in 2017 was 562 kg¹, including waste from industrial camps. Approximately 50% of the total waste (garbage, recycling and organics) is generated by the ICI sector. The other 50% is divided between the residential and construction and demolition (C&D) sectors, and materials that are dropped off by generators (i.e. self-hauled).

Based on available data, the regional waste diversion rate was estimated at 22%¹ in 2017.

When looking at the diversion performance of the different sectors, the residential sector had the highest diversion rate at 43%. The diversion rate for the ICI sector was 27%, and the diversion rate for materials dropped off at the transfer station by the generator was 21%. C&D materials had the lowest diversion rate at 5%. The 2018 overall diversion rate in the Terrace Service Area was estimated to 36%.

A waste composition study conducted at the Thornhill Transfer Station in 2017 showed that despite having disposal restrictions in place, paper and compostable organics each made up nearly 20% of the overall garbage stream, followed by plastic (15.3%). Approximately 54 % of the single family residential garbage, 42% of the ICI garbage and 14% of the self-haul garbage accepted at the Thornhill Transfer Station is either classified as restricted or prohibited waste. Some of these materials could be managed by the composting and recycling systems, indicating a need for more uptake of the existing diversion systems. There are significant opportunities for improvements to the solid waste management system to improve the recycling and diversion of many materials.

CURRENT RECYCLING INITIATIVES

Current recycling initiatives undertaken by the RDKS include:

- Drop-off options for select recyclables, select Extended Producer Responsibility (EPR) products² and other divertible materials (e.g. organic waste, metal, clean wood) at landfills and transfer stations. Materials accepted varies by facility based on alternative services available within the private sector.



Figure 1 Pollution Prevention Hierarchy

¹ For more information, refer to the Background Information and Assessment of the Current Solid Waste System, 2019, RDKS.

² The Recycling Regulation requires producers of designated products to develop programs for their end-of-life collection and recovery of materials. Producers of designated products often appoint a stewardship agency to collect EPR products.

- Curbside collection of printed paper and packaging (PPP) recyclables for Electoral Area residents in the Terrace Solid Waste Service Area.
- Covering costs for transportation and processing of commercial cardboard collected at RDKS facilities in the Hazelton & Hwy 37 North Service Area.
- Promotion and education of drop-off and collection options for recyclables and EPR products in the region (e.g. Recycling Directory).

The RDKS is currently seeking to partner with Recycle BC to support the curbside collection of residential PPP from the Greater Terrace Area and to enlist the Kitwanga Transfer Station as a Recycle BC Depot. Recycle BC has indicated that it is willing to consider entering an agreement with the RDKS to provide recycling services to the residents of the Kitwanga area. This agreement would need to include the allowance of bulk drop off from First Nations communities including Gitsegukla, Gitwangak, Gitanyow and Iskut. Each of the First Nation communities use or are planning to use a mobile eco-depot to collect residential recycling as three streams. The operators of the mobile eco-depot further sort the materials into their individual Recycle BC-compatible streams and inspect materials for contamination.

Many member municipalities and First Nation communities currently provide curbside collection for recyclables. The City of Terrace is the only member municipality that receives financial compensation from Recycle BC for its curbside collection program. The District of Kitimat has indicated an interest to partner with Recycle BC, but there is currently no agreement in place.

Private companies offer subscription-based collection of residential recycling in some areas that are not serviced by local government collection programs. These services are offered to both residential and commercial customers.

There are also depots located throughout the RDKS that accept paper, cardboard, plastic and metal containers from residents. These include the bottle depots in New Hazelton and Kitimat, Do Your Part Recycling in Terrace, and the RDKS operated recycling center at the Stewart Transfer Station. The above four listed depots receive a financial subsidy from Recycle BC, and residents can drop off recyclables at no charge. The RDKS also operates a recycling center at the Kitwanga Transfer Station for PPP without the financial support of Recycle BC. This location is also free for residents to use.



Figure 2 Example of information provided in RDKS recycling directory

The “Kitimat Understanding the Environment” or KUTE depot in Kitimat accepts cardboard and paper from Kitimat industrial projects and camps. Do Your Part Recycling is the only recycling facility that receive ICI paper and cardboard from the RDKS.

The RDKS promotes all collection options available via an electronic directory and via brochures for specific service areas (e.g. the Recycling Directory for the Terrace Area shown in Figure 2). These information sources are frequently updated.

CHALLENGES WITH CURRENT RECYCLING IN THE REGION

In early 2017, China announced its National Sword program, resulting in import limitations and strict quality standards on specific recyclables entering the country. China previously recycled about half of the globe's plastics and paper products. The new strict requirements placed on recyclables left many collectors without end markets for certain collected materials.

RDKS pays for the collection, transportation, and processing fees for all PPP recycling services it offers, with the exception of the Recycle BC-supported depot at the Stewart Transfer Station. All commercial cardboard is managed without the support of Recycle BC, as the Recycling Regulation only mandates the stewardship covers cardboard coming from residential locations.

There is currently no recycling facility in the Hazelton and Highway 37 North service area that can manage the volumes of cardboard and paper products generated by the commercial sector. The Bottle Depot in New Hazelton does accept residential PPP in partnership with Recycle BC.

All commercial cardboard and paper accepted at RDKS waste facilities are transported to Do Your Part Recycling in Terrace for processing. Transportation costs are reduced by backhauling using the only readily available freight company in the region, but still the costs are significant. The RDKS pay a fixed fee for the backhaul of \$68 per mega bag. In 2018, the RDKS paid approximately \$15,000 to backhaul ICI cardboard from Stewart to Terrace and \$2,500 to process these materials. The backhauling from Kitwanga Transfer Station (cardboard and PPP) cost almost \$17,000 in 2018. Due to the density of the hauled material, the backhauling costs equate to \$750 per tonne for Stewart and \$930 per tonne for Kitwanga.

In Terrace, all cardboard and paper (both from the residential and ICI sectors) is consolidated and baled at one facility (Do Your Part Recycling). Materials covered by the Recycle BC program (i.e. by the City of Terrace via residential curbside collection and materials dropped off by residents at the depot interface) are kept separate from other materials at the processing facility. Do Your Part also receives recyclables from RDKS facilities, private service providers of collection ICI properties, and self-hauled recyclables from residential and ICI customers.

Haulers of commercial cardboard and paper pay the facility operator a tipping fee of \$99/tonne, which is set by the RDKS and is lower than the tipping fee for garbage at the transfer station, to encourage waste separation. The RDKS tops up \$26 per tonne to make the total payed to Do Your Part Recycling \$125 per tonne and shares the revenue from the sale of the material and associated costs with the facility operator. This system only applies to commercial cardboard and paper generated in the Terrace Service Area. Commercial cardboard is not accepted at RDKS facilities in the Terrace Service Area.

Cardboard is, however, accepted with no tipping fees at RDKS facilities in the Hazelton and Hwy 37 North Service Area. The RDKS pays Do Your Part Recycling more to process cardboard and paper from the Hazelton and Hwy 37 North Service Area (\$350/tonne as of July 2019).

In 2016 when the cost-sharing agreement was signed, there were always revenues to split equally between the RDKS and the contractor, however since 2018 the RDKS recyclables have not been generating revenue and only resulted in net costs. The contractor has asked for increased tipping fees to cover increased costs.

The current recyclables management model is increasingly financially unsustainable for both the RDKS and the private recycling facility, who take financial risks to manage these low-value recyclables.



The RDKS has been looking at ways to reduce recycling costs. Although not confirmed it appears likely that Recycle BC will add the Regional District's Greater Terrace Area curbside recycling collection to their Stewardship program. This will help to offset collection and processing costs currently borne by the RDKS and tax payers. The collection and processing of curbside materials from the Greater Terrace Area is currently costing approximately \$6,000 - \$7,000 per month in processing fees, plus the cost of collection.

The RDKS has explored other alternatives to recycling that can help to reduce costs. The potential to compost paper and cardboard is highlighted as part of Strategy 8 of this Memo. Another alternative that has been considered by the RDKS is burning. This may be suitable at Meziadin Landfill where burning of cardboard is permitted under the current operating certificate.

This section provides a summary of the 11 potential new strategies and initiatives that aim to further improve recycling and reduce the associated costs in the region.

STRATEGY 1. LOBBY FOR IMPROVED ACCESSIBILITY TO EPR PROGRAMS

There are currently over 20 regulated provincial EPR programs covering a wide range of material categories. Current EPR programs mainly focus on the residential sector and not the ICI sector. New product categories are continually being evaluated for inclusion into the Recycling Regulation.

The RDKS provides drop-off options for a number of EPR and stewardship products and assists in facilitating working relationships between private collection centers of EPR materials and their associated stewardship agencies. The RDKS aims to offer drop-off options where there are gaps in private collection services. Strategy 5 refers to how the RDKS can improve options for hazardous wastes.

In 2018 the RDKS provided input to the Stewardship Agencies of BC (SABC) together with other member regional districts from the BC Product Stewardship Council with regards to the rural accessibility standard used by stewardship associations. The letter articulated many concerns, such as stewards only prioritizing accessibility to EPR programs in communities that fall into a "City, Town, Resort Municipality, or District Municipality" and not rural communities in order to meet regulated definitions of accessibility. Recommendations included how the SABC can develop an acceptable rural accessibility standard that ensures improved accessibility to rural communities.

The RDKS conducted an audit report in 2018 to ensure that private depots and their partnerships with various stewards are functioning as they should. The audit identified the following issues:

- **Infrequent collection service offered by steward**, e.g. Tire Stewardship of BC, to collection site resulting in excess of tires stored on-site as illustrated in Figure 3.
- **Support is needed for increased public education on how to return EPR products** to depots via signage, printed material, etc. Many depots reported to the RDKS that consumers are returning their used tires on rims. Rims are not accepted by the Tire Stewardship of BC and become an added cost to the depots. For depots accepting used lubricating oil, antifreeze, oil filters, consumers often drop off materials in unlabeled containers or outside opening hours.
- **Increased public education on where to return EPR products.** The RDKS identified the need for better EPR signage at most of the pharmacies in the Greater Terrace Area to increase the awareness of drop-off options provided for unused medications. Bottle depots accepting alcoholic beverage containers have expressed their desire for more consumer education on



bottle return, and all depots have stated that they often need to redirect consumers trying to return materials such as pop and juice containers.

- **Increased access to more drop-off locations for some additional EPR products.** For example, Product Care, the steward for paints, flammable liquids, and pesticides, only has one location in the region at Do Your Part Recycling that accepts the flammable liquid / pesticide portion of materials covered.
- **Increased flexibility to accept PPP from rural communities at Recycle BC depots.** The RDKS is wanting commitment from the steward that it will always allow bulk drop-off by First Nation communities to Recycle BC depots, such as how the RDKS is allowing bulk drop-off at the Kitwanga Transfer Station.



Figure 3 Tire build-up at Stewart Transfer Station

The RDKS has also identified the need to expand the list of regulated materials. For small rural communities in the Region, recyclables management could be simplified and made more efficient and more economical if PPP from the ICI sector is managed together with residential sources, which are currently regulated. The ICI sector, including small businesses, schools, hospitals, municipal offices, care homes, and tourism resorts are often left with no viable option for recycling of PPP resulting in recyclable material ending up in landfills. The RDKS is currently having to subsidize the recycling costs of some ICI PPP. The producers of these materials should be required to be part of the solution provided by stewardship organizations.

Specific materials that the RDKS would like to see regulated under the Recycling Regulation include:

- ICI PPP
- Hazardous wastes, such as mercury, diesel fuel, acid, household cleaners, garden products, and pesticides, which are currently not included as regulated materials.
- Tires on rims and oversize tires (large off-road tires and industrial tires)
- Bulky furniture and mattresses
- Drywall

The RDKS may want to bring up these specific issues with the Ministry of Environment and Climate Change Strategy.

Possible options to incorporate in the SWMP include:

- 1A. Lobby for better service levels for existing EPR materials in rural areas.
- 1B. Lobby for inclusion of new materials, regardless of the source (residential or ICI), under the Recycling Regulation, in particular ICI packaging and printed paper.

STRATEGY 2. PROVIDE CONTINUOUS DIVERSION EDUCATION AND OUTREACH PROGRAMS COUPLED WITH ENFORCEMENT

Education and outreach play a key role in waste reduction, diversion, and proper disposal of residual waste. The RDKS has made a wide range of waste management information available on its website, including information sheets on each solid waste facility, composting information, how-to guides for ICI recycling and organics collection, and links to various waste management planning initiatives. The RDKS also provide residents with recycling service information through the Recycle Coach desktop and smart phone apps of the “MyWaste™” platform.

In 2016, the RDKS undertook immense efforts to educate all stakeholder groups prior to the implementation of Bylaw No 671, introduction of three stream waste segregation, and new and/or upgraded facilities. Extensive education and outreach was completed to inform all stakeholders about the upcoming service and program changes. Every business that had collection service from either Geier Waste or Waste Management were contacted directly and provided with information through site visits or phone calls. There were also public open houses, newspaper ads, etc. (see Figure 4). All major organics producers received personalized letters providing information about material restrictions, and the new waste streams organics, cardboard/paper, recyclables and garbage. There was also an IC&I working group formed to obtain feedback from that stakeholder group.

The RDKS maintains a stakeholder registry which includes stakeholder information and the outreach and education provided. This allows the staff to track provided outreach and identify needs for additional support.

The waste composition results from 2017 showed that there is potential to divert more recyclables and compostable organics from the residential waste stream. The composition of waste from the City of Terrace and the Greater Terrace RDKS collection routes were similar, although residential garbage from the City contained more compostable organics than the residential garbage from the RDKS collection area (24.3% vs 19.6%). Paper, plastic and compostable organics make, on average, up 57% of the disposed single-family residential waste stream. The composition of residential MSW drop-off at Thornhill Transfer Station is slightly different from that collected curbside, however, paper, plastic and compostable organics made up a significant portion (43.4%) of the audited material.



Figure 4 Example ad from organics diversion campaign.

Despite RDKS' major focus on public education and outreach, the diverted curbside recycling stream can still be more contaminated than acceptable. Contamination is often a result of "wishful recycling" when residents with good intent place materials not accepted under the current collection program in the recycling bin. MH understands that contamination of the curbside recycling stream, which is partially funded by Recycle BC, is an issue for the City of Terrace. Do Your Part Recycling reported an 8.5% contamination rate of the RDKS residential curbside recycling collected outside the Recycling BC program in 2018. Participation in the Recycle BC recycling program requires low recycling contamination rates (3% contamination threshold), which increases the importance of continued outreach and education, especially to those stakeholders receiving RBC funded services.

Improved and increased user education was requested through the April 2019 Public Solid Waste Survey, which aimed to identify key topics to consider in the SWMP update. Recycling can be confusing and the need for more public information about the recycling process was highlighted, including information about how the recyclables are processed and where. There is also a public interest in understanding the financials around recycling and how the system is funded. Given recent challenges with recycling in the region and recent media coverages that can cast doubt on responsible management of recyclables, it is important for the RDKS to reemphasize the benefits of recycling in order to maintain high public participation. More education is needed to clarify:

- who manages and pays for recycling
- where non-curbside materials can be recycled
- where the recyclables go and how they are processed

Contamination of the organics stream has been reduced since introduction of the program in 2016, however there is a need for continued education and outreach to further reduce contamination of organic waste going to the Terrace compost facility (e.g. bags and other products marketed as biodegradable, plastic bags and vegetable wraps). The product produced is currently too contaminated to be sold to the public or used in public gardens. The material is at present used as biocover for landfill closure, which allows the RDKS to beneficially use the product while optimizing the composting operations and address the contamination issue. The organic ICI waste stream, mainly from fast food restaurants, is generally the most contaminated. This stream is also the most challenging to address due to the corporate and internal nature of the businesses, the type and quantity of food packaging used, and the difficulty to reach the many different waste generators.

Continuous education and active stakeholder outreach is needed to ensure continued public participation in the diversion programs, improved diversion, and reduced contamination of the diverted material. This can be done by keeping the stakeholder registry up to date and developing an annual communication and education plan. The plan would link appropriate information, outreach and timelines with the right stakeholders. The plan would also include the development of new or updated material.

The RDKS has to date focused on education and outreach. Although, current bylaws allow the RDKS to issue fines for disposal of compostable organics (currently only in the Terrace service area) and recyclable materials, enforcement has not been applied to date. Hence, there is an opportunity to incorporate enforcement as part of education and outreach.

The RDKS has developed a non-compliance form for the facility operating contractors to use to report non-compliance. These reports could be used to provide outreach and issue fines as needed. Additional contractor information may be needed to highlight bylaw and contract requirements and to ensure reports are completed with supporting data, such as photos, and submitted to the RDKS in a timely manner. Collaboration with haulers will also be required to develop an approach to issue fines.



For example, fines issued for disposed contaminated waste loads from the multi-family residential and ICI sectors. It is also important that enforcement is performed on a continuous basis.

To address contamination of the curbside waste stream, the RDKS may want to inspect the waste composition of residential garbage when it is set-out for disposal, through curbside audits. The purpose of this enforcement approach is to encourage all residents to participate equally in the service, collect waste composition data, and to target education and outreach efforts effectively. Some residents may be uncomfortable with having their waste examined. However, the collection bylaw (RDKS Bylaw 674, section 17) allows the RDKS to inspect the waste set out for collection. This approach is seen as a final option, should diversion of materials remain low and garbage volumes high. As an alternative, the RDKS may want to conduct a set-out outreach program targeting households that do not set-out for organics or recyclables or have continually large garbage set-outs. This type of program would assess and address program participation without auditing the waste. Programs have demonstrated that direct one-on-one outreach can have very positive results in reducing contamination and encouraging participation in curbside diversion programs.

The RDKS may also want to consider changing the tipping fee structure to include a per tonne surcharge for contaminated loads. This is discussed further in as part of Strategy 9.

Possible options to incorporate in the SWMP include:

- 2A. Regularly update existing communication plan. Develop performance targets and monitor the performance of the implemented communication plan.
- 2B. Perform audits, such as set-out audits, to assess curbside participation rates or curbside audits to assess the waste composition of the different waste streams, coupled with in-person education and out-reach. Issuing of fines may be considered for repeat offenders.
- 2C. Provide contractor education pertaining to bylaw requirements, contract requirements and the importance of reporting of non-compliance and contaminated waste loads. Performance incentives through contract adjustments or other means might be warranted.
- 2D. In collaboration with waste haulers develop a common approach allowing haulers to pass down fines for contaminated waste loads to waste generator.

STRATEGY 3. SUPPORT ICI TO ENCOURAGE WASTE DIVERSION

The main economic activities within the RDKS include mining, forestry, energy, fishing, and transportation. The area is home to several mills and multiple hydro projects. The economic activities in the RDKS mean there are a number of industrial work camps in the area. These camps consist of buildings used for residential accommodations and support for industrial construction project workers. New mining, forestry, oil and gas and/or energy developments in the region may result in a significant increase in waste from industrial work camps and construction.

Recognizing that 73% of the waste generated by the ICI sector in the region is landfilled and only 27% diverted, the RDKS needs to address ICI with different approaches than the residential sector.

In 2016, before the RDKS implemented a bylaw that restricted organic waste³ as part of landfilled waste, a consultant was hired to approach a large number of stakeholders from the ICI sector to

³ Organic waste (including food waste) is classified as a Restricted Waste in the Greater Terrace Service Area, which means it must be delivered to the Thornhill Transfer Station in separated loads.



prepare them for the change. More information on the efforts undertaken was included as context to Strategy 2.

The tipping fee for separated food scraps and yard waste is lower than the tipping fee for garbage, which creates an incentive for commercial generators to separate their food waste.

The 2017 waste composition study showed that the largest component of ICI waste was paper (21.3%), followed by compostable organics (19.7%), plastic (14.9%), and household hygiene (14.0%). Compostable organics mainly comprised food waste (17.0%), of which 13.2% of food was avoidable and 3.8% was unavoidable and backyard compostable. Paper mostly comprised compostable and food-soiled paper (8.3%) and plastic mainly comprised other film and packaging (4.7%).

In 2018, a total of 560 tonnes of organics were captured from ICI sources (equivalent to 29 kg/capita). The capture rate in 2019 was similar but the RDKS noted less contamination of non-compostable materials. There is still room for improvements to capture more organics and to reduce contamination rates.

PTAC has previously discussed the need for the RDKS to develop a model bylaw for mandatory physical space allocation for recycling in new multifamily and ICI buildings in the region. Within Terrace some back alleys have limited space to accommodate more bins and the pick-up thereof.

The Local Government Act provides for local governments to regulate construction, alteration, repair and demolition of buildings. However, this section only applies to local governments that provide a building inspection service, which the RDKS currently does not. Within the Regional District, the City of Terrace and the District of Kitimat provide demolition permits. The RDKS cannot require more space for waste management in new construction that is located in a member municipality. Instead, the RDKS can encourage municipalities to amend existing building bylaws or adopt new bylaws to require waste management space in new construction. As the need for space allocation for recycling is not a prevalent issue amongst many member municipalities, it is recommended that each member municipality develop and implement such bylaw, as needed.

There are many potential options to encourage ICI waste diversion. The RDKS can focus on assisting private collectors to encourage better ICI recycling amongst its customers. This can, for example, include updating and distributing the current hauler information package, and providing support to haulers to clearly communicate waste segregation expectations to customers.

The RDKS may want to directly promote available waste diversion opportunities to commercial generators and offer on-site audits and coaching on waste diversion.

The RDKS may want to establish an ICI waste diversion working group. The focus can be on the biggest waste generators to help divert more waste and reduce business costs. High-priority generators include industrial camps, grocery stores, restaurants, hotels and large generators of cardboard (e.g. furniture stores). The working group can help to identify circular economy opportunities where one waste material can be used as a resource for another local business (for example surplus food from grocery stores or hotels to people in need via not-for profit organizations, or as animal feed).

Possible options to incorporate in the SWMP include:

- 3A. Support private collectors with an updated hauler information package to encourage better ICI recycling amongst its customers.
- 3B. Promote available waste diversion opportunities and provide or support diversion coaching to commercial generators.
- 3C. Establish an ICI waste diversion working group to focus on largest waste generators and find waste diversion solutions that can benefit many parties.

STRATEGY 4. REDUCE RECYCLING COSTS

The RDKS wants to emphasize the importance of stewardship organizations taking more responsibility for recycling in rural communities (refer to concerns and options as outlined in Strategy 1). In addition, the RDKS is actively working to increase the level of financial support provided by Recycle BC for residential recycling at the Kitwanga Transfer Station and for curbside collection in the Greater Terrace Area. This strategy focuses on managing recyclables more efficiently and identifying lower cost recyclable management options.

In addition to working to develop partnerships with stewards, the RDKS may want to undertake an efficiency review of how recyclables are collected, stored and transported within the region. The review can identify potential cost savings from using balers/compactors to minimize the hauling of loose materials in mega bags, as well as the increase of covered storage capacity at suitable facilities to reduce hauling frequencies. For example, the Peace River Regional District is planning to build large storage sheds at many of its transfer stations to reduce transportation costs.

The options for backhauling recyclables to Terrace can also be re-assessed as part of an efficiency review. The current contractor is very costly and it would be worthwhile for the RDKS to confirm if there are other collaboration partners that can provide backhauling services at lower costs.

To limit future cost increases to provide recycling services, the RDKS may also want to look for local alternatives to sending collected materials long distances for recycling while still diverting materials from landfills. The RDKS has already explored alternatives to recycling at sites (e.g. Stewart Transfer Station and the Meziadin area) such as composting or burning. These methods would target material streams the RDKS views as high-priority; residential and commercial cardboard and paper products. The RDKS looked into vermicomposting for this type of feedstock and submitted an expression of interest to the Ministry to access funding via the Organics Infrastructure Program. The request was unsuccessful since the identified feedstock is not listed as approved feedstock to composting facilities in B.C. under the Organic Matter Recycling Regulation (OMRR⁴).

The Ministry intends to amend Schedule 12 of the OMRR to include “non-recyclable paper material”, defined as “paper material contaminated with organic matter that cannot be reasonably recycled into a paper product, and is not contaminated with any substance harmful to humans, animals, plants or the environment”. The Ministry will update guidance with examples of paper and cardboard materials that may be considered suitable for composting. Morrison Hershfield interprets the wording as commercial cardboard not being acceptable feedstock under OMRR unless it is contaminated with organics. The

⁴ The OMRR governs the construction and operation of compost facilities, and the production, distribution, storage, sale and use of biosolids and compost. It provides guidance for local governments and compost and biosolids producers, on how to use organic material while protecting soil quality and drinking water sources.



intended changes to the regulation may still prevent the RDKS from accessing infrastructure funding if recyclables such as paper products that are not contaminated are used in the process.

The Peace River Regional District is also struggling with high recycling costs and is planning to trial vermicomposting in 2020 using cardboard, mixed paper and food waste. This process has already been successfully adopted by the town of Fort Nelson in the cold climate of the Northern Rockies. The RDKS may still want to pursue composting of paper products without financial assistance from the province. Composting is further discussed as part of organics diversion strategy (Strategy 8).

As a last resort, the RDKS may want to set an upper cost threshold for acceptable recycling costs. If the cost threshold is exceeded, the RDKS would consider alternative lower cost options (e.g. composting, burning or landfilling). Once the recycling costs exceed the agreed threshold, alternatives to recycling are implemented until recycling costs can be reduced below the agreed threshold. A cost threshold should be revisited every year.

This is a cost-reduction approach that can have negative impacts that need to be carefully considered. For example, if landfilling is deemed as the only feasible option, the entire concept of source segregation is threatened. The public may struggle to see why anyone should continue to separate recyclables and this can undo the education and outreach efforts to date undertaken by the RDKS and member municipalities. If this is a cost reduction option that PTAC is interested in exploring further, it will be considered as part of MH's Memo for Cost Recovery options.

If the RDKS wishes to have the flexibility to landfill recyclables when recycling is cost prohibitive, the RDKS will need to consider amendments to the bylaws to allow this alternative practice.

Alternatively, the RDKS may simply want to consider charging higher tipping fees for other materials and/or raising taxes to sufficiently fund the true cost of recycling.

Possible options to incorporate in the SWMP include:

- 4A. Maximize the partnership opportunities with stewardship organizations, such as for residential recycling at the Kitwanga Transfer Station and for curbside collection in the Greater Terrace Area.
- 4B. Undertake an efficiency review of the management of recyclables within the region.
- 4C. Pursue composting of paper products at locations where deemed feasible.
- 4D. Set cost threshold when alternative lower cost options (e.g. composting, burning or landfilling) are pursued until recycling is no longer cost prohibitive.

STRATEGY 5. IMPROVE DROP-OFF OPTIONS FOR HOUSEHOLD HAZARDOUS WASTE WHERE GAPS EXIST

Although many household hazardous waste materials are regulated EPR materials, many of them still have limited drop-off options available in parts of the region, especially outside the Greater Terrace Area. Generally no liquids (e.g. used oils/antifreeze, paints, pesticides, flammables, fertilizer) are collected at any RDKS facilities. Stewart Transfer Station is an exception which accepts paint. RDKS does not have an agreement with Product Care or the B.C. Used Oil Management Association (BCUOMA), but promotes drop-off options available at private facilities. With the exception of Do Your Part Recycling, which is a Paint Plus depot which accepts pesticides, flammables, fertilizers for Product Care, there are no drop-off options for these hazardous wastes in the entire region.



The 2017 waste composition study showed that 4.7% of the overall garbage arriving at the Thornhill Transfer Station is made up of household hazardous waste⁵. Single family residential garbage contained 3.0%, ICI waste 6.7% and self-hauled garbage by the public 2.3% of household hazardous waste. Paint, solvents, pesticides and gasoline made up 2.3% of residual waste, while the ICI sector only had 0.3% of the same hazardous materials. Waste from single family residents in the Greater Terrace area contained a larger portion of hazardous wastes compared to that of residents in the City of Terrace (3.6% vs. 2.8%). The difference may result from the gap in service options available outside Terrace.

The Solid Waste Survey undertaken in the spring of 2019 included questions to understand the participation level in available EPR programs in the Terrace Service Area. Based on the survey results, respondents were most unsure where to drop off hazardous products such as smoke detectors and carbon monoxide alarms (27% of respondents), lightbulbs and fixtures (18%), tires (11%), used oil and filters (10%), small appliances (9%), paints, solvents, pesticides (9%), and batteries (6%). The respondents' were able to provide comments via the survey. Based on comments from the Terrace and Hazelton and Highway 37 North Service Areas, almost 8% of the comments related to more education for how to manage waste.



Figure 5 Poster used in 2015 to advertise the roundup event

In 2015 the RDKS undertook a two day roundup event for a large range of hazardous waste (not limited to EPR materials), including chemicals, oils, batteries, paints, cleaning products, and pesticides (Figure 5). The event took place without any partnership with the stewards. It was the first hazardous waste roundup held in 10 years and the collection was staged at sites in Kitimat, New Hazelton and Terrace. It was successful but costly. Participation generally exceeded expectations and the forecasted volumes were accurate apart from receiving a large amount of paints, used oils and industrial-type resins, which had local take-back options available to residents on a year round basis. The total roundup costs for the two day event, were estimated at \$90,000. One of the key recommendation from the 2015 event was to look for opportunities to obtain financial contribution from stewardship organizations for future events. The RDKS may want to implement periodic roundup events to collect hazardous waste materials in locations where permanent drop-off options are not available or feasible to establish.

The RDKS may want to offer permanent drop-off options for targeted EPR materials of hazardous nature.

The Stewart Transfer Station already accepts paint and has potential to expand to accept more EPR materials. The RDKS may also want to consider expanding the accepted EPR material at the Kitwanga Transfer Station to include used oil and antifreeze.

Used oil is not collected at any of the RDKS transfer stations. Used oil is collected at three private facilities in the Hazelton and Hwy 37 North Service Area (Geraco Industrial Supplies in New Hazelton, Petro Canada in Stewart, and Charlie's Shop in Dease Lake) and three



Figure 6 Modified containers designed for used oil storage on behalf of BCUOMA

⁵ Hazardous waste included batteries, light bulbs, oil & antifreeze, paint, pesticides, medications, biohazard, needles, solvents, other hazardous waste and other non-hazardous waste.

private facilities in the Terrace Service Area (OK Tire & Auto Service, Terrace Toyota and Petro Canada). Currently BCUOMA offers a \$0.30/liter rebate for used oil and antifreeze, as well as infrastructure grants to cover the cost of facility upgrades related to the collection of used oil program material⁶ (Figure 6). When partnering with Product Care, the stewardship organization would provide collection site guidelines, spill kits, weather proof containers for the collection of paint, pesticides and gasoline products⁷. The RDKS will need to increase training for the attendants to enable them to educate the facility users.

Whichever option the RDKS pursues (i.e. collection via roundup events and/or permanent drop-off at facility), there must be sufficient resources dedicated to educating and promoting consumers where there are available drop-off options.

The RDKS is also recommended to address non-EPR waste (such as mercury, diesel fuel, acid, household cleaners, garden products, and pesticides) by lobbying the province to expand the list of regulated products (refer to Strategy 1 of this Memo).

Possible options to incorporate in the SWMP include:

- 5A. Offer recurring roundup collection events for hazardous waste in potential partnership with stewardship organizations.
- 5B. Offer permanent drop-off options for targeted EPR materials at suitable transfer stations through partnership with stewardship organizations.

STRATEGY 6. CONSIDER OPTIONS FOR MATTRESS RECYCLING

Used mattresses are not accepted for recycling at any locations in the RDKS and are often undesirable with little to no second-hand market. Mattresses are currently landfilled throughout the region. It is unclear how many mattresses are disposed of per year.

There are numerous issues with managing mattresses as part of residual waste going to landfill. Due to their bulkiness, mattresses are hard to manage at the transfer stations and landfills. Their low density makes them undesirable landfill material, and the springs in mattresses have a tendency to impact facility equipment (e.g. potential puncture hazards).

Local governments across BC have reported that mattresses make up a significant part of illegally dumped materials and resulting in high clean-up and management costs. In recent years many local governments have pressured the MOE to include mattresses under the Recycling Regulation as a new EPR program.

Mattress recycling in rural parts of BC is not common but it does occur. Morrison Hershfield undertook research into current practices as part of assessing the economic and environmental impacts of mattress recycling in BC for Metro Vancouver in 2017. The study showed that often mattresses are locally disassembled and only parts of mattresses are recycled (typically steel and clean wood). The majority of recycled materials from mattresses (e.g. foam) in Metro Vancouver is sent to the US for recycling. The primary end use of the recycled foam is for use as carpet underlay. The two mattress

⁶ Based on personal communication with Will Burrows, BC Used Oil Management Association, December 4, 2019.

⁷ Based on personal communication with Mannie Cheung, Product Care, December 16, 2019.



recyclers in Metro Vancouver have experienced difficulties due to fluctuating markets for recycled commodities⁸.

Dismantling of mattresses needs to be undertaken to a level that is acceptable to local scrap metal dealers and other recyclers. There is a potential need for specialized equipment and therefore this may not be an appropriate solution for every municipality. Generally, the mattress foam, individual pocket coil and soiled mattresses are still being disposed to landfill.

Strategy 1 (Lobby for improved accessibility to EPR programs) involves the RDKS continuing to pressure the Ministry on new materials that should be covered by the Recycling Regulation, such as mattresses. Until mattresses are managed under EPR, the RDKS may want to investigate the feasibility of recycling mattresses (or parts of them).

Possible options to incorporate in the SWMP include:

- 6A. Investigate feasibility of recycling mattresses (or parts of them) in the region, and implement pilot when deemed feasible.

STRATEGY 7. INCREASE DIVERSION OF C&D WASTE

Construction and demolition (C&D) waste commonly make up a large portion of the disposed solid waste stream. The waste may consume significant airspace due to its bulky nature and depending on the performance of the waste placement and compaction. The C&D sector is responsible for about 12% of the waste generated in the Terrace service area. However, the sector is responsible for 17% of the total amount of waste disposed, which means that the diversion rate of C&D waste is lower than that for the other waste sectors, especially the residential sector. Diversion of C&D waste (~ 5%) is currently achieved through segregation of clean wood waste and beneficial use of contaminated soil at the Forceman Ridge Landfill.

A waste composition study was performed for the waste accepted at Thornhill Transfer Station in September 2017. Waste is accepted from three main sectors - Single-family residential curbside collection; Industrial, commercial, and institutional (ICI); and public drop-off. The public drop-off waste accepted at the Thornhill Transfer Station is made up by two streams; MSW and C&D waste which are collected separately. The largest components of C&D waste were building material (33.9%), glass (23.3%), and non-compostable organics (21.6%). Roofing materials made up over 70% of the building material category.

No waste composition study has been performed for commercial C&D loads accepted at the Forceman Ridge Waste Management Facility. However, MH understands that some commercial C&D loads contain significant portions of compostable organics, such as clean wood (e.g. dimensional lumber and pallets) as well as asphalt roofing materials, identified through visual inspection.

Organic materials such as yard waste, tree branches and compostable structural wood waste is classified as restricted waste in the Terrace service area under Bylaw 671. Organic materials are not restricted in the Hazelton and Hwy 37 North service area (Bylaw 688) however segregation is encouraged at all RDKS facilities. All loads containing restricted waste are subject to a \$100 fine. A reduced tipping fee is applied to loads containing clean organic materials. MH understands that the protocols and limited enforcement of clean wood waste segregation in the Terrace service area is

⁸ Assessment of Economic and Environmental Impacts of Mattress Recycling in BC, report by Morrison Hershfield, on behalf of Metro Vancouver, June 14, 2017.



creating some confusion and frustration among local contractors. Clear segregation requirements should be applied and enforced to provide a level playing field for all stakeholders while incentivizing those who choose to segregate. To further enable enforcement of source segregation, clean wood waste could be specified as its own waste category in the applicable bylaw and classified as restricted waste. Alternatively, segregation of clean wood waste and an upper contamination limit could be added as a requirement under the RDKS issued disposal permits required for disposal of any C&D loads over 5m³, currently classified as controlled waste.

A viable use for the segregated clean wood waste has not been identified at this time. The RDKS is burning the waste on a regular basis, as approved under the applicable Operating Certificates. The RDKS has explored the option of grinding the wood for bulking in their composting process, however hog fuel can be sourced locally at a third of the cost, making grinding financially unviable.

Roofing materials such as asphalt shingles are recyclable and are most commonly ground and reused in pavement. Asphalt shingles can also be used in landfill operations either for alternative daily cover or as road base for access roads. Asphalt shingles are currently not segregated from disposal at RDKS waste management facilities, nor is the material category identified as controlled, restricted or prohibited under applicable bylaws. Based on the 2017 waste composition audit, roofing material makes up a significant portion of the disposed mixed waste stream. In addition, 43 tonnes of asphalt roofing were accepted at Forceman Ridge Waste Management Facility in 2018 as separate loads. The RDKS may want to explore viable options for segregation and recycling or beneficial use.

Approximately 5% of the building material portion of the self-haul C&D waste stream accepted at the Thornhill Transfer Station consists of drywall, gypsum and plaster. Gypsum, mud and tape commonly contain asbestos, especially if manufactured prior to the early 1990s. If inhaled, asbestos can cause serious long-term health issues. Asbestos is classified as controlled waste under Bylaws 671 and 688. Asbestos is accepted at the Forceman Ridge Waste Management Facility, the Hazelton Waste Management Facility, and Meziadin Landfill (but not Thornhill and Kitwanga transfer stations or Rosswood, and Iskut landfills). Disposal of gypsum together with biodegradable waste or under anaerobic conditions, can lead to the generation of hydrogen sulphide. Hydrogen sulphide is an odorous, poisonous, corrosive, and flammable gas which can be harmful to human health and surrounding environment. Special considerations and treatment may be required if collected landfill gas contain elevated levels of hydrogen sulphide. Gypsum can relatively easily be recycled into new drywall. If the RDKS were to implement gypsum segregation, two streams would be required, one for drywall produced prior to 1990 and one for drywall produced after 1990, as these streams would require separate processing.

Concrete is another common component of C&D waste. Crushed concrete can be used as road base at landfills or for other operational purposes. Broken concrete 300mm in diameter or smaller is classified as controlled waste under Bylaws 671 and 688 and disposal thereof requires an RDKS issued permit. Larger pieces are classified as prohibited waste and is charged double the tipping fee of that for smaller fraction concrete.

The amount of C&D waste being disposed could potentially further be reduced if the RDKS decides to explore options to encourage segregation of reusable building materials and deconstruction of buildings rather than demolition (as discussed in *Summary of Reduce and Reuse Options to Consider for Inclusion in the Solid Waste Management Plan*). Deconstruction would result in more segregated waste streams that either could be recycled or reused. Recycling and reuse infrastructure would first have to be established, including allocated segregation space for the solid waste management facilities, recycling capacity and/or reuse stores or share sheds.



Any changes to the bylaw and segregation activities should be coupled with changes to the material categories recorded through the scale software programs.

Changes to diversion programs and recycling should be implemented in conjunction with outreach and education measures. Communication material targeting specific stakeholders could be developed and distributed prior to changes being made. This would include updating the Construction Site Waste Management guide for Terrace Area. The Guide currently lists clean wood waste under controlled waste and it states that the material “should be kept separate from general garbage” which may cause unclear direction and confusion. Advanced distribution of information would allow stakeholders to change their operating procedures in advance to meet the updated segregation requirements.

If viable markets are established for any of the divertible materials, the RDKS could consider classifying these materials as prohibited, coupled with enforcement. Consideration should be taken to the implications on tipping fee revenue from the prohibited materials, and adjustment of the overall tipping fee structure may be warranted.

Possible options to incorporate in the SWMP include:

- 7A. Create a C&D waste working group with parties from the C&D sector and if suitable from industry.
- 7B. Perform a waste composition study of commercial C&D waste to identify and quantify recyclable waste streams.
- 7C. On a regular basis conduct research to identify local diversion options for asphalt shingles, dry wall and clean wood.
- 7D. Explore the need for operational material at the landfills and the options to use shingles and/or concrete for beneficial use.
- 7E. Under existing bylaws specify identified materials, such a clean wood waste and asphalt shingles, and classify these as restricted materials. Amendments to the tipping fee structure to encourage segregation of these materials may also be warranted.

CURRENT ORGANICS DIVERSION

Current organics⁹ diversion initiatives undertaken by the RDKS include:

- Curbside organics collection to residents in the Terrace Service Area who live outside the City of Terrace.
- Operation of a composting facility at the Forceman Ridge Waste Management Facility using an in-vessel Gore™ cover system capable of processing 4,000 tonnes of organic material per year (see Figure 7).
- Production of compost, which will initially be used in the closure process of the Thornhill Landfill and Kitwanga Landfill to reduce costs of bringing in external material. Eventually the composting process will generate Class A compost, which may also be made available to the community for use on community gardens or parks.

⁹ Organic waste includes yard and garden waste, food scraps (including cooked foods, meat, dairy, grains, fruits and vegetables), and food-soiled paper/cardboard.





Figure 7 Composting facility at Forceman Ridge Waste Management Facility.

A number of organics diversion initiatives are also underway by other parties in the region. The City of Terrace offers curbside organics collection to its residents and operates a yard waste composting facility at its public works yard. The compost is used by the City in parks and recreation sites, lawn application and for other purposes. The District of Kitimat operates a windrow compost at its landfill. It processes yard waste dropped off by customers. Approximately eight First Nation communities are currently trialing rotating drum composters within their respective lands.

Collection of organic waste from ICI properties and multi-family buildings in the Terrace Service Area is managed privately and the organics are processed at the composting facility at the Forceman Ridge Waste Management Facility.

The importance of diverting organic waste from disposal is reflected in the provincial goal of having organic waste disposal restrictions in place for 75% of the provincial population by 2020. Within the RDKS up to 50% of the population are covered by such restrictions. Disposal restrictions must be accompanied by alternative management solutions for organic waste generators. Composting is not available in some areas.

The RDKS has disposal restrictions on organic materials where there are organics diversion options available. The facility regulation bylaw in the Hazelton and Highway 37 North Service Area does not require segregation of organics nor are there centralized composting facilities within the service area.

This section provides one new strategy and associated initiatives for the RDKS to undertake to increase organics diversion in the region.

STRATEGY 8. ESTABLISH ORGANICS PROCESSING CAPACITY AT SUITABLE FACILITIES

The RDKS has identified the need to establish additional organics processing capacity in targeted areas. Organic waste is costly to transport long distances and the RDKS has identified composting as a potential additional service at the Hazelton Waste Management Facility. The design of the Hazelton Waste Management Facility includes a currently unused space for a potential future compost facility

with a leachate catchment system. RDKS staff has understood from local residents that there is a need for compost in local gardens.

Based on a survey of citizens conducted in March 2019, it is estimated that about half of the population currently divert some portion of their food and yard waste through backyard composting. Fifteen percent indicate that they use food scraps as animal feed, and about one third stated that they would use a public composting facility if available.

The RDKS estimated the total quantity of compostable organics available for processing at the Hazelton Waste Management Facility and applied capture rates recorded in the Greater Terrace Service Area. Depending on whether First Nation communities would participate and bring feedstock to the facility directly and via the Kitwanga Transfer Station, the estimated feedstock ranges from 200 – 500 tonnes of feedstock per year. The RDKS has undertaken research on suitable composting technologies for this estimated tonnage. The RDKS may want to issue a request for qualifications to seek technology suppliers who can provide high-level designs and costs for the facility. This will enable the RDKS to assess if a composting facility at the Hazelton Waste Management Facility is financially feasible. The submissions may reveal potential collaboration partners that are able to reduce overall costs.

As mentioned in Strategy 4 when reviewing options to reduce recycling costs, the RDKS will need to decide if the compost should process feedstock such as uncontaminated/clean paper products (e.g. commercial cardboard which is the main driver for RDKS' high recycling costs). MH understands that accepting this material may prevent the RDKS from accessing infrastructure funding.

The community of Stewart has looked at in-vessel composting options for the Stewart Transfer Station. Wildlife protection is the main concern for this area and the site currently does not have any suitable infrastructure (building to house the in-vessel compost and connection to electricity). The RDKS may want to support the District of Stewart to identify feasible options for the community.

The RDKS may want to lobby for the OMRR to also include uncontaminated paper products (including cardboard) as approved feedstock where these products are cost prohibitive to recycle. This would allow rural communities to compost cardboard and paper if it is cost effective.

Once processing capacity has been established in an area, the RDKS can also support the communities nearby to introduce an organics curbside collection service. This option is described further as part of Strategy 4.

Possible options to incorporate in the SWMP include:

- 8A. Issue a request for qualifications to assess suitable designs and costs to establish a composting facility at Hazelton Waste Management Facility, and implement if deemed feasible.
- 8B. Support the District of Stewart to assess the feasibility of a small-scale compost facility and support implementation if deemed feasible.
- 8C. Lobby for the regulation governing organics management to include uncontaminated paper products as approved feedstock where recycling is cost prohibitive.

SYSTEM EFFICIENCY IN THE CONTEXT OF WASTE DIVERSION

The RDKS' solid waste management system has undergone some major changes over the past few years through the construction of two new landfills, three new transfer stations, recycling depots, a compost facility, and closure of four landfills. The RDKS has also implemented a number of new programs, including three-stream curbside collection of garbage, recyclables and organics in the Terrace area, new disposal restrictions, and cost recovery models that considered taxes and tipping fees.

Users of the service, RDKS staff, and contractors providing services, must continue to become accustomed to new operations and expected standards of service. The RDKS has identified that optimizing operations to get maximum benefit from the infrastructure and services is a priority.

The current situation in terms of system performance and efficiency and the target operational objectives are presented in Technical Memo 1: Efficiency within RDKS solid waste management functions. Key consideration highlighted in the memo include:

- Contractor performance
- RDKS staffing and roles
- Operating roles, responsibilities and expected timelines
- Information availability
- Policies and guidelines
- Service standards and plans
- Internal and external communication and education

This section provides three strategies and associated initiatives for the RDKS to undertake to improve system performance and efficiency.

STRATEGY 9. AMEND SOLID WASTE BYLAW TO ENCOURAGE WASTE DIVERSION

Within the Region there are a number of bylaws in place to encourage waste diversion and responsible management of waste materials. Waste Regulation Bylaw 671 and 688 outlines the fees and regulations for the deposit of waste at the Regional District's facilities in the Terrace and Hazelton and Highway 37 North waste management facilities, respectively. Bylaw 682 outlines an updated fee schedule for the Terrace service area. The bylaws do not apply to the Dease Lake and New Aiyansh Landfills. Local municipalities have their own municipal bylaws.

Controlled, restricted and prohibited materials are identified in the RDKS bylaws. The materials included in these categories varies between the two service areas because access to service varies between the areas. The main difference between the bylaws is the classification of certain materials and the RDKS' ability to control and enforce the diversion thereof. For example, EPR materials are classified as prohibited in the Terrace service areas and restricted in the Hazelton and Hwy 37 North service area. Figure 8 shows the controlled, restricted and prohibited materials listed in the two bylaws. The differences between the two are highlighted in red. The waste classifications could be adjusted to create a more cohesive and fair system for those materials where services and recycling options exist in both service areas. There are currently no disposal restrictions on organic materials in the Hazelton and Highway 37 North service area nor are there centralized composting facilities within the service

area. In comparison to the Terrace Service Area, fewer households receive curbside collection of recyclables.

Terrace Service Area – Bylaw 671		
Controlled materials	Restricted materials	Prohibited materials
<ul style="list-style-type: none"> • Animal carcasses > 50kg • Asbestos • Contaminated Soils • Land Clearing Waste or C&D Waste in excess of 5m³ • Clean Soils • Broken concrete • Broken asphalt • Waste ash from incinerators • Septage 	<ul style="list-style-type: none"> • Metal • Organic Materials 	<p>Class A</p> <ul style="list-style-type: none"> • Hazardous Waste • Radioactive waste • Slaughter Waste • Waste that is on fire or smoldering or highly flammable • Explosive or highly combustible materials • Other Sewage Waste <p>Class B</p> <ul style="list-style-type: none"> • Auto hulks • Broken concrete ≥300 mm • Broken asphalt ≥300mm <p>Class C</p> <ul style="list-style-type: none"> • EPR Materials • Tires • Cardboard and Paper Products
Hazelton and HWY 37 North Service Area – Bylaw 688		
Controlled materials	Restricted materials	Prohibited materials
<ul style="list-style-type: none"> • Animal carcasses > 50kg • Asbestos • Contaminated Soils • Land Clearing Waste or C&D Waste in excess of 5m³ • Clean Soils • Broken concrete • Broken asphalt • Waste ash from incinerators • Septage • Garbage or Restricted Waste originating from Commercial Premises 	<ul style="list-style-type: none"> • Metal • White goods • Cardboard and Paper Products originating from Commercial Premises • EPR Electronic products • EPR PPP • EPR Tires 	<p>Class A</p> <ul style="list-style-type: none"> • Hazardous Waste • Radioactive waste • Slaughter Waste • Waste that is on fire or smoldering or highly flammable • Explosive or highly combustible materials • Other Sewage Waste • Waste that is not MSW <p>Class B</p> <ul style="list-style-type: none"> • Auto hulks • Broken concrete ≥300 mm • Broken asphalt ≥300mm <p>Class C</p> <ul style="list-style-type: none"> • EPR Materials (excl Restricted Waste) • Organic Materials that originate from Industrial Work Camps or from outside the Service Area • Tires that do not fall within the definition of EPR materials.

Figure 8 List of controlled, restricted and prohibited materials in the RDKS as set out by Bylaw 671 and 688. The differences between the two bylaws are identified and highlighted in red.

Clean wood waste is currently diverted at all RDKS sites. However clean wood waste, which falls into the definition of organic materials, is only classified as restricted in the Terrace service area. The current operating certificates allow the RDKS to burn clean wood waste at all their sites except the Thornhill Transfer Station. However, clean wood waste collected at the Thornhill Transfer Station is



transferred to Forceman Ridge Waste Management Facility where it is burnt. The RDKS may want to consider creating and defining a separate waste category for clean wood waste and classifying the new category as restricted in both bylaws, with the objective to encourage continued diversion from landfilling, while having the option to enforce through contaminated load inspections.

Schedule “G” in Bylaws 671 and 688 outline fines applicable to disposal offences. Depositing of a load containing controlled waste is subject to a \$500 fine, whereas loads containing restricted materials is subject to a \$100 fine. The fine for loads containing prohibited materials vary between \$100 and \$1,000 depending on the class (A, B or C) of the prohibited material. The RDKS has developed a non-compliance form for the contractor to use and report back to RDKS. To date there has been limited follow up on reported non-compliances.

A relatively common alternative approach to issuing fines for contaminated loads is to apply surcharges. For example, in Peace River Regional District, unsorted loads are charged double the tipping fee compared to sorted loads. Application of surcharges would require visual inspection and an established level of acceptable contamination. Discounts could also be applied to materials that are of value or needed for operations, such as lower tipping fees for metal and organic materials in the Terrace service area.

Major appliances and other MARR products are currently accepted at the Thornhill Transfer Station, however this is done without an agreement with MARR. The RDKS is exploring the option to make an agreement with MARR, however to qualify for funding support a bylaw amendment is required where the current fee schedule is adjusted and MARR products are accepted for free.

Possible options to incorporate in the SWMP include:

- 9A. Amend the definition of organic materials and develop a separate category for clean wood waste. Include this new category under restricted material under both Bylaw 671 and 688.
- 9B. Amend the list of prohibited materials to be as consistent as possible between the two service areas, granted diversion options exist and are developed.
- 9C. Adjust the current fee schedule to encourage increased diversion. Consider surcharges on contaminated loads.
- 9D. Adjust the current fee schedule to allow agreements with stewards such as MARR.

STRATEGY 10. SUPPORT COMMUNITIES TO INTRODUCE CURBSIDE COLLECTION

Many communities offer curbside collection for recyclables, organics and residual waste (garbage). The RDKS may want to take on a facilitating role to encourage communities to offer consistent services, where possible.

The RDKS promotes fair and equitable access to recycling programs and has communicated with the stewardship organization responsible for residential PPP, Recycle BC, that the best way to eliminate the barriers to recycling is through a curbside collection program. In correspondence between the RDKS and Recycle BC, the Regional District has proposed areas in the Region for provision of Recycle BC curbside service.

The RDKS may want to facilitate the communication between member municipalities and Recycle BC to seek opportunities to form partnerships with the steward and obtain financial support to cover recycling costs.



In communities where organics processing capacity has been established, the RDKS can support member municipalities in the implementation of curbside organic waste collection that fits the selected organics processing technology. The RDKS can support with templates for request for proposal, tender documents, contracts, including sorting requirements for recyclables (compatible with Recycle BC) and outreach material for program roll-out. Consistent waste management labeling and universal colour coding across the region would help to reduce consumer confusion around sorting of recyclables and organic waste materials.

By providing support to communities who want to provide curbside collection of recyclables, the RDKS can facilitate consistent service across the region. This approach would enable a fast transition to RDKS if a region-wide service was to be implemented.

Possible options to incorporate in the SWMP include:

- 10A. Support the implementation of curbside collection of recyclables and/or organics in communities in the region.

STRATEGY 11. INCENTIVIZE IMPROVED CONTRACTOR AND DIVERSION PERFORMANCE

The RDKS facility contractors are currently bound to perform certain task under their contracts conditions. Additional incentives may be warranted to further increase the performance under these contracts and, in this context, increase diversion at RDKS facilities. Studies in the UK show that introduction of staff incentives have helped boost the diversion performance at drop-off facilities. Incentives may include increased staff/contractor involvement through meet and greet procedures, shared monthly diversion reports, regular training but also direct financial payments, vouchers or charitable donations for reaching certain performance targets. Performance targets could include diversion of certain materials, site cleanliness, visitor satisfaction or maximizing container or skid loads.

A high-level cost benefit analysis may be warranted before an incentive based program is considered or implemented. The potential cost savings from increased diversion, improved contractor adherence to the standard operating procedures and contract expectations, and reduced need for RDKS supervision should be assessed. In addition, current contracts and local employment practices should be considered before any financial incentives are implemented.

Possible options to incorporate in the SWMP include:

- 11A. Explore the option of introducing an incentive based program to improve contractor and diversion performance through a combination of education, increased contractor involvement and potentially financial rewards.

IMPACTS OF POTENTIAL STRATEGIES TO INCREASE RECYCLING AND COMPOSTING

Table 1 provides an overview of the anticipated financial impacts if the strategies are implemented in the region. The table is followed by Table 2 which shows which stakeholder groups are affected by the strategies outlined in this memo.



Table 1. Anticipated financial impact related to the identified reductions and reuse strategies.

#	Strategy	Operational costs	Capital Costs	Comments
1	Lobby for improved accessibility to EPR programs	Low	Low	
2	Provide continuous diversion education and outreach programs coupled with enforcement	Low-Medium	Low	Cost depends on the extent of the education and outreach and if provided by in-house or contracted staff. Enforcement could generate revenue through fines and/or surcharges.
3	Support ICI to encourage waste diversion	Low-Medium	Low	Cost depends on the extent of the outreach and support provided to commercial generators.
4	Reduce recycling costs	Low	Low	Collaboration with stewards aims to reduce the net cost of the current recycling programs.
5	Improve drop-off options for household hazardous waste where gaps exist	Medium-High	Low-Medium	Cost depends on operating frequency for temporary collection service and number of depots with permanent collection options. Collaboration with stewards aims to reduce the net cost of the current recycling programs.
6	Consider options for mattress recycling	Low-Medium	Low	
7	Increase diversion of C&D waste	Low-Medium	Low-Medium	Cost depends on waste management option. Enforcement of segregation requirements could generate revenue through fines and/or surcharges.
8	Establish organics processing capacity at suitable facilities	Low-High	Low-High	Cost depends on technology selected.
9	Amend solid waste bylaw to encourage waste diversion	Low	Low	Required segregation of additional materials coupled with enforcement could generate revenue through fines and/or surcharges.
10	Support communities to introduce curbside collection	Low-Medium	Low	Costs to implement curbside collection will fall on member municipalities.
11	Incentivize improved contractor and diversion performance	Low-Medium	Low	Cost depends on approach taken. Financial incentives could be small, continuous contractor education and engagement would require some additional funds.

Table 2. Organizations and categories of individuals impacted by the identified recycling strategies.

#	Strategy	RDKS	Member municipalities	Residents	Waste haulers and recycling facilities	ICI sector	Non-profit organizations	Comments
1	Lobby for improved accessibility to EPR programs							
2	Provide continuous diversion education and outreach programs coupled with enforcement							Additional contractor involvement will likely be required to monitor accepted loads.
3	Support ICI to encourage waste diversion							
4	Reduce recycling costs							
5	Improve drop-off options for household hazardous waste where gaps exist							
6	Consider options for mattress recycling							
7	Increase diversion of C&D waste							All stakeholders generating, hauling or managing C&D waste are affected.
8	Establish organics processing capacity at suitable facilities							
9	Amend solid waste bylaw to encourage waste diversion							Amendments to bylaws are likely to affect all stakeholders and waste generators
10	Support communities to introduce curbside collection							
11	Incentivize improved contractor and diversion performance							

Appendix 28 – Memo 9: Options for Residual Waste Management at Existing Facilities to Consider for Inclusion in the SWMP (March 2020)

MEMORANDUM



TO: Erin Blaney, Regional District of Kitimat Stikine

FROM: Veronica Bartlett and Eva Robertsson, Morrison Hershfield

PROJECT No.: 190497600

RE: Options for Residual Waste Management at Existing Facilities to Consider for Inclusion in the Solid Waste Management Plan

DATE: March 3, 2020

\\MH.LOCAL\DATA\PROJ\2019\190497600-RDKS SOLID WASTE MANAGEMENT PLAN\08. WORKING\04 RESIDUALS MANAGEMENT - EXISTING FACILITIES\MEM-2020-03-03-RESIDUAL WASTE MANAGEMENT-EXISTING FACILITIES_RDKS SWMP-190487600_FNL.DOCX

Under the Environmental Management Act, regional districts are required to have a solid waste management plan (SWMP), which must be developed following the solid waste management planning guidelines provided by the Ministry of Environment and Climate Change Strategy (the Ministry) for content and process.

The Regional District of Kitimat Stikine (RDKS) is in the process of developing a new SWMP. The planning process was initiated in 2017 and steps 1 and 2 of the planning process were completed in 2018, resulting in the formation of the Public and Technical Advisory Committee (PTAC), assessment of the current system, development of the consultation plan and development of six technical memos covering specific topics. In November 2019, Morrison Hershfield (MH) was commissioned to provide consulting support to continue developing the SWMP for the RDKS.

This is Morrison Hershfield's third technical memo in a series of five, each presenting potential management options on key solid waste related topics:

- Summary of reduce and reuse
- Recycling and composting
- **Residual Waste Management at Existing Facilities**
- New Service Areas for RDKS
- Cost Recovery

The content of each memo will be presented to the PTAC. The feedback on these memos will be considered as MH develops a final memo outlining Preferred Options to be included in the new draft SWMP, which will be brought to the public for consultation.

This memo provides context with respect to residual waste management and existing facilities operated by the RDKS and highlights current key challenges and opportunities that should be considered. The memo outlines a number of potential strategies and options the RDKS may want to pursue to improve residual waste management.

CONTEXT

The RDKS' solid waste management system has undergone some major changes over the past few years, including: the construction of a new landfill, the expansion of another with significant upgrades, and the construction of three new transfer stations, two with integrated recycling depots. Additional changes include the closure of four landfills; two RDKS-owned and two owned by member municipalities.

The siting, design, and construction of the different facilities, especially Forceman Ridge Waste Management Facility (WMF), required major capital investment. The RDKS has also implemented a number of new programs, including three-stream curbside collection of garbage, recyclables and organics in the Terrace Service Area, the implementation of new disposal restrictions, and cost recovery models tailored for each service area.

The population growth in the Terrace Service Area and the District of Kitimat is closely tied to the development of the LNG industry and the global market. The waste generation from all sectors; residential, industrial, commercial, and institutional, is therefore difficult to predict. As such, the future rate of landfill airspace consumption is also difficult to predict.

As a result of the system overhaul, solid waste facility users, residents, RDKS staff, and contractors providing services have faced a challenging learning curve to get accustomed to the new system and expected standards of service. The RDKS has identified areas where operating procedures at solid waste facilities can be improved to get maximum benefit from the infrastructure and solid waste management services.

Current system performance and efficiency challenges were presented in Technical Memo 1: Efficiency within RDKS solid waste management functions. Key consideration highlighted in the memo included:

- Contractor performance
- RDKS staffing and roles
- Operating roles, responsibilities and expected timelines
- Information availability
- Policies and guidelines
- Service standards and plans
- Internal and external communication and education

One of the nine guiding principles adopted by PTAC for the planning process is the need to “Improve operational efficiency of the current solid waste system”. This guiding principle will underpin the strategies and options presented in this memo.

CURRENT RESIDUAL WASTE MANAGEMENT SYSTEM

Residual waste is managed through a system that is described below using three categories: Garbage collection, transfer stations, and landfills.

1.1 Waste Collection

The current system for collecting garbage within the region is summarized in Table 1 below. Apart from the City of Terrace which operates its own collection vehicles for residential garbage, the collection service provided to residents in the RDKS service areas and in other municipalities are contracted out.

Table 1 Summary of Residential Garbage Collection Programs in RDKS.

Municipality	Service Provider	Collection Frequency	Collection Type
City of Terrace	Municipal	Biweekly	Automated
District of Stewart	Municipal	Weekly	Manual
Village of Hazelton	Municipal	Twice Weekly	Manual
District of New Hazelton	Municipal	Biweekly	Manual



Municipality	Service Provider	Collection Frequency	Collection Type
Electoral Areas C and E	RDKS	Biweekly	Manual
District of Kitimat	Municipal	Weekly	Manual
Kitselas	Band Operations & Maintenance Department	Biweekly	Manual
Kitsumkalum	Private Contractor	Biweekly	Manual
Iskut	Band Operations & Maintenance Department	Weekly	Manual
Gitanyow	Band Operations & Maintenance Department	Weekly	Manual
Gitwangak	Band Operations & Maintenance Department	Weekly	Manual
Gitsegukla	Band Operations & Maintenance Department	Weekly	Manual
Witset	Band Operations & Maintenance Department	Weekly	Manual
Gitanmaax	Band Operations & Maintenance Department	Weekly	Manual
Glen Vowell	Band Operations & Maintenance Department	Weekly	Manual
Hagwilget	Private Contractor	Weekly	Manual
Kispiox	Band Operations & Maintenance Department	Weekly	Manual

1.2 Transfer Stations

The RDKS currently has three transfer stations within its boundaries as summarized in Table 2 below.

Table 2 Summary of RDKS Transfer Stations.

Facility Name	Service Area	Scales	Residual Waste transferred to:
Thornhill Transfer Station	Terrace	Yes	The Landfill at Forceman Ridge WMF
Stewart Transfer Station	Hazelton and Highway 37 North	No	Meziadin Landfill
Kitwanga Transfer Station	Hazelton and Highway 37 North	No	The Landfill at Hazelton WMF

The Thornhill Transfer Station (TTS) is equipped with scales and accepts garbage from curbside collection vehicles operated by the City of Terrace, Kitselas First Nation, and the contracted collector for Kitsumkalum and the RDKS. Self-hauled residential waste and construction and demolition (C&D) debris are also accepted at the TTS in loads under 5 cubic meters in size. Tipping fees are applied based on weight, as laid out in Bylaw 671.

The Stewart and Kitwanga Transfer Stations, guided under Bylaw 688, do not have scales and do not charge tipping fees to residents or businesses from within the Service Area. Volume-based tipping fees



are applied to asbestos, contaminated soil, and any material from industrial sources. The RDKS operates all three transfer stations under contracted operation agreements.

1.3 Landfills

There are five operational landfills in the region that are owned by the RDKS, and three landfills owned by other entities. These facilities are summarized in Table 3 below.

Table 3 Summary of Operational Landfills in Region

Facility Name	Ownership	Tonnage (2017)	Scale	Remaining Lifespan	Accepting waste from:
Forceman Ridge WMF	RDKS	6903	Yes	> 100 years	Terrace Service Area and Thornhill Transfer Station
Rosswood Landfill	RDKS	50	No	~20 years	Rosswood area residents only
Hazelton WMF	RDKS	3100	No	~50 years	The Hazeltons, east to Wisset and north to Kispiox, and the Kitwanga Transfer Station
Iskut Landfill	RDKS	150	No		Iskut Band and Electoral Area D residents
Meziadin Landfill	RDKS	2800	No	~50 years	Stewart Transfer Station, residents of the Meziadin area, and industrial camps
District of Kitimat Landfill	District of Kitimat	6250	No	<3 years Phase 2 ~27 years Phase 2 and 3 ³	District of Kitimat
Dease Lake Landfill	MOTI ¹	100	No		Dease Lake, Telegraph Creek, and surrounding Electoral Area F residents
New Aiyansh Landfill²	Village of Gitlaxt'aamiks	1200	No		Nisga'a Nation and Electoral Area A residents
Telegraph Creek Landfill²	Telegraph Creek Band		No	Closure imminent	Telegraph Creek Band and Electoral Area D & F Residents

¹ Ministry of Transportation and Infrastructure

² RDKS contributes cost sharing funding to the Nisga'a Lisims government and Telegraph Creek Band for Electoral Area users.

³ District of Kitimat does not have the authority, under the 2016 BC Ministry of Environment Landfill Criteria for Municipal Solid Waste, to expand laterally into Phase 3 without significant capital investment in design and operational improvement. The future of the Kitimat Landfill is currently undecided as the District of Kitimat is evaluating their long-term disposal options and relating costs.

In addition to the active landfills, there are four recently closed landfills within the RDKS; the Thornhill Landfill, Stewart Landfill, Kitwanga Landfill and Terrace Landfill. RDKS staff manage ongoing environmental monitoring at all operational RDKS-owned landfills and the closed Thornhill and Kitwanga landfills. Closure monitoring at the Terrace and Stewart landfills remains the responsibility of their respective municipalities.

All RDKS-owned landfills are operated under contracted operation agreements. The Forceman Ridge Waste Management Facility is the only landfill equipped with a weigh scale.

In 2017, an estimated 21,003 tonnes¹ of waste was landfilled in the RDKS when including quantities disposed at the four landfills not owned by the RDKS. In the Terrace Service Area, scale data indicates 51% of the waste disposed is from the ICI sector, 26% is from the residential sector, 17% is C&D waste, and the remaining 6% drop-off waste received in loads under 5 m³ in size. Due to lower ICI activity in the Hazelton and Highway 37 North Service Area, it is assumed that a higher proportion of the waste is generated, and therefore landfilled, by the residential sector.

The majority of waste in the Terrace Service Area flows through the Thornhill Transfer Station for final landfilling at the Forceman Ridge WMF. Both facilities are equipped with scales. Residential waste from the community of Rosswood is landfilled at the RDKS owned Rosswood Landfill. None of the waste management facilities in the Hazelton and Highway 37 North Service Area are equipped with weigh scales.

Based on the estimated 2017 disposal tonnages¹, the landfilled waste is distributed fairly evenly between the Terrace Service Area, the Hazelton and Highway 37 North Service Area, and the District of Kitimat (approximately one third each of the total estimated 21,000 tonnes landfilled within the RDKS).

This section provides a summary of the six potential new strategies and initiatives that aim to further improve residual waste management at existing solid waste facilities and reduce the associated costs in the region.

STRATEGY 1. SET LIMITS FOR SOLID WASTE ACCEPTED FROM OUTSIDE THE SERVICE AREA

The siting, design, construction, and operation of all RDKS solid waste management facilities are partially funded through tax requisition collected from the two service areas. The Terrace Service Area is funded by a 50% taxation 50% tipping fee requisition model, and the Hazelton Highway 37 Service Area is funded mainly through taxation with the only tipping fees being those charged to industrial users such as mine camps, or for special handling materials such as asbestos.

These funding mechanisms are important to consider when accepting solid waste from sources outside of each service area, including from industrial work camps. Out-of-service-area waste generators are currently charged a 25% surcharge for disposal at RDKS facilities which are set with the intention of offsetting the tax funded portion of the landfill airspace used.

It is MH's understanding that when Forceman Ridge WMF was designed and constructed the expected volumes of potential incoming industrial waste were much lower as the current LNG Canada project was not underway at the time. It is also understood that establishment of the two solid waste service areas and the associated cost recovery models did not consider the significant quantity of industrial waste received at the Forceman Ridge WMF. The tax/tipping ratio shifts away from the 50/50 ratio, under the current cost recovery model, as more waste is accepted from industrial sources in the Terrace Service Area. This results in a lower financial burden on tax payers in this Service Area. The Hazelton and Highway 37 North Service Area residents and commercial businesses are not experiencing the same financial benefit as less industrial waste is accepted at the facilities in the Service Area. In addition, it is MH's understanding that the landfill airspace at the landfill at Forceman Ridge WMF is being consumed at a faster rate than initially projected.

¹ As presented in the RDKS report *Background Information and Assessment of the Current Solid Waste System – 2018 Update*

In 2018 approximately 2% of the waste disposed at Forceman Ridge WMF originated from industry. In addition, almost 1,800 tonnes of contaminated soil were accepted and used for landfill operations. The RDKS currently accepts contaminated soil from industry at a rate of \$97.50/tonne (\$78.00/tonne plus a 25% Out-of-Service-Area surcharge). A conservative approach is used when accepting contaminated soils from industry outside the Service Area to ensure accepted materials remain over a lined portion of the landfill and that materials are suitable for use on-site as cover material.

With large industrial work camps in the region and the LNG construction project in Kitimat there is a potential opportunity to accept more waste, including contaminated soil, from industry over the next few years. This presents an opportunity for additional revenue through collection of tipping fees subject to the out-of-service-area 25% surcharge. Careful consideration should be given to available landfill airspace and the value thereof when reviewing potential incoming industrial waste. Currently, preference has been given to industrial materials that do not take up landfill airspace, such as organics, clean wood, and contaminated soil that can be used on-site as cover material.

The RDKS has received industrial waste soil from within the North Coast Regional District and there may be interest in accepting waste soil from other neighboring regional districts, such as the Bulkley Nechako Regional District. Due to the geographic location of the Forceman Ridge WMF, it is unknown if hauling of waste from these areas would be financially viable. The RDKS may want to investigate if disposal gaps exist in other regional districts and if so, assess the potential benefits and challenges associated with accepting additional out-of-service-area waste.

If the RDKS decides to accept additional waste from outside the service areas for disposal at their facilities, they may want to control the flow of said waste within the regional district. For example, the RDKS would have the ability to direct such waste to the Meziadin Landfill instead of the landfill at Forceman Ridge WMF, where most industrial waste is currently accepted and disposed. By routing the waste to Meziadin Landfill or the landfill at Hazelton WMF the RDKS would generate revenue for the Hazelton and Highway 37 North Service Area, which currently is facing financial challenges, primarily due to higher than anticipated operating costs. This option will be further explored in the fifth and final technical memo on cost recovery.

There is currently no defined limit set on annual disposal volumes at the RDKS landfills. The RDKS needs to decide on how much airspace, if any, should be afforded to accommodate out-of-service-area and/or industrial waste. Consideration to the additional tipping fees to fund operations should be given when making this decision. The RDKS may want to establish a framework with evaluation procedures, limits to acceptable quantities, and applied tipping fees; either for each individual disposal facility or each solid waste service area.

The RDKS would also need to ensure the tipping fees are set to fully cover the cost of landfilling, including siting, capital, and closure/post-closure liability costs. The RDKS may also want to consider which alternative disposal options are available for industry and assess the cost per tonne breaking point for when industry would choose alternative disposal options.

The RDKS is currently charging a 25% surcharge for out-of-service-area waste, including waste from industrial work camps within the regional district. It is not uncommon for other jurisdictions to charge a 100% surcharge for waste generated outside the service area. This is done in Comox Valley Regional District for example. The surcharge is generally set based on the remaining airspace available and the landfill owner's need for increased revenue. However, for long-term financial sustainability the true value of airspace should be considered when establishing tipping fees and surcharges. Consideration should be given to costs associated with landfill siting, design, construction and closure, landfill liability, operations, and post-closure activities.



Possible options to incorporate in the SWMP include:

- 1A. Develop a policy that specifies the type and maximum amount of out-of-service-area waste accepted.
- 1B. Assess the value of landfill airspace and significantly increase surcharge for out-of-service-area waste.
- 1C. Develop policy to allow disposal from neighbouring Regional Districts.

STRATEGY 2. SET LIMITS AND REPORTING REQUIREMENT FOR LIQUID WASTE

Septage is accepted for treatment at Forceman Ridge and Hazelton Waste Management Facilities as well as Meziadin and Iskut Landfills. The types of liquid waste accepted are outlined in Bylaw 671 and 688. Septage is classified as controlled waste under both bylaws and disposal thereof requires an RDKS issued permit. Septage includes septic tank pumpage and treated sewage sludge in both Service Areas. Additional specification is provided in Bylaw 688 for septage accepted in the Hazelton and Highway 37 North Service Area and include:

- the contents of grease traps from restaurants within the Service Area when they are mixed with septic tank pumpage.
- wash water that is free of hydrocarbon contamination.

Other sewage wastes, such as wastewater, sewage and slurry, are classified as prohibited and are not accepted at the treatment facilities at Forceman Ridge and Hazelton WMF.

In 2018, approximately 1,095 tonnes of septage was accepted at the treatment facility at Forceman Ridge WMF, which is designed with the annual capacity of almost 2,200m³. The amount of septage accepted at the treatment facility at the Hazelton WMF, Iskut and Meziadin Landfills is unknown. The facility at Hazelton WMF is designed with an annual capacity of almost 1,100m³.

The accepted liquid waste generally contains 95% liquid and is pumped into filtration beds where the solids are separated from the liquids. The sludge in the filtration beds reaches about 85% moisture content before it is removed from the filtration beds, bulked, and composted. The liquid portion is pumped into an equalization pond where it is treated together with the landfill leachate collected on site.

There are currently two liquid waste haulers in the Terrace Service Area which both have active disposal permits for the treatment facility at Forceman Ridge WMF. There is one hauler with a disposal permit for the Hazelton and Highway 37 North Service Area. There are no records of active permits at the other two facilities accepting septage. The reporting requirement for the haulers is currently limited to specifying quantity, if the waste originates from residential or commercial sources, and if the waste is bulked or un-bulked septage. These reporting requirements provide the RDKS with limited control of the liquid waste accepted, its source and quality, which reduces their ability to enforce applicable bylaws.

The RDKS has concerns regarding two main liquid wastes:

- grease trap waste because of the presence of fats, oils and grease (FOG).
- catch basin waste from parking lots because of the high likelihood of the presence of hydrocarbons



The liquid waste treatment facilities are not designed to separate or treat FOG, which can cause clogging of the filtration system resulting in reduced environmental control and increased operating and maintenance costs. Nor are the systems designed to treat hydrocarbons, the presence of which would contaminate both the separated and composted sludge and the sewage.

The RDKS seeks to develop a policy that clearly defines the quantity, types, and sources of liquid waste accepted at its waste management facilities. The policy may include reporting requirements for: quantity of waste disposed; source of waste, i.e. residential or commercial; and type of waste, i.e. septage, grease trap, oil-water separator, or catch basin waste. The policy may also set out requirements for regular lab analysis for specific waste sources and acceptable limits for concentration of contaminants. It may also be warranted to include scheduled annual system maintenance periods and volume restrictions (m³ per month or similar) to prevent the treatment system from becoming overwhelmed. These requirements and restrictions need to align with any RDKS plans and policies relating to liquid waste management. The RDKS may want to discuss options with the haulers regarding how fines and potential disposal suspensions can be passed onto the waste generator.

The RDKS may want to develop a registry of establishments using grease traps, oil-water separators and catch basins coupled with an outreach program. A targeted outreach program could focus on educating the waste generators of proper and acceptable disposal of liquid and solid wastes. The registry could potentially be developed in collaboration with the haulers who know their customer base and the waste collected.

Possible options to incorporate in the SWMP include:

- 2A. Develop policy that requires haulers to report additional details on the quantity, source and type of waste disposed at facility (as part of annual permit).
- 2B. Improve record keeping as it pertains to active permits and liquid waste accepted at the landfill at Hazelton WMF and Iskut and Meziadin Landfills.
- 2C. Develop education program aimed at generators of waste.

STRATEGY 3. REDUCE GREENHOUSE GAS EMISSIONS

The RDKS prepares and submits annual reports on the greenhouse gas (GHG) emissions relating to the organization's activities as part of CARIP Climate Action²/Carbon Neutral Progress Survey in an effort to reduce organizational GHG emissions. The RDKS reports on GHG emissions relating to solid waste management, including landfill gas (LFG) management and organic waste composting.

Major efforts have been made to reduce GHG emissions from the landfill at Forceman Ridge WMF through LFG management. LFG, which is mainly composed of methane, is generated when organic waste is decomposed under anaerobic conditions. Methane has a 100-year global warming potential which is 21 times higher than that of carbon dioxide.

The RDKS is reducing the generation of GHGs at the landfill at Forceman Ridge WMF by restricting the disposal of organic material and by minimizing precipitation infiltrating the disposed waste. An LFG collection system is designed to capture the produced LFG via a network of horizontal and vertical pipes that are installed as the waste is disposed. The captured gas will be flared, which reduces the

² Local governments that have signed the Climate Action Charter and committed to becoming carbon neutral can access the Climate Action Revenue Incentive Program (CARIP), a grant that reimburses 100% of the carbon tax that local governments pay directly.



global warming potential 21 times as methane is converted to carbon dioxide. The installation of LFG capture piping is anticipated to commence in 2020.

These combined strategies result in GHG emission reductions without increasing efforts above regular landfill operations. According to the assessment presented in the *Forceman Ridge Regional Landfill Design, Operations & Closure Plan*³, collection of LFG will not be required under the BC Landfill Gas Management Regulation until 2069. Early installation of an active LFG management system can be considered a voluntary GHG emission reduction initiative which can generate some tradable carbon credits for the RDKS. In 2017 Sperling Hansen Associates estimated that the landfill at Forceman Ridge WMF could generate about 377,000 tonnes of CO₂e GHG emission reduction credits amounting to total revenue of about \$10 million until 2069 (at a price of \$25/tonne of CO₂e)³.

The RDKS has also collected and flared LFG at the Thornhill Landfill, on the same voluntary basis since 2019 (Figure 1). Therefore, the RDKS has the opportunity to generate carbon credits for emissions reductions achieved at the two RDKS landfills. If eligible, it would be suitable for the RDKS to commit to allocating the revenue obtained from the credits to the Service Area where the GHG reduction efforts were realized and the credits are generated.

The Climate Investment Branch of the Ministry of Environment and Climate Change Strategy procures GHG emission offsets, which includes those for waste and residual management.

Offsets for landfill gas collection were, for example, purchased from Columbia Shuswap Regional District for \$13/tonne in 2018. The current application period for the Request for Offset Units, Greenhouse Gas Offset Units close on July 19, 2021.



Figure 1 Landfill gas flare at the closed Thornhill Landfill.

Possible options to incorporate in the SWMP include:

- 3A. Assess eligibility for carbon credits for GHG reduction efforts in solid waste operations and allocate revenue to the service area where carbon credits were generated.

STRATEGY 4. ASSIST IN THE PREVENTION OF ILLEGAL DUMPING

Illegal dumping⁴ is an ongoing issue for the RDKS. Materials found at illegal dump sites are often those that would have been collected in a residential curbside program or could have been dropped-off

³ Forceman Ridge Regional Landfill Design Operations & Closure Plan, prepared by Sperling Hansen, 2017.

⁴ "Illegal dumping" refers to the intentional disposal of waste materials in unauthorized locations.

free of charge at the appropriate depots. Some of the main factors influencing illegal dumping include the perceived inconvenience to access disposal facilities, and a lack of education around available disposal options, and avoidance of anticipated disposal costs. Residents may be unaware of convenient disposal options in their area.

The RDKS is currently addressing illegal dumping with a range of initiatives including:

- Providing education and promotion of current options to recycle and dispose of waste safely at a waste management facility.
- Investigating optimizing operating hours at all solid waste facilities to increase user convenience and discourage illegal dumping.
- Encouraging people to report illegal dumping incidents on Crown Land and supporting community clean-up efforts. Residents can report illegal dumping by calling the toll-free line RAPP (Report all Poachers and Polluters).
- Supporting residents voluntarily picking up illegally dumped garbage by providing bag tags to receive free curbside garbage pickup. Residents are required to provide a photo of the site(s) before and after the cleanup. The tags are available at the RDKS office.
- Reimbursing tipping fees for disposal of illegally dumped waste material collected by non-profit organizations. Groups must make a request to the RDKS Board at one of two available annual application intakes.

The management and response to illegal dumping in rural areas on Crown Land is the responsibility of the BC Conservation Officer Service (BCCOS). Municipal governments are responsible for managing illegal dumped materials in their jurisdictions.

Historically, about 15 reports of illegal dumping were made to the BCCOS annually. In 2017, 55 reports were made, with that number increasing through 2018. It is unclear how many reports were recorded in 2019. Each report relates to a unique site and increased reports are not related to multiple complaints about one site.

The BCCOS reported that during 2019, a total of 37 investigations were conducted regarding illegal dumping. Thanks to the use of cameras, some of which were supplied by the RDKS, a number of offenders were identified and have been issued \$575 fines⁵.

Data shows that illegal dumping has increased in the RDKS. The issue has been highlighted by local media, such as by the Terrace Standard on October 25, 2018 (Figure 2).

The RDKS is currently participating in a Terrace area inter-agency working group to identify solutions and mitigation strategies. The working group includes representatives from the RDKS, Conservation Service, Ministry of Transportation and



Figure 2 Illegal dumping in the RDKS
(Terrace Standard October 25, 2018)

⁵ Information provided by Sergeant Tracy Walbauer, BC Conservation Officer Service for the North Coast Zone/ Skeena Region, Ministry of Environment, January 31, 2020.

Infrastructure, Nechako Northcoast, Natural Resource Officers, the Kitsumkalum Resource Officer, and the RCMP. The group has discussed identifying areas of known dumping activity and various options to mitigate known sites including signage, cameras, restricting access and cleaning the sites to discourage future dumping. The working group has not met since early 2019.

The RDKS can potentially use the already established working group to develop a region-wide illegal dumping prevention strategy. The strategy could set out the responsibilities of all parties, actions to take, and data reporting requirements to improve tracking, outreach, and staffing.

The first step in forming a strategy can be to conduct a survey to determine the most common materials illegally discarded and the most frequent locations. This will provide a basis for types of materials and “hot spots” on which to build an education campaign and clean-up and enforcement programs.

The strategy can include, but is not limited to, the following:

- Conduct targeted outreach campaigns if/when specific “problem” groups are identified.
- Establish a reporting mechanism where residents (e.g. neighborhood watch programs) and outdoor groups can report dumping location, to be targeted for contracted / volunteer cleanup.
- Restricting access and installing cameras at popular dumping sites.
- Post signs at frequent illegal dumping sites to educate about reporting and potential fines for illegal dumping.

The strategy should have input from stakeholder groups such as First Nations, forestry companies, BC Hydro, and back-country user groups (mountain bikers, river anglers, etc.).

Possible options to incorporate in the SWMP include:

- 4A. Utilize the existing illegal dumping working group to develop an illegal dumping strategy aimed to improve tracking and reduce the number of illegal dumping incidents.
- 4B. Implement strategy including survey of illegally dumped materials, public outreach and enforcement.

STRATEGY 5. CLOSE SELECTED SMALL LANDFILLS AND REPLACE WITH TRANSFER STATIONS

The RDKS operates some smaller landfills, which typically require significant costs to operate and maintain. Due to the limited amount of waste disposed and fixed costs associated with landfilling, the cost per tonne of waste landfilled is considerably higher than that at a larger landfill. There are opportunities to reduce operating costs to the RDKS by closing some of the smaller landfills and establishing transfer stations at these sites. This approach was already taken by the RDKS at Kitwanga, where a transfer station was established in 2017 in conjunction with the closure of the existing landfill.

There are currently two smaller landfills that could benefit from being replaced by transfer stations: Rosswood Landfill and Iskut Landfill.

The Rosswood Landfill, which is approximately a 30-minute drive north of Terrace, is intended for residential MSW generated from the Rosswood community of 150 - 200 residents. There are no tipping fees at this landfill. The RDKS has observed that some Terrace Service Area residents drive out to this landfill to avoid paying tipping fees at the Thornhill Transfer Station. The Rosswood Landfill has



approximately 20 years of capacity remaining. If the landfill were to close, and a transfer station built, waste from Rosswood would be sent to the Forceman Ridge WMF.

There is potential cost savings in closing this landfill. The operating cost in 2019 was \$37,000 for Rosswood compared to \$81,000 for the Thornhill transfer station and \$309,500 for Forceman Ridge WMF. Without taking into consideration the cost for diversion efforts at the facilities, the cost per tonne of disposed waste is about 15 times higher at the Rosswood landfill than that for Thornhill Transfer station and Forceman Ridge WMF combined⁶.

The Iskut Landfill is also relatively small, and services both the Iskut Band and residents of Electoral Area D. The RDKS has experienced on-going issues with maintaining compliance with the site's operational certificate. In collaboration with Iskut Band, the RDKS is interested in investigating the cost/benefits of closing the current landfill and establishing a transfer station that can offer improved waste diversion opportunities for the area. The RDKS will need to assess the feasibility of accepting waste at the Meziadin Landfill from a transfer station in Iskut.

For both Rosswood and Iskut, the RDKS would need to assess the cost/benefits of establishing transfer stations, including costs associated with waste hauling. The RDKS can investigate if there is potential grant funding available for a feasibility study and/or capital costs. If transfer stations are deemed cost effective and feasible, the RDKS can proceed to plan and construct transfer stations and implement landfill closures within the next 10 years.

An additional option for consideration for Iskut Landfill is to continue to landfill only inert material, such as demolition and land clearing waste and use a transfer station for the putrescible MSW. This is an operational practice some regional districts employ to reduce haul costs and continue to operate the landfill as an inert waste landfill.

Possible options to incorporate in the SWMP include:

- 5A. Assess cost/benefit of closing Rosswood and Iskut landfills by determining community need for transfer stations and implement if deemed feasible.
- 5B. Consider options to continue to operate the Iskut Landfill for demolition and land clearing waste.

SYSTEM EFFICIENCY IN THE CONTEXT OF RESIDUAL WASTE MANAGEMENT

Throughout the solid waste management planning process the RDKS is committed to placing a high importance on improving the operational efficiency of the current solid waste system. This was highlighted in Technical memo 1: Efficiency within RDKS Solid Waste Management Functions (February, 2019).

This section provides three strategies and associated initiatives for the RDKS to undertake to improve system performance and efficiency at existing facilities. Although the main focus of this memo is on residual waste management, efforts to increase efficiencies spans across the entire waste hierarchy (including reduce, reuse, recycle).

⁶ Assuming 50 tonnes of waste disposed at Rosswood landfill and 8,500 tonnes of waste disposed at the landfill at Forceman Ridge WMF in 2019.



STRATEGY 6. EFFECTIVELY USE LANDFILL AIRSPACE

When considering strategies applied to effectively using the remaining airspace at existing landfills in the RDKS, consideration should be given to the type of waste landfilled and how the landfill is operated. The type and quantity of waste placed in the landfill should be considered as landfill air space is valuable and should not be consumed by recyclable materials. Operating procedures, waste placement, and compaction also affect the use of the available airspace.

As discussed under Strategy 1, contaminated soils are accepted at the Forceman Ridge WMF and used onsite for operational cover material, and there is capacity to accept and utilize more. The facility Design, Operations, and Closure Plan (DOCP) includes a material management plan which incorporates calculations of how onsite materials are to be used for operations. The material balance shows that the onsite material is insufficient for operations and some reliance on imported soils for cover material is required. Approximately half of the required material is available within the footprint of the final landfill design. Additional material is planned to be sourced from a borrow area adjacent to the filling area and through imported soil. Recent airspace and waste compaction analysis show that the waste to cover ratio is significantly lower than 4:1 stipulated in the DOCP. A low waste to cover ratio means airspace is consumed by soil rather than waste reducing the life of the landfill and increasing the need for soil for landfill operations and, in the case for the landfill at Forceman Ridge WMF, the need to import this material.

Forceman Ridge WMF was opened in 2016 and was designed with 100 years of capacity. The site was selected after exhaustive investigations to ensure the facility could co-exist with the surrounding environment. Figure 3 shows the Forceman Ridge WMF under construction. The landfill is lined with a Geosynthetic Clay Liner and a High Density Polyethylene Composite Liner and constructed with leachate collection system and treatment. Installation of a landfill gas collection system is planned to commence in the summer of 2020.



Figure 3 Forceman Ridge WMF under construction.

The operation at Forceman Ridge WMF is guided under Operational Certificate (OC) 17227. The OC does not require the application of daily cover; however, the use thereof is considered a best practice to limit vector attraction, windblown litter, and odours. The use of daily cover also limits the infiltration of

precipitation and consequently the generation of leachate. The use of daily cover or an alternative daily cover is required under the BC Landfill Criteria for Municipal Solid Waste. Steel plates (also referred to as Revelstoke Iron Grizzly (RIG) plates) are currently available for use as an alternative daily cover at the site (Figure 4). It is MH's understanding that there is room for improved efficiency in the use of the RIG plates. The steel plates do not consume any airspace as they are removed at the beginning of every operating day and reused.



Figure 4 Placement of RIG plates as alternative daily cover at the landfill at Forceman Ridge WMF.

With the exception of Rosswood Landfill, the landfill at Forceman Ridge WMF is the only disposal facility in the Terrace Service Area. Though the landfill has many years of remaining capacity, the available airspace should be considered invaluable as siting of a new facility or expansion of the current one may be challenging. Recent airspace and waste compaction analysis show that the compaction rate achieved at the landfill meets the target of 0.75 tonnes/m³. However, as mentioned above, the use of operational soil is higher than ideal and the waste to cover ratio is well below the set target of 4:1. The high use of operational soil reduces the airspace utilization factor (tonnes of waste per cubic meter airspace used by waste and cover). Based on the results of the recent survey, additional operator training may be warranted with subsequent operational changes to conserve airspace and available cover material.

The Meziadin Landfill is nearing the end of the first phase of its lifespan, with Phase II currently undergoing design; construction is anticipated for 2020. There are five total phases planned for the Meziadin Landfill providing plenty of airspace available for future use. The landfill at the Hazelton WMF has three remaining phases which are expected to reach capacity in 2069. The RDKS may consider closing smaller landfills, as discussed in Strategy 5, and transferring waste from these communities to area landfills, such as Meziadin. Accepting additional industrial waste for disposal at either Meziadin landfill or the landfill at the Hazelton WMF is also being considered. These potential changes in waste accepted will affect the remaining life of the landfills which highlights the importance of efficient use of available airspace.

It is estimated that Rosswood Landfill has about 20 years of remaining capacity. Waste is only accepted from Rosswood's 150-200 residents. The remaining life of Iskut Landfill is unknown and received an estimated 150 tonnes of waste in 2017. Both landfills are small and the operational costs

per tonne are high considering the small service population. Existing airspace should be used effectively until alternative disposal options have been identified. It is MH's understanding that both landfills are natural attenuation sites and lateral expansion will likely require engineered liners and potentially other costly design features.

Conserving landfill airspace can be done by controlling the waste disposed. The RDKS may want to increase enforcement of the current disposal restrictions to ensure landfill airspace is not consumed by material required to be segregated under Bylaw 671 and 688. Additionally, enforcement of disposal restrictions ensures a fair system for all users and improved operations. The RDKS may also want to consider assessing the feasibility of using asphalt shingles for operations as alternative daily cover or road construction. Asphalt shingles are currently landfilled and the alternative beneficial use would offset some of the need to import operational soils and save the landfill airspace otherwise consumed. Consideration should be given to reducing the tipping fee for materials that can be used in landfill operations that otherwise would consume airspace.

Proper operation of the active face, waste placement, and compaction play an important role in effective use of landfill airspace. SWANA offers landfill training, including training for operations of composting facilities and landfill gas operations and management. The SWANA Manager of Landfill Operations (MOLO) course provides a comprehensive study of efficient landfill operations, including site design, regulations, health and safety, cost controls and other issues to consider when planning, operating, and closing landfills. The current landfill contractor supervisor is required to be MOLO certified and all contracted staff have some level of landfilling training. Some RDKS Works & Services department staff will receive MOLO training this spring.

It is also important to keep records of the waste placed and soil used each year to be able to assess the performance of landfill airspace. MH recommends that the RDKS continue to regularly perform aerial surveys of the landfill at Forceman Ridge WMF. The RDKS may also want to consider performing aerial surveys for the landfill at Hazelton WMF and the Meziadin Landfill with the objective to assess the use of airspace, remaining landfill life and operator contract adherence. Surveys could be performed every 3-5 years.

The RDKS has developed standard operating procedures (SOPs) for their facilities. The RDKS may want to review these internally on an annual basis and periodically provide the landfill operators a refresher on SOPs, performance targets and expected level of service.

Possible options to incorporate in the SWMP include:

- 6A. Enforce existing bylaws to control the waste disposed and minimize unnecessary airspace consumption.
- 6B. Review the landfill operations including the use of operational soil and alternative daily covers and waste placement and compaction. Based on findings consider providing contractor training to improve operations.
- 6C. Consider segregating materials, such as asphalt shingles, to be used for landfill operations thereby offsetting some need for operational soils while saving landfill airspace.



STRATEGY 7. IMPROVE PUBLIC ACCESSIBILITY TO EXISTING SOLID WASTE MANAGEMENT FACILITIES

One of the main comments received through the April 2019 Public Solid Waste Survey pertains to facility accessibility. There is a strong interest in having waste management facilities with recycling facilities and/or access to 24 hours unsupervised recycling locations. Changed or extended opening hours of transfer stations and landfills were also requested by survey responders.

With the major overhaul of the RDKS solid waste management system over the past few years there are no plans to open any new facilities outside of those discussed in the next memo for new service areas and new facilities at the PTAC meeting in April. In addition, all facilities need to be supervised in order to qualify for funding from EPR stewards such as Recycle BC. The RDKS is not intending to offer any 24-hour unsupervised facility for garbage or recycling.

The RDKS waste management facilities are currently open to the public between 2 and 5 days per week. The operating hours of each facility is shown in Table 4 below. Forceman Ridge WMF is not open to the public.

Table 4 Public opening hours at RDKS waste management facilities.

Facility	Public Hours
Thornhill Transfer Station	Winter: 12:00pm to 5:00pm – Saturday - Monday Summer: 12:00pm to 7:00pm – Saturday - Monday
Rosswood Landfill	12:00pm to 5:00 pm – Saturday - Sunday
Hazelton WMF	12:00pm to 7:00pm – Thursday - Monday
Kitwanga Transfer Station	1:00pm to 7:00pm – Wednesday - Sunday
Meziadin Landfill	10:00am to 5:00pm – Sunday - Monday, Thursday - Friday
Iskut Landfill	12:00pm to 6:00pm - Friday - Saturday
Stewart Transfer Station	12:00pm to 6:00pm - Tuesdays and Thursday 12:00pm to 4:00pm - Saturday

The RDKS has received requests for the Hazelton WMF to be open in the morning, as well as requests to extend the hours at the Thornhill Transfer Station. The RDKS may want to assess accessibility to current facilities and adjust the current operating hours to address client needs. This assessment could include offering an online survey requesting feedback on specific public and client needs pertaining to opening hours and facility accessibility.

Improved accessibility can likely be reached without increasing operating hours or the cost to taxpayers, but by shifting hours to align with the need of the public. The operating hours of other private facilities that offer solid waste services, such as privately operated recycling depots, should be considered so that residents can drop-off divertible materials, such as recyclables/ EPR products, during the same trip as garbage. The perception that operational hours are causing increased illegal dumping would be reduced by ensuring facility accessibility meets the needs of the residents.

There may be an opportunity to increase operating hours at one facility while decreasing the hours at another, given they are within the same service area. Such changes have to consider contractor agreements, peak visitor hours, and risk for increased illegal dumping. There may also be an opportunity to improve the facility operations and accessibility by applying seasonal opening hours, based on tracked visitor frequency.

Possible options to incorporate in the SWMP include:

- 7A. Adjust opening hours at transfer stations based on public feedback without raising operational costs significantly by maintaining the total hours of operation.
- 7B. Develop seasonal opening hours at targeted RDKS facilities.

STRATEGY 8. ENGAGE AND COMMUNICATE TO CITIZENS ON WASTE MANAGEMENT

The RDKS has identified the need to increase public education about the region's landfills, landfill closures and gas capture programs, and the need for responsible residual waste management. The RDKS Board has set a strategic mandate for the organization as a whole to increase efforts to engage and communicate with residents.

There is potential to open a site for public education at the Thornhill Transfer Station. It can be used for delivering education to schools, and other interested parties on the need to manage waste materials responsibly. The promotion of reduce, reuse, and recycling would also be an important part of the site.

The RDKS can also increase public education by offering tours for the public and schools/ universities at facilities such as the Forceman Ridge and the Hazelton WMFs.

Possible options to incorporate in the SWMP include:

- 8A. Establish an education site at the Thornhill Closed Landfill to educate the public and schools in responsible management of residual waste.
- 8B. Offering tours at suitable waste management facilities.

STRATEGY 9. DELIVER OPERATIONAL SERVICES IN-HOUSE

The RDKS has made significant capital investments in its solid waste management infrastructure. As a result of the system overhaul, users of the solid waste facilities and services, RDKS staff, and contractors providing services, have faced a significant learning curve and are continuing to become accustomed to the new system and expected standards of service. The RDKS has identified that optimizing operations to get maximum benefit from the infrastructure and services is a priority.

The RDKS has found that ensuring proper operation of RDKS-owned site equipment and efficient landfilling operations has required extensive RDKS staff hours in oversight and operator support at some sites. The RDKS is also concerned that the operational contracts in place may not be sufficiently incentivizing waste diversion. Current bylaws allow the RDKS to issue fines for disposal of compostable organics (currently only in the Terrace Service Area) and recyclable materials, however enforcement has not been applied to date.



Operations contracts are particularly challenging to secure for remote facilities. There are very few proponents willing to bid on operational contracts for remote facilities, and as a result of limited competition the operational costs of these facilities become inflated.

The RDKS may want to review the cost-benefit of operating targeted facilities using in-house staff instead of contractors. The review would include the need to purchase heavy equipment, where these are currently provided by the contractor.

The following is a list of potential benefits associated with moving to an in-house delivery model:

- Opportunities to share staffing and equipment resources between waste management facilities
- Greater flexibility to modify facility services to accept additional waste materials as needed (e.g. organic waste, EPR products)
- Greater control over organics processing and the quality of compost material
- Greater control over operational efficiencies and staff messaging to site users
- Potential reduced operating/annual costs by eliminating 'double payment' to contractor and RDKS staff hours to provide operator support and oversight

There are also potential risks associated with transitioning to an in-house delivery model. Potential risks include:

- Risk of higher administrative, management, coordination costs compared to current contracted delivery model due to additional staff and resources to manage
- High initial capital investment to purchase equipment
- Additional staff required – greater risk due to labour market conditions and availability
- Exposure to greater liability through additional high-risk operations

For the sites where the RDKS decides to continue to use a contractor for facility operations the RDKS can reconsider the incentives set out in its contract to enhance waste diversion and other operational efficiencies. As part of the previous memo for Recycling and Composting options, option 2C touched on contract requirements and performance incentives to provide continuous waste diversion education and enforcement.

The RDKS may want to reconsider the incentives set out in their operations contracts. There are a variety of options that can be considered; incentives for contractors can be based on achievements that have been made against agreed key performance indicators (KPIs). For example, in Suffolk County Council, UK, staff at depots receive incentive payments if they meet KPIs for customer satisfaction, waste diversion rates, and site cleanliness. The KPIs (and method of calculation) were agreed upon between the Council and Contractor as part of the contract negotiation process. In general, the contractor collects the data and calculates the payments as part of their contractual commitment. The payment is made as a result of the saving in disposal charges. The RDKS may also want to consider negotiating contracts more favorable for both the RDKS and the selected contractor.

Possible options to incorporate in the SWMP include:

- 9A. Assess the cost-benefit of using contractor vs. in-house staff to operate RDKS facilities, and transition to in-house service if determined to be beneficial.
- 9B. For facilities operated by contractors, review contract incentives to better incentivize waste diversion and site cleanliness.



IMPACTS OF POTENTIAL STRATEGIES TO INCREASE RECYCLING AND COMPOSTING

Table 5 provides an overview of the anticipated financial impacts of the strategies if implemented in the region. The table is followed by Table 6 which shows which stakeholder groups are affected by the strategies outlined in this memo.

Table 5. Anticipated financial impact related to the identified strategies for residual waste management at existing facilities.

#	Strategy	Operational costs	Capital Costs	Comments
1	Set limits for solid waste accepted from outside the service area Set limits for solid waste accepted from outside the service area	Low-High	Low-High	The additional cost depends on the amount of waste accepted and the surcharges applied to the waste.
2	Set limits and reporting requirement for liquid waste	Low-Medium	Low	Capital cost low assuming no additional infrastructure is required.
3	Reduce greenhouse gas emissions	Low-Medium	Low	Capital cost already allocated for LFG management system at Forceman Ridge WMF. Operational costs might be offset by carbon credit sales.
4	Assist in the prevention of illegal dumping	Low-Medium	Low	
5	Close selected small landfills and replace with transfer stations	Low-medium	Medium-High	Reduced operating costs likely to offset the capital cost for landfill closure and post-closure work.
6	Effectively use landfill airspace	Low	Low	Assumed small investment in education and operational improvements compared to savings of airspace its value.
7	Improve public accessibility to existing solid waste management facilities	Low	Low	Assuming no or small changes in total hours of operation.
8	Engage and communicate to citizens on waste management	Low	Low	
9	Deliver operational services in-house	Low-High	Low-High	The operational and capital cost depend on the model selected.

Table 6. Organizations and categories of individuals impacted by the identified strategies for residual waste management at existing facilities.

#	Strategy	RDKS	Member municipalities	Residents	Waste haulers and recycling facilities	ICI sector	Non-profit organizations	Comments
1	Set limits for solid waste accepted from outside the service area Set limits for solid waste accepted from outside the service area							
2	Set limits and reporting requirement for liquid waste							Additional reporting paper work will be required by all stakeholder.
3	Reduce greenhouse gas emissions							RDKS responsible for collection of landfill gas. Diversion of organics responsibility of all stakeholders.
4	Assist in the prevention of illegal dumping							
5	Close selected small landfills and replace with transfer stations							Closure will affect the users of the specific sites.
6	Effectively use landfill airspace							Stakeholders affected through either operational changes or enforcement of disposal restrictions.
7	Improve public accessibility to existing solid waste management facilities							Strategy will affect those using the sites.
8	Engage and communicate to citizens on waste management							
9	Deliver operational services in-house							



***Appendix 29 – Memo 10: Options for Waste Management at New Facilities or in
New Service Areas to Consider for Inclusion in the SWMP
(May 2020)***

MEMORANDUM



TO: Erin Blaney, Regional District of Kitimat Stikine

FROM: Veronica Bartlett and
Eva Robertsson,
Morrison Hershfield

PROJECT No.: 190497600

RE: Options for Waste Management at New Facilities
or in New Service Areas to Consider for Inclusion
in the Solid Waste Management Plan - FINAL

DATE: May 20, 2020

I:\MH.LOCAL\DATA\PROJ\2019\190497600-RDKS SOLID WASTE MANAGEMENT PLAN\08. WORKING\03 RESIDUALS MANAGEMENT - NEW FACILITIES\MEM-2020-05-20_WASTE MGMT_NEW FACILITIES_SERVICE AREAS_RDKS SWMP-190497600_FNL.DOCX

Under the Environmental Management Act, regional districts are required to have a solid waste management plan (SWMP), which must be developed following the solid waste management planning guidelines provided by the Ministry of Environment and Climate Change Strategy (the Ministry) for content and process.

The Regional District of Kitimat Stikine (RDKS) is in the process of developing a new SWMP. The planning process was initiated in 2017 and steps 1 and 2 of the planning process were completed in 2018, resulting in the formation of the Public and Technical Advisory Committee (PTAC), assessment of the current system, and development of the consultation plan and six technical memos covering specific topics. In November 2019, Morrison Hershfield (MH) was commissioned to provide consulting support to continue developing the SWMP for the RDKS.

This is MH's fourth technical memo in a series of five, each presenting potential management options on key solid waste-related topics:

- Summary of Reduce and Reuse
- Recycling and Composting
- Residual Waste Management at Existing Facilities
- **New Facilities and Service Areas for RDKS**
- Cost Recovery

The content of each memo will be presented to the PTAC. The feedback on these memos will be considered as MH develops a final memo outlining Preferred Options to be included in the new draft SWMP, which will be brought to the public for consultation.

This memo provides context with respect to waste management at either new RDKS facilities or in new service areas. Potential options are discussed from both practical and financial perspectives; however, additional financial detail on potential strategies will be presented in the last memo in this series, which focuses on Cost Recovery. The memo outlines a number of potential strategies and options the RDKS may want to pursue to improve solid waste management in the region.

CONTEXT

The RDKS consists of two solid waste management Service Areas: Terrace Service Area and Hazelton and Highway 37 North Service Area. The two Service Areas were established in July 2015 under

Bylaws 657¹ and 658². Figure 1 shows the RDKS's current service areas and facilities. The entire geography region does not get solid waste services from the RDKS; however, approximately 75% of the population is provided solid waste management services by the RDKS. The majority of the population not receiving solid waste management services by the RDKS reside in the District of Kitimat.

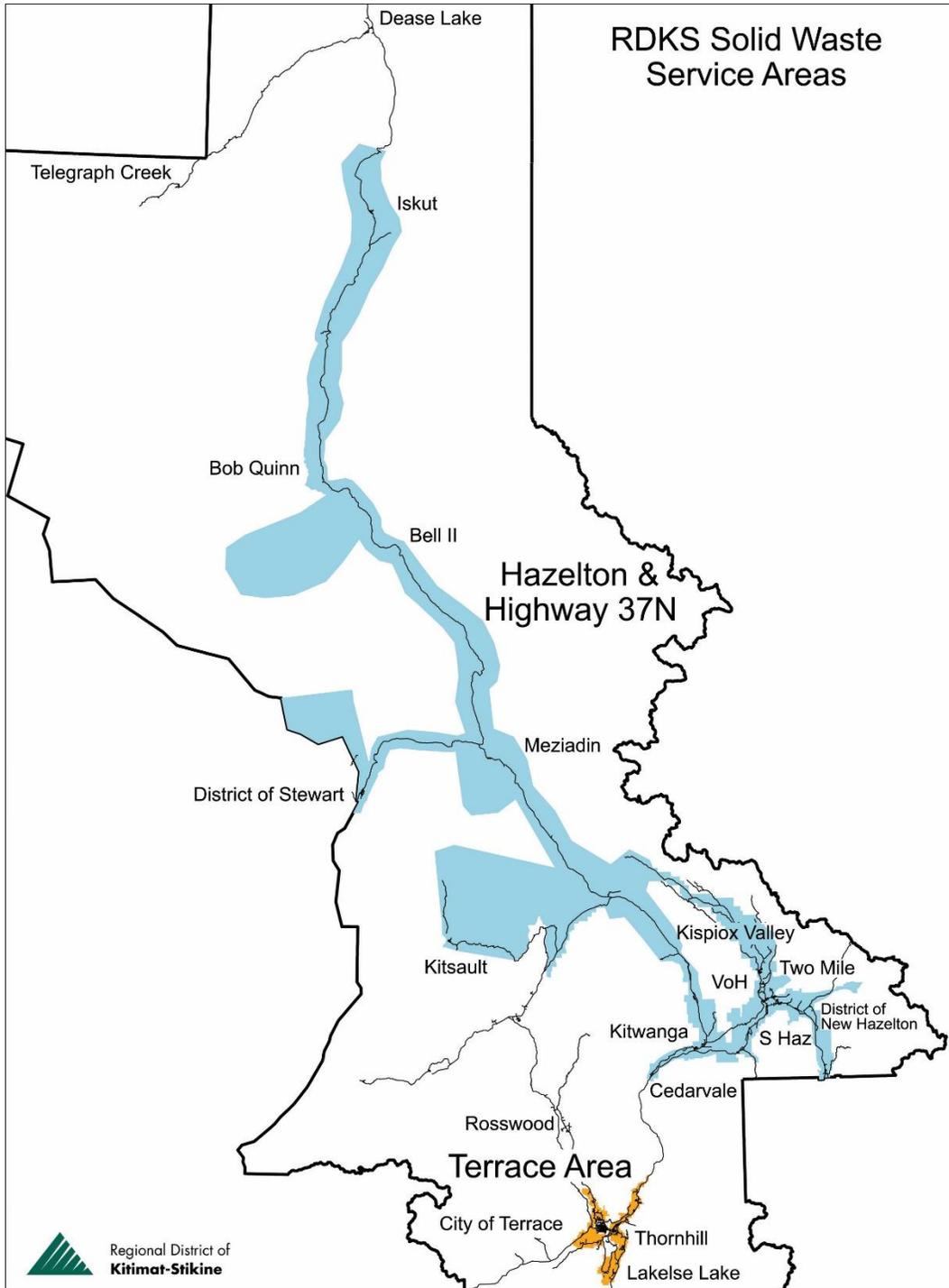


Figure 1. RDKS solid waste service areas and facilities.

¹ Kitimat-Stikine Hazeltons and Stewart Area Solid Waste and Recyclable Material Management Service Establishment Bylaw No. 657, 2015.

² Kitimat-Stikine Terrace Service Area Solid Waste and Recyclable Management Service Establishment Bylaw No. 658, 2015.



The following sections present potential strategies for expanding the current service areas and for establishing new solid waste facilities within these areas.

STRATEGY 1. DEVELOP NEW AGREEMENT BETWEEN THE DISTRICT OF KITIMAT, THE KITIMAT LANDFILL, AND THE RDKS

The District of Kitimat (Kitimat) is located approximately 60 km south of Terrace and is currently not included in either of the two RDKS Service Areas. Waste originating from Kitimat is therefore considered out-of-service-area waste and is subject to a surcharge if received at an RDKS solid waste management facility. There is currently no agreement between Kitimat and RDKS for waste to be accepted at RDKS facilities.

In 2019, Kitimat developed a Solid Waste Management Strategy and Action Plan with the objective of developing and selecting options to improve Kitimat's waste diversion and disposal system. Kitimat retained a consultant, Maura Walker & Associates (MWA), to assist with developing a strategy and recommended actions for implementation in 2020 and beyond. Significant actions scheduled for 2020 include the preparation of a landfill upgrade plan, as well as an assessment to evaluate the cost effectiveness of participating in the Terrace Service Area under the RDKS.

Kitimat owns the Kitimat Landfill, which is operated under contract. All residential and commercial residual waste generated and collected in Kitimat is disposed at the site. Waste is also accepted from Kitimaat Village (Haisla Nation). There is no scale at the landfill and volume based tipping fees apply on non-residential loads. There is no charge for disposal of self-hauled residential refuse.

Kitimat estimates there are less than three years of remaining capacity in Phase 2 of the Kitimat Landfill. However, a recent assessment of the landfill capacity shows that there may be some additional capacity in Phase 2 which can increase the estimated remaining life. MH understands that, based on a detailed landfill conformance assessment and comments from the Ministry, Kitimat will not have the authority to expand into Phase 3 without significant capital investment in design and operational improvements. Kitimat Landfill is operated as a natural attenuation site; however, a lateral expansion into Phase 3 would require construction of a landfill liner and a leachate collection and treatment system. The future of the Kitimat Landfill is currently undecided, as Kitimat is evaluating its long-term disposal options and related costs.

Kitimat currently provides curbside collection of garbage and yard waste to its residents and the current contract expires in June 2020. Kitimat recently voted to introduce a three-stream curbside collection program in 2021.

There are two main potential options for future waste management collaboration between Kitimat and the RDKS. These options are also discussed in the Technical Memorandum: Solid Waste Management Strategy and Action Plan presented to the District of Kitimat by MWA in February 2020. The potential options for collaboration are:

- Kitimat becomes a full participant in the Terrace Service Area's solid waste management services. This would include disposal and composting at the Forceman Ridge Waste Management Facility (WMF), the construction of a transfer station somewhere in Kitimat, waste hauling, and closure of the Kitimat Landfill. Kitimat may also be included in the Greater Terrace Area curbside collection service currently offered by the RDKS.
- Kitimat remains outside the RDKS Service Area and an agreement is established that provides Kitimat with a preapproved permit to access the services at the Forceman Ridge WMF. This

could include the use of all solid and liquid-waste management facilities or be limited to the landfill or composting facility. The permit could include annual disposal limits and applied tipping fees.

MWA also presented the option for Kitimat to become a full participant in the RDKS Greater Terrace curbside collection program without fully becoming a participant of the Terrace Service Area. This would potentially be beneficial to both parties through economies of scale and the expansion of an established service. Expansion of the RDKS's curbside organics collection program to include Kitimat could also benefit the composting facility at Forceman Ridge WMF, which is currently not receiving the quantities of organic waste anticipated when the facility was designed and constructed. The new three stream curbside collection program to be introduced in Kitimat in 2021 will be very similar to that provided by the RDKS. This will be beneficial should Kitimat become a full or partial participant of the Terrace Service Area.

The RDKS can choose to not make any changes to its current service area or develop an agreement with Kitimat. Kitimat then has the option to either expand the Kitimat Landfill in accordance with the 2016 Landfill Criteria or seek disposal capacity elsewhere and continue offering solid waste management services completely separate from the RDKS operations.

Potential benefits associated with a collaboration between the RDKS and Kitimat include:

- Cost savings for both parties through economies of scale and use of existing facilities and programs.
- Streamlined services and messaging to all residents in the regional district.
- Increased diversion
 - More efficient operation of the composting facility at the Forceman Ridge WMF due to increased quantities of feedstock.
 - Increased quantities and efficient handling of recyclables may increase access to markets and funding from stewardship programs (e.g. Recycle BC).
- Increased annual revenue for the RDKS through an expanded tax base, additional tipping fee revenue, and/or curbside service collection fees collected from an increased number of customers.

There are some potential risks to the RDKS, which include:

- The RDKS runs out of airspace at the landfill at Forceman Ridge WMF sooner than anticipated.
- The RDKS experiences an additional period of contamination of recyclables and organics as the residents and businesses in the new service area adjust to new rules and restrictions.
- The RDKS is burdened with unforeseen costs that exceed the additional revenue.

In addition to the benefits and risks stated above, the RDKS may want to consider some or all of the following questions when assessing and determining the preferred collaboration with Kitimat, if any:

- How would either of the options affect the projected life of the landfill at Forceman Ridge WMF?
- Does the composting facility have the capacity to take additional organics in the long term?
- Who would be responsible for outreach and education?
- How would the options impact staffing requirements at the District of Kitimat and RDKS?

- Who would pay for the required site, design, and construction of the transfer station in Kitimat?
- Would Kitimat remain the owner of the Kitimat Landfill, including the responsibility for closure and post-closure costs, as well as landfill liability?
- How will changes to the current system affect other users of the Kitimat Landfill, such as the residents of Kitimaat Village?
- Considering existing users have paid for the development of the RDKS services, what actions are required to create a system fair to all users?

An analysis of the cost-benefit for all parties should be performed that takes into consideration associated costs and cost sharing while ensuring the fairness to the residents and businesses already included in the Terrace Service Area. MH's fifth memo on Cost Recovery presents further discussion around the cost implications of the potential collaboration between the RDKS and Kitimat.

Possible options to incorporate in the SWMP include:

- 1A. Assess the costs and benefits of including Kitimat in the RDKS Greater Terrace curbside collection program. Develop cost sharing between Kitimat and RDKS to create a system fair to all.
- 1B. Assess the costs and benefits of including Kitimat in the RDKS Terrace Service Area, building a transfer station in Kitimat, and hauling waste to Forceman Ridge WMF. Develop options for cost sharing and responsibilities related to the Kitimat Landfill and the new transfer station.
- 1C. Assess the costs and benefits of permitting Kitimat to access the landfill at Forceman Ridge WMF without joining the Terrace Service Area. If deemed the best option, develop an agreement between the two parties.

STRATEGY 2. INCREASE RDKS SERVICE AREA TO INCLUDE TELEGRAPH CREEK LANDFILL (AND TRANSFER STATION)

Telegraph Creek Landfill is owned by Telegraph Creek Band, which is part of the Tahltan Nation. The landfill is located about 100 km west of Dease Lake. Putrescible waste is no longer accepted for disposal at the Telegraph Creek Landfill. Putrescible waste is currently collected at a transfer station established at a different location in the community. The site has no infrastructure, with the exception of a few bins for collection of waste. Telegraph Creek is currently hauling one 40 cubic yard bin of waste to Dease Lake Landfill on a weekly basis. Dease Lake Landfill is owned by the Ministry of Transportation and Infrastructure (MOTI). MOTI has expressed an interest in handing landfill ownership and operation over to the RDKS; this is discussed in Strategy 3.

The RDKS contributes funding to the Telegraph Creek Band for facility use by Electoral Area D residents through a cost-sharing agreement. The RDKS has had limited input on long-term development of the site. All costs associated with the landfill are shared between the two parties based on the populations of the Tahltan Reserve and non-reserve users in the Service Area. It is MH's understanding that the decision to close the Telegraph Creek Landfill and design and construct a transfer station was made by the Telegraph Creek Band in collaboration with Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC). The RDKS has had limited involvement to date and are open to increasing the level of involvement as per the agreement currently in place. The closure of the landfill, construction of a transfer station, and hauling of waste for disposal at the Dease Lake Landfill may affect the RDKS as some of its residents currently are using the Telegraph Creek Transfer



Station. The RDKS may also consider increased involvement of the operation of the Dease Lake Landfill to which waste from Telegraph Creek currently is hauled. Therefore, an amended agreement may be needed to ensure fair cost-sharing, especially if the RDKS's involvement with the Dease Lake Landfill operations increases.

Possible options to incorporate in the SWMP include:

- 2A. Increase the RDKS's involvement in the planning and decision-making process for the Telegraph Creek Landfill and transfer station. Review the current agreement and propose an amendment, if warranted.

STRATEGY 3. INCLUDE DEASE LAKE IN THE RDKS SERVICE AREA

The Dease Lake Landfill is owned by MOTI and operated by a local road maintenance contractor. The landfill receives approximately 100 tonnes of waste a year (2017 estimate) from the surrounding community; however, there is no scale to confirm accurate quantities. Waste is also accepted from Telegraph Creek. Telegraph Creek hauls a 40 cubic yard bin of waste to Dease Lake Landfill on a weekly basis, contributing to an additional estimated 75 to 100 tonnes per year. The Dease Lake facility is fenced and gated, but the landfill is not lined.

Previously, the community of Dease Lake was able to drop off recyclables at the landfill (Figure 2), but this service was disrupted in June 2019 when the recyclables processor in Smithers burned down. The service resumed in January 2020 after Do Your Part Recycling in Terrace started accepting the materials.



Figure 2. Dease Lake Recycling Drop-Off.

MOTI is actively looking for options to have the RDKS operate the landfill. MOTI has asked whether the RDKS is willing to take over responsibility of the landfill and operate the landfill as part of the regional solid waste management network. The RDKS may want to negotiate with MOTI and develop an agreement where RDKS is responsible for operations of the landfill while ownership and landfill liability remain with MOTI.

If the RDKS takes over operational responsibility of the Dease Lake Landfill, the landfill would become a facility under the Hazelton and Highway 37 North Service Area. The RDKS would need to consider



how to pay for both the capital and operating costs of the site. Bylaws 657 and 688 would need to be amended to include Electoral Area F (Dease Lake) and the Dease Lake Landfill. The cost-sharing agreement between the RDKS and Telegraph Creek Band for the Telegraph Creek Landfill would likely also be affected.

There are existing environmental impact liability issues with this site. In 2019, MOTI commissioned a Design, Operations and Closure Plan (DOCP) for the site, which includes a filling plan. However, the final DOCP has not been issued.

If the RDKS takes over operational responsibility of Dease Lake Landfill, two options would need to be considered; either continuing the landfill operations or assist MOTI with the landfill closure and the establishment of a transfer station. The RDKS would operate the transfer station and be responsible for hauling of waste to a disposal site (most likely to Meziadin Landfill). Landfill ownership and liability would remain with MOTI.

Possible options to incorporate in the SWMP include:

- 3A. Develop an agreement with MOTI where RDKS is responsible for operations of the landfill and any future transfer station, while landfill liability remains with MOTI.

IMPACTS OF POTENTIAL STRATEGIES FOR NEW FACILITIES AND SERVICE AREAS

Table 1 provides an overview of the anticipated financial impacts of the strategies if implemented in the region. The table is followed by Table 2, which shows which stakeholder groups are affected by the strategies outlined in this memo.

Table 1. Anticipated financial impact related to the identified strategies for waste management at potential new facilities or service areas.

#	Strategy	Operational costs	Capital Costs	Comments
1	Develop new agreement between the District of Kitimat, the Kitimat Landfill, and the RDKS	Low-High	Low-High	A cost-benefit analysis of potential options for the RDKS should be performed to avoid increased costs to the RDKS and the Terrace Service Area.
2	Increase RDKS service area to include Telegraph Creek Landfill (and transfer station)	Low-Medium	Low-Medium	
3	Include Dease Lake in the RDKS Service Area	Low-High	Low-High	The cost will depend on the agreement reached with the MOTI, if any, and the sharing of operational costs.

Table 2. Stakeholder groups impacted by the identified strategies for waste management at potential new facilities and service areas.

#	Strategy	Terrace Service Area	Hazelton and Highway 37 North Service Area	District of Kitimat	MOTI	CIRNAC	Kitimaat Village (Haisla Nation)	Tahtan / Telegraph Creek Band	Comments
1	Develop new agreement between the District of Kitimat, the Kitimat Landfill, and the RDKS								Residents, local contractors and other users (e.g. Kitimaat Village - Haisla Nation) and service provider groups within the two areas would also be impacted and would have to be consulted.
2	Increase RDKS service area to include Telegraph Creek Landfill (and transfer station)								Increased RDKS involvement would be beneficial to the RDKS and the Electoral users that are represented.
3	Include Dease Lake in the RDKS Service Area								Involvement of the Ministry of Environment and Climate Action will also be required.

Appendix 30 – Memo 11: Options for Cost Recovery to Consider for Inclusion in the SWMP (May 2020)

MEMORANDUM



TO: Erin Blaney, Regional District of Kitimat Stikine

FROM: Curtis Jung and
Eva Robertsson,
Morrison Hershfield

PROJECT No.: 190497600

RE: Options for Cost Recovery to Consider for Inclusion in
the Solid Waste Management Plan - FINAL

DATE: May 20, 2020

\\MH.LOCAL\DATA\PROJ\2019\190497600-RDKS SOLID WASTE MANAGEMENT PLAN\08. WORKING\05 COST RECOVERY\MEM-2020-05-20-COST RECOVERY_RDKS SWMP-190487600_FNL.DOCX

Under the Environmental Management Act, regional districts are required to have a solid waste management plan (SWMP), which must be developed following the solid waste management planning guidelines provided by the Ministry of Environment and Climate Change Strategy (the Ministry) for content and process.

The Regional District of Kitimat Stikine (RDKS) is in the process of developing a new SWMP. The planning process was initiated in 2017 and steps 1 and 2 of the planning process were completed in 2018, resulting in the formation of the Public and Technical Advisory Committee (PTAC), assessment of the current system, development of the consultation plan and development of six technical memos covering specific topics. In November 2019, Morrison Hershfield (MH) was commissioned to provide consulting support to continue developing the SWMP for the RDKS.

This is Morrison Hershfield's last technical memo in a series of five, each presenting potential management options on key solid waste related topics:

- Summary of Reduce and Reuse
- Recycling and Composting
- Residual Waste Management at Existing Facilities
- New Facilities and Service Areas for RDKS
- **Cost Recovery**

The content of each memo will be presented to the PTAC. The feedback on these memos will be considered as MH develops a final memo outlining Preferred Options to be included in the new draft SWMP, which will be brought to the public for consultation.

This memo provides context with respect to the current RDKS solid waste management cost recovery model and highlights current key challenges and opportunities that should be considered. The memo outlines a number of potential strategies and options the RDKS may want to pursue to improve cost recovery and maintain financial sustainability.

CONTEXT

The RDKS consists of two solid waste management Service Areas: Terrace Service Area and Hazelton and Highway 37 North Service Area. The two Service Areas were established in July 2015 under Bylaws 657¹ and 658². The service areas are financed separately under these bylaws and the cost recovery is outlined in Section 4 of each bylaw. Cost and revenue sharing is currently not possible

¹ Kitimat-Stikine Hazelton and Stewart Area Solid Waste and Recyclable Material Management Service Establishment Bylaw No. 657, 2015.

² Kitimat-Stikine Terrace Service Area Solid Waste and Recyclable Management Service Establishment Bylaw No. 658, 2015.

between the two distinct service areas under current bylaws as per the Local Government Act (*Part 11, Division 2, Items 378-380*).

The RDKS' solid waste management system has undergone some major changes over the past few years, including the construction of a new landfill, the expansion of another with significant upgrades, and the construction of three new transfer stations, two with integrated recycling depots. Additional changes include the closure of four landfills—two RDKS-owned and two owned by member municipalities. These upgrades have required significant capital investments. The upgrades and added services have also resulted in increased and difficult-to-predict operational costs in both service areas.

The Terrace Service Area is currently operated with a surplus; however, the Hazelton and Hwy 37 North Service Area is experiencing higher than expected capital and operating costs and an annual deficit.

Morrison Hershfield representatives Curtis Jung and Eva Robertsson met with the Financial Working Group (FWG) on February 11, 2020, to discuss the current cost recovery models and the member communities' ideas, concerns and observations. The FWG is made up of financial representatives from member municipalities and First Nations within the RDKS. The initial meeting was aimed at guiding the development of this memo and development of the cost recovery strategies and options to be considered for inclusion in the SWMP.

This memo summarizes our review of options for enhancing and improving the current cost recovery models directed by the five Guiding Financial Principals developed in collaboration with the RDKS and the FWG. These five principals are:

1. Long-term financial sustainability
2. Take advantage of economies of scale, where possible
3. Provide good and equal level of service
4. Provide equitable service to all residents in the same service area
5. Improve operating efficiencies of current solid waste management services and facilities

The following sections provide an overview of the current cost recovery models and their associated challenges.

CURRENT COST RECOVERY MODELS AND CHALLENGES FACED

The two RDKS service areas have different cost recovery models tailored to each area. The details of the cost recovery models are outlined in Bylaws 657 and 658.

Terrace Service Area

The cost recovery model in the Terrace Service Area was originally established with the intent of covering 50% of the annual operating costs through tipping fee revenues and the balance through property taxes. The tax portion is calculated based on population and the value of improvements³ in the City of Terrace, Electoral Area C, and Electoral Area E, and a population-based contribution from the Kitselas and Kitsumkalum on-reserve communities.

³ "improvements" means any building, fixture, structure or similar thing constructed or placed on or in land, or water over land, or on or in another improvement..." BC Assessment Act, [RSBC 1996] CHAPTER 20



In 2017, the RDKS found that significantly less waste than expected was brought to the Thornhill Transfer Station and the Forceman Ridge Waste Management Facility. This resulted in a revenue shortfall, which was partially offset by the structure of the contract with Bear Creek Group, the landfill operations contractor. The financial status of the Terrace Service Area has since changed and is now operating with a surplus, mainly due to the acceptance of soil and refuse from industry. Additional revenue streams in the Terrace Service Area are from curbside collection fees for service provided in the greater Terrace areas of Electoral Areas E and C and from First Nation cost-sharing revenue.

Approximately 31% of the annual operating costs were covered by taxes in 2019, 53% by tipping fees and other user fees, and 16% by surplus from the previous year. The industrial waste and soil accepted at the Forceman Ridge Waste Management Facility (WMF) contributed to almost \$700,000 in revenues, representing about half of the tipping fees collected in the Terrace Service Area in 2019.

Hazelton and Highway 37 North Service Area

The cost recovery model in Hazelton and Highway 37 North Service Area is almost exclusively funded by taxes and cost-sharing with First Nations. No tipping fees are charged on garbage from residential and commercial sources⁴ originating from within the Service Area. Waste accepted from outside the Service Area is charged a tipping fee with a 25% surcharge as outlined in Bylaw 688. The solid waste services in the Service Area are funded by taxes from incorporated and electoral areas, calculated based on population and the value of improvement in each community, and population-based contributions from First Nations.

The Hazelton and Highway 37 North Service Area has experienced higher than anticipated operating costs, particularly maintenance at the Hazelton WMF and the Iskut Landfill, since the Service Area was established. The Service Area is currently operating at a deficit. In January 2020, the RDKS Board voted to increase the tax requisition in the Service Area significantly to cover operating expenses and eliminate deficit in 5 years. The First Nations population-based contributions are also to increase.

The current financial status of the two service areas, associated challenges, and other relevant information are summarized in Table 1 below.

Table 1. Summary of the financial status of the two RDKS service areas, the associated challenges, and the additional information relevant to the respective cost recovery models.

	Terrace Service Area	Hazelton & Highway 37 North Service Area
Estimated Population	20,000	8,000
Annual surplus/deficit	Currently operating on an annual surplus.	Currently operating on an annual deficit.
Loan situation	Significant loan for capital projects with a 25-year financing period.	Small loan for capital projects compared to that for the Terrace Service Area. The tax requisition is not covering the loan repayments.

⁴ Tipping fees are currently charged on asbestos, contaminated soils and waste from industrial sites.

	Terrace Service Area	Hazelton & Highway 37 North Service Area
Cost recovery model	Funded by tipping fees, user fees and tax requisition.	Almost exclusively funded by tax requisition and population-based contributions. Strong opposition to tipping fee from community.
Out-of-service-area waste	Significant revenue stream from material (mainly soil) accepted from out-of-service-area charged a 25% surcharge.	Limited waste from out-of-service-area, mostly received at Meziadin Landfill from mining camps.
Other considerations	It took 15 years to decide on the site for Forceman Ridge WMF. The replacement value and the value of airspace at the landfill, is therefore high.	Smaller facilities, smaller population and larger distances compared to the Terrace Service Area results in higher operating costs and higher cost per system user and tonne of waste managed.

The following sections introduce five potential strategies for improving the current cost recovery models, which were developed to align with the established Financial Guiding Principles.

STRATEGY 1. REVIEW COST RECOVERY MODEL WITHIN THE SERVICE AREAS TO PROVIDE FAIR COST SHARING

Over the past five years, facility operating costs in both service areas have increased substantially. As shown in Figure 1 below, annual facility operating costs in the Terrace Service Area have increased from approximately \$574,000 in 2016 to \$1,239,000 in 2019. This significant cost increase is attributed to the commissioning of the Thornhill Transfer Station and Forceman Ridge Waste Management Facility, which opened at the end of 2016 and in the beginning of 2017, respectively. Annual facility operating costs in the Hazelton and Highway 37 North Service Area remained relatively consistent from 2016 to 2018, at approximately \$1,400,000 but increased significantly in 2019 up to \$1,800,000 as new facilities were completed and opened. The increase in the last year is mainly related to operations of the Stewart Transfer Station, Kitwanga Transfer Station, and Hazelton Waste Management Facility.

Table 2 below summarizes the facility maintenance and operations costs included for both service areas (as presented in Figure 1, Figure 2, and Figure 3).

Table 2. Facilities included in annual operating costs for each service area.

Terrace Service Area	Hazelton and Highway 37 North Service Area
<ul style="list-style-type: none"> ▪ Thornhill Transfer Station ▪ Forceman Ridge Waste Management Facility ▪ Rosswood Landfill ▪ Thornhill Landfill (closed) 	<ul style="list-style-type: none"> ▪ Hazelton Waste Management Facility ▪ Iskut Landfill ▪ Kitwanga Landfill (closed) ▪ Meziadin Landfill ▪ Kitwanga Transfer Station ▪ Stewart Transfer Station (2018 and 2019) ▪ Stewart Landfill (closed, contributions in 2018, 2019)

Figure 1 presents the annual facility maintenance and operating costs for the two service areas.

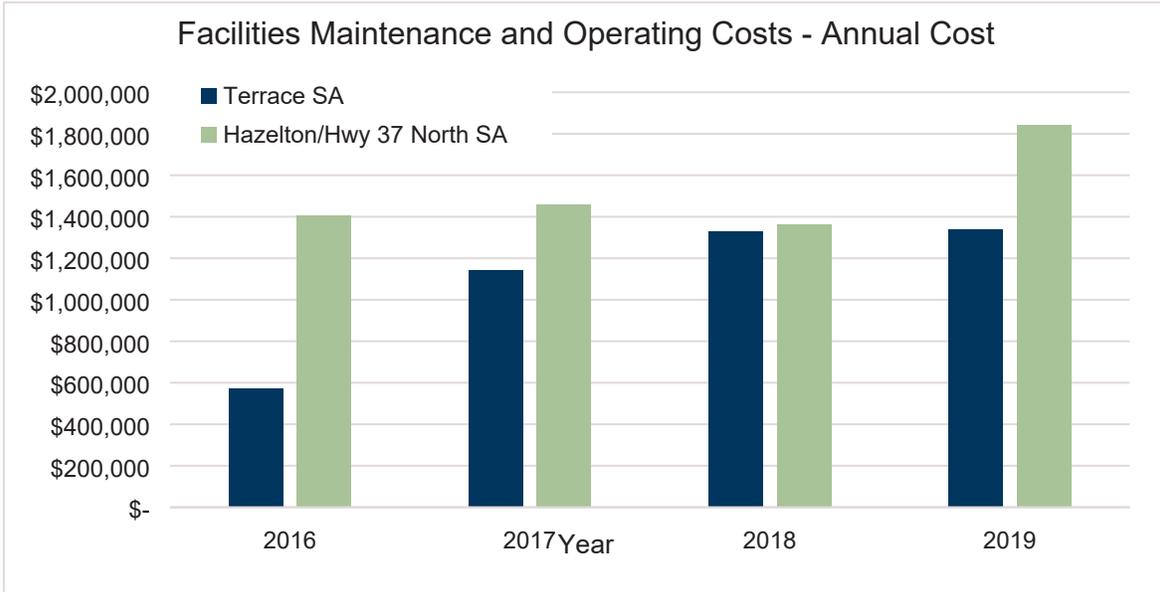


Figure 1. Annual facility maintenance and operating costs for service areas over last four years.

Figure 2 presents the annual facility maintenance and operating costs for the two service areas on a per-capita basis. For the purposes of this analysis, the populations of both service areas were assumed to be constant from 2016 to 2019, with the exception of the 2019 Hazelton and Highway 37 North Service Area population as the District of Stewart was added to the Service Area. The assumed population of the Terrace Service Area is 20,000 and the assumed population of the Hazelton and Highway 37 North Service Area is 8,000 (8,400 in 2019).

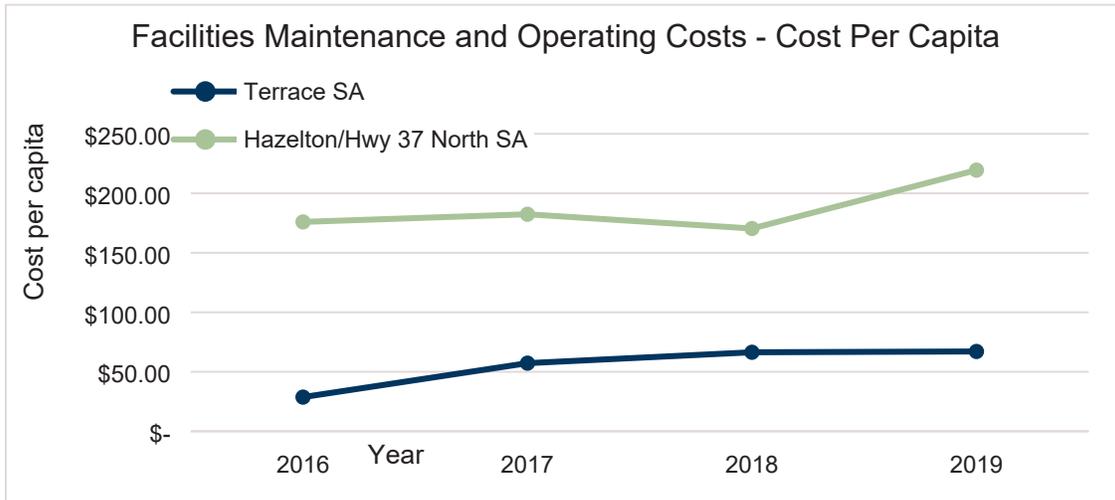


Figure 2. Facilities maintenance and operating costs for the Terrace and Hazelton and Highway 37 North Service Areas, presented as cost per capita.

As shown in Figure 2, the cost per capita to operate the solid waste facilities in the Hazelton and Highway 37 North Service Area is about three to four times higher than the cost of operating the facilities in the Terrace Service Area. The significantly higher per-capita facility operating costs are due to the substantially smaller population base, the greater number of solid waste facilities, and the greater distance between facilities in the Hazelton and Highway 37 North Service Area.



Figure 3 below shows the facility operating costs on a per-tonne basis. The total annual facility operating costs for all facilities in each service area (as summarized in Table 2) are divided by the total tonnes of garbage disposed at all landfills in the service area. In the Terrace Service Area, the primary disposal facility is the Forceman Ridge Landfill, but the tonnages also include waste disposed at the Rosswood Landfill. In the Hazelton and Highway 37 North Service Area, the primary disposal facilities are the landfill at Hazelton WMF and Meziadin Landfill. The other disposal facility owned and funded by the RDKS is the Iskut Landfill. Waste is transferred from the Kitwanga Transfer Station to Hazelton WMF and, as of 2019, from the Stewart Transfer Station to Meziadin Landfill.

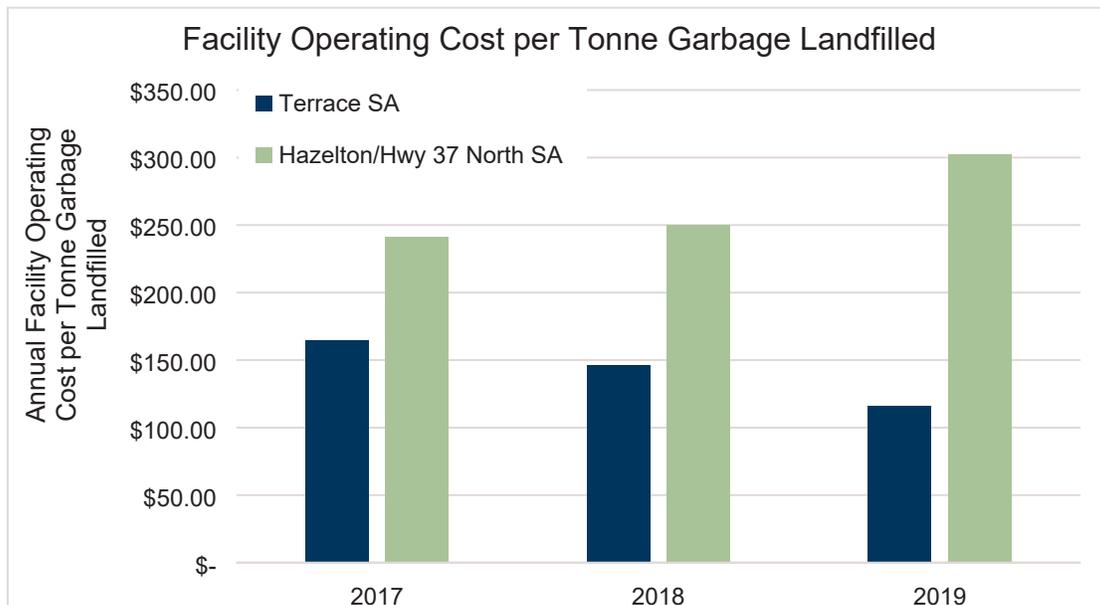


Figure 3. Total facility operating cost per tonne garbage landfilled in both service areas.

Disposal data for the Terrace Service Area is available from 2017 to 2019 (scale records from the Thornhill Transfer Station and Forceman Ridge Landfill and assumed disposal tonnages at the Rosswood Landfill). None of the facilities in the Hazelton and Highway 37 North Service Area are equipped with a weigh scale and the disposal is therefore estimated based on accepted volumes. Estimated tonnages are available for 2017⁵ and 2018⁶. For the purpose of this report, MH estimates the 2019 tonnages based on the 2017 and 2018 average for the Service Area, plus estimated tonnages of the waste transferred from the District of Stewart. The data in Figure 3 indicates that the per-tonne facility operating costs in the Hazelton and Highway 37 North Service Area may be more than double the per-tonne costs in the Terrace Service Area. The decreasing per-tonne disposal cost in the Terrace Service Area since 2017 is primarily due to the increase in landfilled waste from industrial and commercial sources. The Hazelton and Highway 37 North Service Area does not have the same access to funding through disposal of industrial waste at this time. The increased per-tonne disposal cost seen for the Hazelton and Highway 37 North Service Area between 2018 and 2019 is mainly the result of the costs related to the Stewart Transfer Station.

As discussed above, the two Service Areas have different funding models. The funding models and formula used to calculate the cost to residents through taxes or population-based contributions were established in 2015, prior to the completion of the major capital investments and service changes in the regional district. The RDKS may want to review the long-term sustainability of the cost recovery

⁵ Background Information and Assessment of the Current Solid Waste System – 2018 Update, Rev. 1.1, January 4, 2019, RDKS

⁶ Annual Reports for Hazelton WMF, Meziadin Landfill, and Iskut Landfill.



models, considering it has been five years since the two Service Areas were formed and operating costs have increased substantially since that time.

The objective of the cost recovery model is to generate sufficient revenue to cover all costs associated with the solid waste service (including garbage, recycling, and organics collection, processing, and disposal) while providing an acceptable level of service to residents in both Service Areas.

Two of the Guiding Financial Principles aim to provide an equal service level to residents in each Service Area. The cost recovery model for both Service Areas should consider the following key questions:

- How much does a resident pay for solid waste services?
 - Total cost to the resident for provision of solid waste services (via tax requisition, tipping fees, and/or a combination of both) by both the RDKS and municipal provided services (such as curbside collection). This may also include review of the cost share agreements in place for First Nations communities.
- What level of service is provided to the resident?
 - Consider both RDKS and municipal programs in place to collect, process, and dispose of garbage, recyclables, and organics.
 - Consider the collection programs in place and the proximity of drop-off facilities if curbside collection programs do not exist.

MH recommends that the RDKS develop a number of key performance indicators (KPIs) considering cost per capita, household or business, and cost per tonne of waste generated or disposed. The KPIs will assist with evaluating the current cost recovery models against the Guiding Financial Principles outlined in the Context section above. KPIs normalize costs to a common denominator (such as per capita or household), which allows for a standard comparison of costs between service areas. Using normalized KPIs is particularly important when comparing costs between two different service areas with significantly different populations.

It may also be warranted to continually reassess the cost recovery model within each service area with the goal to provide fair and equitable cost sharing. This is discussed further in Strategy 3 below.

There may not be a clear understanding of the high cost of waste management among residents and business owners. There may, for example, be a perception that recyclables are creating a resource and revenue stream for the RDKS, which is not the case, especially for the Hazelton and Highway 37 North Service Area due to high transportation costs and unfavorable market conditions for recyclable materials. The RDKS may want to include messaging around waste management costs in their public education efforts. The financial messaging could be communicated in the context of reuse and waste reduction activities.

Possible options to incorporate in the SWMP include:

- 1A. Develop KPIs to assist in evaluation of the current cost recovery models between service areas based a common factor (such as per capita or household). Adjust cost recovery models to facilitate a continued service delivery fair to all residents and businesses.
- 1B. Include messaging around waste management cost in RDKS's public education efforts.

STRATEGY 2. REDUCE COST

Directing efforts to reduce cost is a natural way to balance the budgets. Cost reductions can sometimes be found through improved operating efficiencies. Cost saving efforts should be considered in conjunction with potential impacts to levels of service or quality provided. All cost saving efforts should aim to avoid compromising the existing service levels being provided to residents.

The Hazelton and Highway 37 North Service Area is currently operating on a deficit, mainly due to high transportation costs, higher than expected operating costs, hauling distances, and the limited market for recyclable materials. The RDKS may want to assess current hauling cost between facilities and explore options for cost savings. Co-haul and back-haul options, baling or compacting loads, and new agreements with stewards are strategies that may reduce hauling costs. Co-hauling can be done within the RDKS or in collaboration with the private industry. Depending on data availability, hauling costs should be assessed for each waste stream (primarily garbage and recyclables) and should be normalized to allow comparison between costs (cost per haul and/or cost per tonne hauled material). The objective of a detailed hauling analysis is to identify haul routes and waste streams presenting the greatest opportunities to reduce costs and improve efficiencies.

As an example, the Yukon Government has been assessing options to reduce its high transportation costs for recyclables within the Territory by co-hauling with the Yukon Liquor Corporation.

The RDKS is currently using back-haul⁷ for transporting recyclable material from the Hazelton and Highway 37 North Service Area to the processor in Terrace. The resulting cost per tonne of material hauled is considerably high⁸, and the RDKS may want to revisit the current hauling agreements. The Iskut Band has recently purchased a hauling company and owns a hauling truck. The band manager has expressed an interest in assessing opportunities to collaborate with the RDKS to increase efficiencies and reduce the cost to both parties.

The RDKS is currently paying a scaled fee to haul cardboard and paper products from the Hazelton and Highway 37 North Service Area to Terrace. The fee varies between \$48 and \$64 per mega bag depending on the number of bags hauled. The RDKS may want to consider baling or compacting selected materials, as this would increase hauling capacity while reducing the space required for material storage.

The RDKS is currently communicating with Recycle BC and other stewards with the aim of increasing the number of service agreements, as discussed in the previous memo on recycling and organics diversion⁸. Agreements with stewards would offset some of the costs associated with collection, storage, management and hauling of the recyclable products and materials.

The RDKS may also want to assess current facility operations with the aim of improving efficiencies and exploring cost saving alternatives. This could include reassessing the operating hours of selected facilities, the use of RDKS equipment, and the allocation of staffing to specific tasks. It is unlikely for cost savings to be found in the current operating contracts, considering the competitive labour market in the region.

The RDKS may want to explore the opportunity of performing all or some tasks in-house using RDKS staff members (currently contracted), as discussed in Strategy 9 presented in the MH memo on residual

⁷ The use of a commercial hauling truck otherwise returning empty after goods have been delivered. The primary delivery is goods, not waste materials.

⁸ Recycling Options to Consider for Inclusion in the Solid Waste Management Plan (MH, February 2020)

waste management at existing RDKS facilities⁹. Moving some of the operation in-house may reduce cost through:

- Sharing of staff and equipment resources between waste management facilities
- Greater control over operational efficiencies and staff messaging to site users
- Improved efficiencies and the elimination of RDKS staff hours required to provide operator support and oversight

Cost reduction strategies and options presented in previous memos are listed in Table 3. The presented options are not included under this Strategy - Reduce Cost, as these options already are covered under other strategies.

Additional cost saving initiatives include long-term investments such as increased public education, outreach, and engagement programs developed with the aim to increase diversion and bylaw adherence with the goal of reduced need for oversight and sustainable use of facilities and services.

The RDKS acknowledges that all major system changes come at a price and this must be accounted before implementing changes aimed to achieve overall cost savings.

Table 3. Cost reduction strategies and options presented in previous memos and selected by the Public Technical Advisory Committee to be included in the Preferred Options.

Recycling Options to Consider for Inclusion in the Solid Waste Management Plan (MH, February 2020)

STRATEGY 4. Reduce Recycling Costs

- 4A. Maximize partnership opportunities with stewardship organizations, such as for residential recycling at the Kitwanga Transfer Station and curbside collection in the Greater Terrace Area.
- 4B. Undertake an efficiency review of the management of recyclables within the region.
- 4C. Pursue composting of paper products at locations where deemed feasible.
- 4D. Set cost threshold when alternative lower cost options (e.g. composting, burning or landfilling) are pursued until recycling is no longer cost prohibitive.

STRATEGY 9. Amend Solid Waste Bylaw to Encourage Waste Diversion

- 9D. Adjust the current fee schedule to allow agreements with stewards such as MARR.

Options for Residual Waste Management at Existing Facilities to Consider for Inclusion in the Solid Waste Management Plan (MH, March 2020)

STRATEGY 5. Close Selected Small Landfills and Replace with Transfer Stations

- 5A. Assess cost/benefit of closing Rosswood and Iskut landfills by determining community need for transfer stations, and implement if deemed feasible.
- 5B. Consider options to continue to operate the Iskut Landfill for demolition and land clearing waste.

STRATEGY 6. Effectively Use Landfill Airspace *(indirect cost savings through efficient use of airspace)*

⁹ Residual Waste Management at Existing Facilities to Consider for Inclusion in the Solid Waste Management Plan (MH, March 2020).

- 6A. Enforce existing bylaws to control the waste disposed and minimize unnecessary airspace consumption.
- 6B. Review the landfill operations, including the use of operational soil and alternative daily covers and waste placement and compaction. Based on findings, consider providing, recommending or requiring additional contractor training to improve operations.

STRATEGY 9. Deliver Operational Services In-House

- 9A. Assess the cost-benefit of using contractor vs. in-house staff to operate RDKS facilities, and transition to in-house service if determined to be beneficial.

Additional possible options to incorporate in the SWMP include:

- 2A. Complete detailed hauling analysis to assess the feasibility of alternative co-hauling and back-hauling options.
- 2B. Perform a cost-benefit analysis of baling and/or compacting recyclable materials hauled from the Hazelton and Highway 37 North Service Area.
- 2C. Regularly revisit agreements and operating procedures to explore options to reduce cost while maintaining level and quality of service.
- 2D. Develop long-term goals and strategies, including potential investment, with the purpose of reducing cost in the long term.
- 2E. Complete operational reviews for each facility, which would include a review of staffing, past operating performance, primary operating costs, and identification of areas for improvement.

STRATEGY 3. INCREASE REVENUE

The RDKS's main revenue sources include requisition through taxation, cost-sharing agreements with First Nation communities, tipping fees, and curbside collection fees. These revenue sources are aimed at covering the solid waste management operations, whereas loans and grants are used to pay for capital projects. Figure 4 illustrates the distribution of the operational revenue streams in 2019 in the Terrace and Hazelton and Highway 37 North Service Areas. Though both service areas experienced a surplus in 2018, the Terrace Service Area is estimated to have a surplus of \$1,128,000 at the end of 2019, whereas the Hazelton and Highway 37 North Service Area is estimated to have a deficit of \$1,224,000.

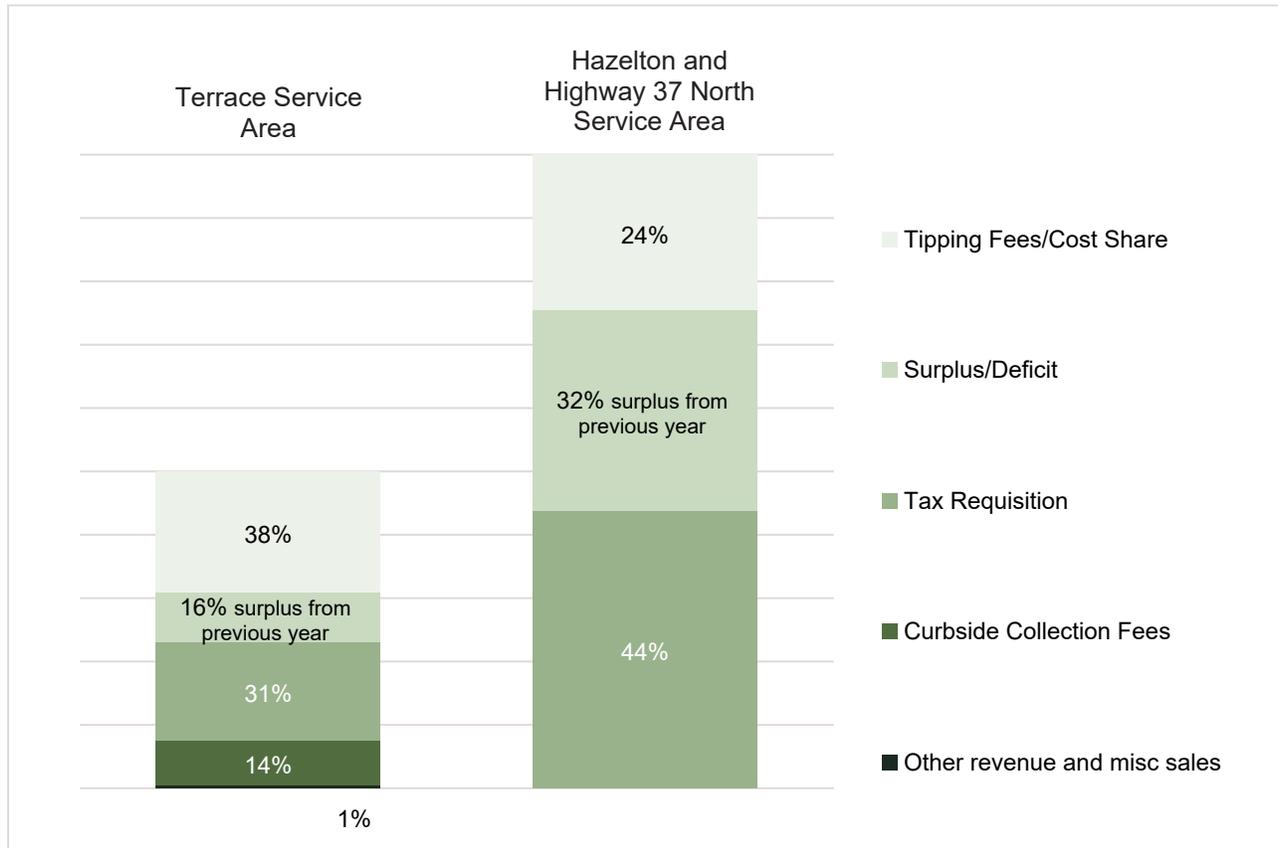


Figure 4. Distribution of revenue streams for each of the RDKS service areas Terrace Service Area and Hazelton and Highway 37 North Service Area in 2019.

Terrace Service Area

The Terrace Service Area is currently funded through a combination of tipping fees and tax requisition. The cost recovery model for the Terrace Service Area was originally established assuming approximately 50% of the revenue would be generated from tipping fees and the 50% from tax requisition. As noted above, approximately 31% of the annual operating costs were covered by taxes in 2019, 53% by tipping fees and other user fees, and 16% by surplus from the previous year.

Since the Forceman Ridge WMF started accepting waste in 2017, the amount of industrial waste and soil accepted at the facility has increased substantially. In 2019, the industrial waste and soil accepted at the facility contributed to almost \$700,000 in revenues, representing about half of the tipping fees collected in the Service Area. Under Bylaw No. 671, soil that is suitable for cover is charged a reduced rate of \$55.00/tonne, whereas contaminated soil is charged \$65-\$78/tonne, depending on the level of contamination. Industrial waste and any waste generated outside the Service Area is charged a 25% surcharge, as prescribed under the same bylaw. In 2019, 1,821 tonnes of contaminated soil was accepted from industry at the Forceman Ridge WMF. An additional 2,441 tonnes of industrial waste (refuse; demolition, land clearing, construction waste, and asbestos) was accepted for a total of 4,262 tonnes of soil and waste from industrial sources.

MH recommends that the RDKS review the surcharge applied industrial waste, out-of-service-area waste, as well as the reduced tipping fee charged for soil material. A revised surcharge for industrial waste and reduced rate for soil should be developed with consideration to the following:

- The full cost of the landfill, including planning, design, operations, closure, and post-closure costs. As a best practice, the tipping fee should be established to cover all landfill costs over its entire lifespan (including the post-closure period). By considering the full cost of the landfill, the value of the remaining available airspace can be quantified.
- The tipping point at which it is more economical for industry to dispose of waste at another facility or construct their own landfill.
- The benefits and costs of accepting contaminated soil at a discounted tipping fee (compared to general garbage). The material management plan in the Design, Operating and Closure Plan (DOCP) for the Landfill at Forceman Ridge WMF relies on some imported material. The RDKS may want to regularly monitor the use of operational soil to ensure that appropriate waste to cover ratio is achieved at the site as discussed in the memo on existing facilities¹⁰.

Hazelton and Highway 37 North Service Area

The RDKS Board has voted to increase tax requisition to recover the 2019 deficit (and future anticipated deficits) over the next 5 years. Additional efforts to increase revenue, particularly for the Hazelton and Highway 37 North Service Area, should be considered to reduce the cost burden on residents and businesses.

Tipping fees have historically been opposed in the Hazelton and Highway 37 North Service Area; however, consideration thereof may be warranted at this time. In 2017, it was estimated that 5,900 tonnes of waste were disposed at the Landfill at Hazelton WMF and the Meziadin Landfill. Currently, there are no tipping fees charged at either facility (with the exception of select ICI loads). Assuming a tipping fee of \$110/tonne, this represents an additional potential revenue stream of up to \$650,000.

Introducing tipping fees in the Hazelton and Highway 37 North Service Area is consistent with a user-pay service delivery model. A user-pay model is based on the principle that users (residents and commercial customers) of the service should pay an amount that is proportional to the amount of waste they dispose. A user-pay system incentivizes residents and businesses to divert more material and reduce the amount of waste disposed.

The RDKS may want to consider introducing tipping fees for large commercial loads only. The RDKS is currently assessing the option to amend bylaw 688 to allow tipping fee charges for only commercial loads larger than 30m³. These larger loads often consume significant airspace and the waste is generally generated by for-profit businesses. There may also be an opportunity to work with current waste haulers to haul larger loads directly to the receiving landfill bypassing a potential transfer station. This would be especially beneficial for large commercial loads generated in the District of Stewart where the local hauler and transfer station contractor are the same.

Should tipping fees be considered for residential users, a model could be set up where each household in the Service Area is given a set waste volume or number of visits for free (or for an annual fee) each year and waste beyond that would be subject to tipping fees. The communities of the District of Stewart, Village of Hazelton, District of New Hazelton, Gitanyow, Gitwangak, Gitsegukla, Witset, Gitanmaax, Glen Vowell, Hagwilget, and Kispiox currently receive curbside pickup of garbage, and residents could be provided with a set number of self-haul visits for free. Alternatively, a cash or card-based system could be established that requires any resident using the facility to pay at the facility or pre-purchase disposal credits (card or coupons) at local retailers.

¹⁰ Residual Waste Management at Existing Facilities to Consider for Inclusion in the Solid Waste Management Plan (MH, March 2020).



There are currently no scales at any facilities in the Hazelton and Highway 37 North Service Area. Therefore, tipping fees would be collected based on volume. An appropriate volume-based tipping fee structure would need to be established that is simple enough to enforce at all facilities yet of sufficient detail to allow for fair collection of fees from various users (residents and commercial users) with various load sizes and material types. One option is to allow a set number of bags per year free of charge, with an additional large load. This could be tracked using drivers' licenses and/or resident addresses.

It is recognized that tax requisition will likely need to be adjusted if tipping fees are introduced in the Hazelton and Highway 37 North Service Area. Communications related to the implementation of tipping fees should clearly indicate that the objective is to charge residents an amount that is more proportional to the amount of waste they are disposing (user-pay system). Communications should clearly explain the total cost to residents if revenues are collected through a combination of tipping fees and tax requisition and compare the proposed costs to the total costs that residents are paying now under current tax-based cost recovery model. It is understood that residents may feel like they are paying twice if tipping fees are introduced.

Possible options to incorporate in the SWMP include:

- 3A. Regularly review and update the current cost model for the landfill at Forceman Ridge WMF and adjust tipping fees for industrial and out-of-service-area waste as needed.
- 3B. Assess the costs and benefits of introducing a "user-pay" cost recovery model in the Hazelton and Highway 37 North Service Area by introducing tipping fees and adjust tax requisition based on new tipping fee structure. Implement a "user-pay" cost recovery model if deemed beneficial to residents, businesses and the RDKS while following the Guiding Financial Principals.

STRATEGY 4. DIRECT OR INDIRECT COST SHARING BETWEEN SERVICE AREAS

Under the current bylaws and Local Government Act, cost and revenue sharing between the two service areas is not allowed. As discussed above, the Terrace Service Area is currently operating in a surplus and the Hazelton and Highway 37 North Service area is operating in a deficit. The following two sections explore the options for direct and indirect cost and revenue sharing between the two service areas.

Direct Cost Sharing

Bylaws No. 657 and 658 were established in 2015 based on the current and projected facility operating costs and revenues at that time. As discussed above, operating costs in both service areas have increased significantly over the last five years. Tax requisition in the Hazelton and Highway 37 North Service Area has recently been increased substantially in order to cover the increasing facility operating costs.

The RDKS may want to review the feasibility of amending Bylaws No. 657 and 658 to combine service areas to allow for cost and revenue sharing. A challenge for the Hazelton and Highway 37 North Service Area is poor economies of scale. There are more solid waste facilities (transfer stations and landfills) in the Hazelton and Highway 37 North Service Area, resulting in higher operating costs as compared to the Terrace Service Area, yet the population in the Hazelton and Highway 37 North Service Area is less than half of the population in the Terrace Service Area.



Similar to the RDKS, there are several regional districts in BC that are challenged with providing solid waste management services to remote communities having high per-tonne disposal costs and poor economies of scale. However, the cost recovery model in several regional districts is based on the solid waste service area, including all communities within the regional district. This allows the regional districts to distribute the revenues from larger facilities (landfills servicing populations in larger communities) to cover the costs of operating smaller facilities with lower economies of scale.

Over \$600,000, almost 40% of the tipping fees collected at Forceman Ridge WMF, were collected from industry or sources outside the Terrace Service Area in 2019. Almost \$470,000 were collected from industry at the Forceman Ridge WMF during the first four months of 2020 alone, which suggests this revenue stream likely is to increase as industry develops in the area. The industrial waste revenue stream would potentially benefit all RDKS residents if the two service areas were joined; reducing the financial burden on the Hazelton and Highway 37 North Service Area residents and businesses while limiting the effects experienced by those in the Terrace Service Area. However, consideration should be given to the uncertainty and limitations of this waste stream both in terms of quantities and short- and long-term supply. Cost sharing should only be considered if it is fair to all residents and businesses.

Indirect Cost Sharing

The Forceman Ridge WMF receives a significant quantity of waste from industrial sources. The Meziadin Landfill is located approximately 230 km north of Terrace, and the Hazelton WMF is located approximately 150 km northeast of Terrace.

The RDKS can consider the feasibility of redirecting waste to the Hazelton and Highway 37 North disposal facilities by providing incentives to industrial users to haul directly to the Meziadin Landfill or Hazelton WMF. Incentives may include reduced tipping fees for industrial users in the Hazelton and Highway 37 North Service Area. The hauling distance from the waste generation point to the disposal facility is one of the primary factors affecting the economics of waste disposal. The other factor is the tipping fee charged at the disposal facility. The round-trip hauling time from Terrace to the Hazelton WMF or Meziadin Landfill is a barrier to redirecting waste to these facilities. Even if industrial waste haulers are incentivized to dispose at these facilities (for example, through reduced tipping fees), the economics of hauling an additional four to six hours may be too much of a financial barrier.

Possible options to incorporate in the SWMP include:

- 4A. Review feasibility of amending bylaws to combine service areas to allow for direct cost and revenue sharing
- 4B. Assess the feasibility of redirecting industrial waste to the Hazelton WMF and/or Meziadin Landfill to allow indirect cost sharing.

STRATEGY 5. EXPAND SERVICE AREA

The RDKS is currently exploring options for expanding its service areas or including new facilities. These options relate to the District of Kitimat, Dease Lake Landfill, and Telegraph Creek Landfill and transfer station and are discussed further below.

Assess the Financial Implications of District of Kitimat Participating in the Terrace Service Area

In 2019, the District of Kitimat (Kitimat) developed a Solid Waste Management Strategy and Action Plan with the objective of developing and selecting options to improve the District's diversion and disposal system. Following up on the Action Plan developed in April 2019, the District retained Maura Walker & Associates (MWA) to assist with developing a strategy and recommended actions for implementation in 2020 and beyond. Significant actions scheduled for 2020 include the preparation of a landfill upgrade plan and an assessment to evaluate the cost effectiveness of participating in the Terrace Service Area under the RDKS.

Kitimat recently voted to introduce a three stream curbside collection program. The program, planned to be introduced in 2021, will be very similar to that offered by the RDKS currently. The current contractor hired by RDKS, Geier Waste, has also been hired to perform the curbside collection service in Kitimat.

Waste currently generated in Kitimat and the Village of Kitimaat (Haisla First Nation) is disposed at the Kitimat Landfill. Kitimat is currently operating in Phase 2 of the Kitimat Landfill, which has limited remaining capacity. MH understands that, based on a detailed landfill conformance assessment and comments from the Ministry, Kitimat will not have the authority to expand into Phase 3 without significant capital investment in design and operational improvements. The Landfill Upgrade Plan scheduled for 2020 is expected to provide a conceptual cost estimate for the proposed upgrades, including weigh scales, additional drop-off areas, an organics processing facility, and an engineered liner and leachate collection system for Phase 3 of the landfill.

Considering that the capital investments associated with the Kitimat Landfill Upgrade Plan are expected to be significant, there is an opportunity at this time to evaluate the cost effectiveness of Kitimat participating in the Terrace Service Area. Given that the RDKS has landfill capacity and provides a similar service, there could be significant financial benefits to harmonizing services.

There are several options for the District of Kitimat to participate in the Terrace Service Area. Each option will require a different cost recovery model. Potential options include the following:

- **Full participation in the Terrace Service Area.** This would involve design and construction of a new Kitimat Transfer Station and the use of the Forceman Ridge WMF for disposal and composting. The RDKS may also offer curbside collection through the Greater Terrace Area curbside collection service. Kitimat would join the Terrace Service Area and become part of the RDKS cost recovery model. Considerations associated with this option include the ownership and operating model of the transfer station and responsibilities for the Kitimat landfill liabilities, including closure activities.
- **Partial participation in the Terrace Service Area.** Under this option, Kitimat would proceed with establishing a transfer station and closing the Kitimat Landfill; however, it would remain outside of the Terrace Service Area and use the Forceman Ridge WMF as a user (i.e. pay tipping fees). Under current RDKS bylaws, waste from Kitimat would be charged the 25% surcharge for out-of-service-area waste.

Kitimat may decide to not join the RDKS and continue operating the Kitimat Landfill by expanding into Phase 3. The likelihood of this status quo scenario will need to be considered in the cost recovery model developed for the Terrace Service Area.

The RDKS can benefit from evaluating the pros and cons of Kitimat participating in the RDKS Terrace Service Area. Financial considerations and potential benefits will depend on the level of participation of Kitimat; however, these benefits may include the following:



- Assuming full participation by Kitimat, this would expand the population base of the Terrace Service Area, resulting in additional revenue from tax requisition (assuming the current cost recovery model remains the same).
- Additional tipping fee revenue from all garbage generated within Kitimat, which was previously being disposed at the Kitimat Landfill.

There would also be additional costs associated with Kitimat's participation in the Terrace Service Area, which may include additional curbside collection costs (if this option is preferred), additional education and outreach costs with an expanded service population, and additional facility operating costs (depending on preferred operating model of the transfer station in Kitimat).

The financial impact to the current residents and businesses should be considered in an evaluation. A collaboration with Kitimat should not be considered if such collaboration would result in increasing costs to residents and businesses in the Terrace Service Area. Consideration should also be given to the investment the RDKS has already made in new programs. Any new Service Area member should pay their share of these investments, this to ensure fair distribution of costs between new and current Service Area members.

Assess the Financial Implications of Including the Dease Lake in the Hazelton and Highway 37 North Service Area

The Dease Lake Landfill is currently owned by the Ministry of Transportation and Infrastructure (MOTI) and operated by a contractor hired by MOTI. The Dease Lake Landfill recently started receiving waste generated in Telegraph Creek, as the Telegraph Creek landfill was closed. A transfer station has been constructed to replace the closed landfill. No tipping fees are currently charged at the Dease Lake Landfill, as there is no scale at the site. It is MH's understanding that MOTI does not have any plans to introduce tipping fees at the site.

The RDKS is considering assessing the options of either taking over operations of the Dease Lake Landfill, or assist in landfill closure and transfer station development and operation. The landfill liability and ownership would remain with MOTI. Either the landfill or transfer station facility would fall under the Hazelton and Highway 37 North Service Area and associated cost recovery model. The RDKS will need to consider the long-term capital and operating costs.

The RDKS should contact MOTI to get an update on the status of the Dease Lake Landfill and future plans for the site. MH understands that the RDKS and MOTI have a meeting scheduled with the Ministry to discuss future options for the site and the best path forward. Factors that should be considered in future discussions between RDKS, MOTI, and Ministry include the following:

- Current cost recovery model of the Dease Lake Landfill, including revenues streams and operating costs. Review of how the facility is currently being funded.
- Historic, current, and planned usage of the site. Estimates may be available on how much waste was disposed by each party, which may impact the operational cost contributions assigned to each party.
- Review of cost sharing agreements with Telegraph Creek First Nation, as well as usage by the RDKS Electoral Area F and residents of Dease Lake First Nation.

Any agreement with the MOTI should consider the cost impact on the current Hazelton and Highway 37 North Service Area residents and businesses. Inclusion of a costly existing system at the expense of current Service Area members is unlikely to receive support.



The RDKS is also considering including Telegraph Creek in the Hazelton and Highway 37 North Service Area, should Dease Lake become a part of the RDKS. The cost recovery model for the Service Area would then need adjustment and the operations of the Telegraph Creek transfer station and closed landfill would have to be negotiated.

Additional information and discussion around expansion of the RDKS service areas are presented in MH's memo on residual waste management at new facilities and service areas¹¹.

Possible options to incorporate in the SWMP include:

- 5A. Assess the financial implications of District of Kitimat participating in the Terrace Service Area. The SWMP could be structured to allow, but not require, the District of Kitimat to use the Forceman Ridge WMF.
- 5B. Assess the financial implications of including Dease Lake in the Hazelton and Highway 37 North Service Area.
- 5C. Assess the financial implications of including Telegraph Creek Landfill and future transfer station in the Hazelton and Highway 37 North Service Area.

IMPACTS OF POTENTIAL STRATEGIES ON COST RECOVERY

Table 4 shows which stakeholder groups are affected by the strategies outlined in this memo.

¹¹ Options for Waste Management at New Facilities or in New Service Areas to Consider for Inclusion in the Solid Waste Management Plan (MH, April 2020)



Table 4. Organizations and categories of individuals impacted by the identified strategies for cost recovery.

#	Strategy	Terrace SA	Hazelton & Hwy 37 North SA	Industrial customers	Residents and local businesses	District of Kitimat	MOTI	Telegraph Creek Band	Village of Kitimaat (Haisla First Nation)	Comments
1	Review cost recovery model within the Service Areas to provide fair cost sharing									
	1A. Develop KPIs to assist in evaluation of the current cost recovery models between service areas based a common factor (such as per capita or household). Adjust cost recovery models to facilitate a continued service delivery fair to all residents and businesses.									
	1B. Include messaging around waste management cost in RDKS's public education efforts.									Providing open and honest communication to gain the trust and buy in from the public.
2	Reduce cost									
	2A. Complete detailed hauling analysis to assess the feasibility of alternative co-hauling and back-hauling options.									
	2B. Perform a cost-benefit analysis of baling and/or compacting recyclable materials hauled from the Hazelton and Highway 37 North Service Area.									The RDKS has recently been successful in negotiating scaled hauling fees, where the cost per mega bag decreases with the increase number of bags being hauled.
	2C. Regularly revisit agreements and operating procedures to explore options to reduce cost while maintaining level and quality of service. Develop long-term goals and strategies, including potential investment, with the purpose of reducing cost in the long term.									
	2D. Complete operational reviews for each facility, which would include a review of staffing, past operating performance, primary operating costs, and identification of areas for improvement.									

#	Strategy	Terrace SA	Hazelton & Hwy 37 North SA	Industrial customers	Residents and local businesses	District of Kitimat	MOTI	Telegraph Creek Band	Village of Kitimaat (Haisla First Nation)	Comments
3	Increase revenue									
	3A. Regularly review and update the current cost model for the landfill at Forceman Ridge WMF and adjust tipping fees for industrial and out-of-service-area waste as needed.									
	3B. Assess the costs and benefits of introducing a “user-pay” cost recovery model in the Hazelton and Highway 37 North Service Area by introducing tipping fees and adjust tax requisition based on new tipping fee structure. Implement a “user-pay” cost recovery model if deemed beneficial to residents, businesses and the RDKS while following the Guiding Financial Principals.									
4	Direct or indirect cost sharing between service areas									
	4A. Review feasibility of amending bylaws to combine service areas to allow for direct cost and revenue sharing									Focus should be given to ensure the combing of the services areas is fair to all, and that the Terrace Service Area residents and businesses don’t feel they are carrying the cost for both the capital investment in the Thornhill Transfer Station and the Forceman Ridge WMF
	4B. Assess the feasibility of redirecting industrial waste to the Hazelton WMF and/or Meziadin Landfill to allow indirect cost sharing.									

#	Strategy	Terrace SA	Hazelton & Hwy 37 North SA	Industrial customers	Residents and local businesses	District of Kitimat	MOTI	Telegraph Creek Band	Village of Kitimaat (Haisla First Nation)	Comments
5	Expand service area									
	5A. Assess the financial implications of District of Kitimat participating in the Terrace Service Area. The SWMP could be structured to allow, but not require, the District of Kitimat to use the Forceman Ridge WMF.									
	5B. Assess the financial implications of including Dease Lake in the Hazelton and Highway 37 North Service Area.									
	5C. Assess the financial implications of including Telegraph Creek Landfill and future transfer station in the Hazelton and Highway 37 North Service Area.									

Appendix 31 – Memo 12: Evaluation of Preferred Options for Inclusion in the Solid Waste Management Plan (June 2020)

TO: Erin Blaney, Regional District of Kitimat Stikine
FROM: Veronica Bartlett
Morrison Hershfield
PROJECT No.: 190497600
RE: Evaluation of Preferred Options for Inclusion in the Solid
Waste Management Plan
DATE: June 18, 2020

\\MH.LOCAL\DATA\PROJ\2019\190497600-RDKS SOLID WASTE MANAGEMENT PLAN\08. WORKING\06 OPTIONS EVALUATION\MEM-2020-06-18-EVALUATION_PREFERRED OPTIONS_FINAL.DOCX

Under the Environmental Management Act, regional districts are required to have a solid waste management plan (SWMP), which must be developed following the solid waste management planning guidelines provided by the Ministry of Environment and Climate Change Strategy (the Ministry) for content and process.

The Regional District of Kitimat Stikine (RDKS) is in the process of developing a new SWMP. The planning process was initiated in 2017 and steps 1 and 2 of the planning process were completed in 2018, resulting in the formation of the Public and Technical Advisory Committee (PTAC), assessment of the current system, development of the consultation plan and development of six technical memos covering specific topics. In November 2019, Morrison Hershfield (MH) was commissioned to provide consulting support to continue developing the SWMP for the RDKS.

MH worked closely with the RDKS to develop a series of five technical memos, each presenting potential management options on key solid waste related topics:

- Summary of Reduce and Reuse
- Recycling and Composting
- Residual Waste Management at Existing Facilities
- New Facilities and Service Areas for RDKS
- Cost Recovery

The content of each memo was presented to the PTAC and feedback on these memos has been considered for the development of this final memo outlining Preferred Options to be included in the new draft SWMP.

This memo provides a summary of the shortlisted options from previous phases for PTAC members to do a final evaluation of all of the proposed strategies. At the PTAC meeting on June 25, members will have the opportunity to vote on which options should be part of the draft SWMP, which will require evaluation and sign off by the Regional District Board prior to public consultation. A workshop with the Board will take place in August and it will determine the preferred direction for each of the updated plan elements, which will be brought to the public for consultation during fall of 2020.

1) PROPOSED STRATEGIES

The proposed strategies for the new SWMP were developed through a series of PTAC meetings, each presenting potential management options on key solid waste related topics. This section presents existing and proposed new strategies, which have been prioritized by PTAC members. The strategies follow the order of the pollution prevention hierarchy. The preferred options will be shown in the order of priority given by PTAC. Options / strategies that were given higher priority with a shorter

implementation period (first five years of implementation) are presented before those with on-going implementation and lower priority strategies with an implementation beyond 5 years.

The key issues or opportunities behind each proposed strategy are summarized together with the proposed implementation time frame, role and responsibility for its implementation, and anticipated capital and annual costs (see Figure 1). Annual costs include staff operational time provided in staff hours, or if a specific action is likely to be outsourced, an estimated cost is presented.



Figure 1 Overview of infographic used to summarize important information around each proposed Strategy.

1.1 Reduction

The RDKS already promotes waste reduction and reuse of resources through outreach and education programs and by supporting non-profit thrift stores by reimbursing tipping fees paid on unsuitable donations received.

This section provides a summary of the five proposed additional strategies and initiatives that aim to further reduce waste generation as shown below.

#	Strategy	Short-term Priority (Year 1-5)	Long-term Priority (Year 6-10+)
1	Lobby for reduction of single-use items and packaging	✓	
2	Encourage voluntary reduction of single-use items by businesses	✓	
3	Promote waste reduction ideas through targeted campaigns	✓	✓
4	Support member municipalities with implementation of bylaw(s) to eliminate the distribution of single-use items		✓
5	Adopt a preferential purchasing policy for green procurement that supports reduce, reuse and the use of recycled content		✓

STRATEGY 1 Lobby for Reduction of Single-Use Items and Packaging

Issue/Opportunity: In recent years, many local and regional governments across Canada and in BC have been investigating and implementing policies to limit the amount of single-use items being generated, which require management through curbside collection, litter management in public spaces, disposal, etc.

Although the waste composition study conducted in 2017 did not specifically identify single-use items, it showed the quantity of several categories of plastics in the landfilled waste. It is estimated that up to 13% of the total waste stream could be single-use plastic items for which use could have been avoided or that could have been directed to recycling facilities.

In June 2019, the Prime Minister announced that the Government of Canada is taking additional steps to reduce plastic waste coming from the use of single-use items through the Canada-wide Action Plan on Zero Plastic. In July 2019, the Ministry of Environment and Climate Change Strategy (the Ministry) issued the Plastics Action Plan, a policy consultation paper on how the Province intends to address plastic waste. Although the Ministry has not announced any immediate plans for future EPR products, it has indicated that products such as single-use items are on the priority list for future inclusion.

Suitable organizations for the RDKS to lobby for a provincial EPR program include, for example, the Provincial Recycling Roundtable that govern recyclable materials and products in association with EPR programs, the Union of British Columbia Municipalities, and the North Central Local Government Association.

- 1A. Lobby for the implementation of a provincial EPR program for single-use items and packaging-like products via suitable organizations.
- 1B. Lobby the Federal government to enact regulations and regarding the distribution of single-use items.



Year 1-5



CapEx: \$n/a
OpEx: \$n/a
RDKS staffing: 30 hrs

Responsibility: RDKS with support from member municipalities

STRATEGY 2 Encourage Voluntary Reduction of Single-use Items by Businesses

Issue/Opportunity: Although this is a priority area for the Ministry, it will take time to develop provincial measures to reduce the distribution and use of single-use items. Meanwhile the RDKS can encourage businesses to voluntarily change their distribution practices and find alternatives to using single-use items. Food safety needs to be carefully considered for dish share programs or bring your own container, or so called BYOC, programs. There is potential to learn from and adapt Metro Vancouver's targeted reduction campaigns.



- 2A. Encourage businesses to voluntarily commit to a reduction of the use of single-use items by developing and implementing outreach campaigns.
- 2B. Support member municipalities to encourage events free of single-use items.
- 2C. Collaborate with Northern Health to develop a guidance document on how to set up a BYOC program.



Year 1-5



CapEx: \$n/a
OpEx: \$n/a

RDKS staffing: 100 hrs

Responsibility: RDKS and member municipalities

STRATEGY 3 Promote Waste Reduction Ideas through Targeted Campaigns

Issue/Opportunity: In Canada the annual waste generation per person from residential sources continues to increase. Although the disposal rate has plateaued, the amount of residential waste diverted through recycling and organics diversion initiatives has almost doubled. Continued efforts are needed to promote waste reduction ideas. The RDKS wants to make reduction of clothing waste a high priority since clothing makes up almost 9% of residential curbside garbage and outreach campaign materials are readily available from Metro Vancouver.

- 3A. Promote waste reduction ideas using some of the readily available campaigns.



Year 1-10



CapEx: \$n/a
OpEx: \$n/a

RDKS staffing: 100 hrs

Responsibility: RDKS with support from member municipalities and/or by non-profit groups

STRATEGY 4 Support Member Municipalities with Implementation of Bylaw(s) to Eliminate the Distribution of Single-use Items

Issue/Opportunity: Many Canadian municipalities including Victoria and Vancouver have begun implementing restrictions on the use, distribution and sale of certain single-use items. However, in July 2019 the B.C. Court of Appeal struck down the City of Victoria's proposed ban on single-use plastics on the basis that the bylaw was based on environmental grounds, which fall under provincial jurisdiction,



and not a business regulation, which would fall under the purview of the city. Since then, the District of Saanich amended its single-use plastic bag ban and had it approved by the Ministry¹.

If supported by the Ministry, the RDKS can support member municipalities with developing and implementing reduction strategies and bylaw(s) to eliminate the distribution of single-use items. The support could include providing educational information and outreach resources to implement bylaws.

4A. Support member municipalities with developing and implementing reduction strategies and bylaw(s) to eliminate the distribution of single-use items, provided it is supported at a provincial level.



Year 6-7



CapEx: \$n/a

OpEx: \$n/a

RDKS staffing: 50 hrs

Responsibility: RDKS and member municipalities

STRATEGY 5 Adopt a Preferential Purchasing Policy for Green Procurement that Supports Reduce, Reuse and the Use of Recycled Content

Issue/Opportunity: The RDKS and its member municipalities purchase significant volumes of products. Recognizing the influence that government can have within the marketplace, the RDKS wants to commit to reducing products such as single-use plastic items in its operations. Even though PTAC was not in full support of this strategy, the RDKS believes it is important for the organization to ‘walk the talk’ and perform actions consistent with the guiding principles of the SWMP. The RDKS already has some green procurement practices in place informally. Formalizing through policy is lower priority, yet important to ensure a more consistent approach across all departments.

¹ <https://vancouverisland.ctvnews.ca/saanich-bylaw-banning-plastic-bags-approved-by-b-c-government-1.4851224>



5A. Adopt a preferential purchasing policy for green procurement that supports the 3Rs (reduce, reuse and recycling) and encourage member municipalities to follow its example.



Year 6-7



**CapEx: \$n/a
OpEx: \$n/a**

RDKS staffing: 50 hrs

Responsibility: RDKS and member municipalities

1.2 Reuse

Reuse is the second preferred option in the 5R pollution prevention hierarchy. Reuse includes use of materials and products as originally intended without any modification (e.g. furniture, electronics) or repurposing of materials, such as used lumber and other building materials or reclaimed wood or textile through so called up-cycling. Reuse in this context also includes repair or refurbishing of items to retain their value, usefulness and function.

There is a strong interest for more reuse opportunities in the region. Almost half of all respondents in the April 2019 Public Solid Waste Survey expressed their support for more reuse opportunities in their communities.

The RDKS maintains recycling directories including reuse options (e.g. secondhand stores) for all communities within the RDKS service areas. There are no directories for areas outside, such as Kitimat and Dease Lake.

This section provides a summary of the four proposed additional strategies and initiatives for reuse in the region.

#	Strategy	Short-term Priority (Year 1-5)	Long-term Priority (Year 6-10+)
6	Develop a contractor's guide to reduction, reuse and recycling	✓	
7	Support reuse through share sheds and reuse stores	✓	✓
8	Support reuse and/or repair events	✓	✓
9	Reuse of construction and demolition materials through deconstruction		✓

STRATEGY 6 Develop a Contractor’s Guide to Reduction, Reuse and Recycling

Issue/Opportunity: The RDKS published a brochure in 2017 that provides information on Construction Site Waste Management. The brochure focuses on recycling by listing which materials are prohibited and restricted from disposal at RDKS facilities, and alternatives to disposal for those materials. Reduction and reuse are not addressed in the brochure. The RDKS will encourage local reuse opportunities of construction and demolition materials by updating the contractor’s guide.

6A. Update the current information brochure to include reduce and reuse options for renovation, construction and demolition contractors and home owners.



Year 1



CapEx: \$n/a

OpEx: \$n/a

RDKS staffing: 50 hrs

Responsibility: RDKS

STRATEGY 7 Support Reuse through Share Sheds and Reuse Stores

Issue/Opportunity: Landfill scavenging is prohibited at all RDKS solid waste facilities unless prior written approval from RDKS Administration is given. There are many examples of regional districts and municipalities establishing or supporting share sheds or reuse stores for residents to drop off usable items that they no longer need or want. These facilities require careful management to limit public dumping and abuse, and have relatively high staffing requirements compared to the waste diversion potential.

The RDKS will prioritize supporting and promoting existing reuse organizations. There are currently limited options in the RDKS for reuse and recycling of reusable goods, including renovation, construction and demolition materials. The RDKS will assess the feasibility of partnering with the private sector, including non-profit agencies, to set-up reuse store(s) at suitable waste management facilities. In Hazelton, where there are currently no reuse opportunities, there may be an opportunity to partner with the Skeena Bakery and Skeena Supported Employment Society to support reuse. If support for existing reuse organizations or partnering opportunities is not feasible, the RDKS may want to allow space at an RDKS facility for reusable materials to be stored for collection by a partner and sold elsewhere.

The RDKS may need to amend their Solid Waste Regulation Bylaw to allow for the separation and storage of reusable goods and materials within the landfill buffer zone.



- 7A. Support and promote existing reuse organizations, by, for example, including those in Dease Lake and Kitimat not currently included in the RDKS directory of reuse options.
- 7B. Assess the feasibility to establish space at the waste management facilities for collection of reusable goods to be offered for sale or for free either by the RDKS or in partnership/support from private industry.
- 7C. If deemed necessary, amend the RDKS Solid Waste Regulation Bylaw to facilitate the reuse of waste materials at the current waste management facilities.



Year 1-10



CapEx: \$10K*
OpEx: \$n/a
RDKS staffing: 100 hrs

Responsibility: RDKS

* Estimated cost for sea can storage in Year 2.

STRATEGY 8 Support Reuse and/or Repair Events

Issue/Opportunity: An alternative to a permanent, physical facility is to host, support or promote reuse and repair events throughout the Regional District. There is strong movement toward reuse, repair and community sharing of resources throughout BC. Of high priority is for the RDKS to seek federal or provincial funding to run a pilot for a regional reuse event. Annual or bi-annual reuse events could be organized by the RDKS with limited involvement or investment. The pilot can identify if items are most suited to be collected at the curb or at set locations such as waste management facilities.

- 8A. Apply for provincial or federal funding to run a pilot for a regional reuse event to assess community uptake and feasibility for a wider implementation.
- 8B. Organize, sponsor or promote reuse through local flea markets or trunk sales.
- 8C. Promote local repair cafés and similar events through sponsorship or marketing.



Year 1-10



CapEx: \$n/a
OpEx: \$n/a
RDKS staffing: 60 hrs

Responsibility: RDKS

STRATEGY 9 Reuse of Construction and Demolition Materials through Deconstruction

Issue/Opportunity: The RDKS Waste Regulation Bylaw prevents people from removing or salvaging any materials from a Waste Management Facility except with the prior written approval of the Solid Waste Services Coordinator. This currently limits reuse of solid waste at the RDKS waste management



facilities. The RDKS recognizes the strong public support for more reuse options and is proposing actions to increase the reuse of construction and demolition (C&D) materials. These are actions in addition to encouraging reuse of C&D materials via Strategy 6 and 7.

- 9A. Facilitate reuse through deconstruction by promoting markets for reusable building materials.
- 9B. Assess the feasibility of having member municipalities require building deconstruction through a cost benefit analysis and support implementation if deemed feasible.



Year 6-10



CapEx: \$/n/a
OpEx: \$/n/a
RDKS staffing: 60 hrs

Responsibility: RDKS and member municipalities

1.3 Recycling

Current recycling initiatives undertaken by the RDKS include:

Drop-off options for select recyclables, select Extended Producer Responsibility (EPR) products² and other divertible materials (e.g. organic waste, metal, clean wood) at landfills and transfer stations. Materials accepted vary by facility based on alternative services available within the private sector.

Curbside collection of printed paper and packaging (PPP) recyclables for Electoral Area residents in the Terrace Solid Waste Service Area.

Covering costs for transportation and processing of commercial cardboard collected at RDKS facilities in the Hazelton & Highway 37 North Service Area.

Promotion and education of drop-off and collection options for recyclables and EPR products, for example via the RDKS website, an electronic directory and brochures for specific service areas (e.g. the Recycling Directory for the Terrace Area as shown in Figure 2), and how-to guides for ICI recycling and organics collection. The RDKS also provides residents with recycling service information through the Recycle Coach desktop and smart phone apps of the “MyWaste™” platform.



Figure 2 Example of information provided in RDKS recycling directory

² The Recycling Regulation requires producers of designated products to develop programs for their end-of-life collection and recovery of materials. Producers of designated products often appoint a stewardship agency to collect EPR products.



The RDKS is proposing six additional strategies and initiatives that aim to further improve recycling and reduce the associated costs in the region.

#	Strategy	Short-term Priority (Year 1-5)	Long-term Priority (Year 6-10+)
10	Lobby for improved accessibility to EPR programs	✓	
11	Increase diversion of C&D waste	✓	
12	Provide continuous diversion education and outreach programs coupled with enforcement	✓	✓
13	Support ICI to encourage waste diversion	✓	✓
14	Reduce recycling costs	✓	✓
15	Improve drop-off options for household hazardous waste where gaps exist	✓	✓

STRATEGY 10 Lobby for Improved Accessibility to EPR Programs

Issue/Opportunity: There are currently over 20 regulated provincial EPR programs covering a wide range of material categories, which are mainly focused on the residential sector and not the ICI sector. The RDKS will lobby for inclusion of new materials, regardless of the source (residential or ICI), under the Recycling Regulation. For small rural communities in the Region, recyclables management could be simplified and made more efficient and more economical if PPP from the ICI sector is managed together with residential sources, which are currently regulated. The RDKS is currently having to subsidize the recycling costs of some ICI PPP. The producers of these materials should be required to be part of the solution provided by stewardship organizations.

The RDKS provides drop-off options for a number of EPR and stewardship products and aims to offer drop-off options where there are gaps in private collection services. In 2018 the RDKS articulated concerns the Stewardship Agencies of BC (SABC) with regards to the rural accessibility standard used by stewardship associations.

The RDKS has identified a number of issues it plans to bring up with the Ministry, including infrequent collection service offered by stewards, need for increased access to more drop-off locations for some additional EPR products, flexibility to accept bulk-drop off of PPP from rural communities at Recycle BC depots, and need for more public education on how and where to return EPR products. For example, consumers of EPR products often drop off materials in unlabeled containers or outside opening hours, at depots accepting used lubricating oil, antifreeze, and oil filters.

Specific materials that the RDKS would like to see regulated include:

- ICI PPP
- Hazardous wastes, such as mercury, diesel fuel, acid, household cleaners, garden products, and pesticides, which are currently not included as regulated materials.
- Tires on rims and oversize tires (large off-road tires and industrial tires)
- Bulky furniture and mattresses
- Drywall

- 10A. Lobby for inclusion of new materials, regardless of the source (residential or ICI), under the Recycling Regulation, in particular ICI packaging and printed paper.
- 10B. Lobby for better service levels for existing EPR materials in rural areas.



Year 1-5



CapEx: \$n/a
OpEx: \$n/a
RDKS staffing: 40 hrs

Responsibility: RDKS

STRATEGY 11 Increase Diversion of C&D Waste

Issue/Opportunity: The Construction and demolition (C&D) sector is responsible for 17% of the total amount of waste disposed and only limited quantities are being diverted from landfilling. Approximately 5% is currently achieved through segregation of clean wood waste and beneficial use of contaminated soil at the Forceman Ridge Landfill. No waste composition study has been performed for commercial C&D loads accepted at the landfill. However, the RDKS understands that loads often contain significant portions of compostable organics, such as clean wood (e.g. dimensional lumber and pallets) as well as asphalt roofing materials, identified through visual inspection. Bylaws are already in place requiring diversion of certain C&D materials, including organic materials such as yard waste, tree branches and compostable structural wood waste; or via variable tipping fees; however these bylaws can be updated and can be enforced better.

- 11A. Under existing bylaws specify identified divertible materials, such as clean wood waste and asphalt shingles, and classify these as restricted materials. Amendments to the tipping fee structure to encourage segregation of these materials may also be warranted.
- 11B. Create a C&D waste working group with parties from the C&D sector and if suitable from industry.
- 11C. Perform a waste composition study of commercial C&D waste to identify and quantify recyclable waste streams.
- 11D. On a regular basis conduct research to identify local diversion options for asphalt shingles, drywall and clean wood.
- 11E. Explore the need for operational material at the landfills and the options to use shingles and/or concrete for beneficial use.



Year 1-5



CapEx: \$n/a
OpEx: \$20,000*
RDKS staffing: 200 hrs

Responsibility: RDKS

* Estimated consulting budget for waste composition study in Year 1.

STRATEGY 12 Provide Continuous Diversion Education and Outreach Programs Coupled with Enforcement

Issue/Opportunity: Do Your Part receives recyclables from RDKS facilities, private service providers of collection ICI properties, and self-hauled recyclables from residential and ICI customers. Do Your Part Recycling reported an 8.5% contamination rate of the RDKS residential curbside recycling. Participants in the Recycle BC recycling program cannot exceed contamination rates of 3%, which increases the importance of continued outreach and education, especially to those stakeholders receiving Recycle BC funded services or wishing to become part of the Recycle BC program. The City of Terrace's curbside collection program is partly funded by Recycle BC, while the curbside collection offered by the RDKS is currently not Recycle BC funded. The RDKS is actively working to increase the level of financial support provided by Recycle BC for residential recycling.

There is a need for continued education and outreach to further reduce contamination of organic waste going to the Terrace compost facility (e.g. bags and other products marketed as biodegradable, plastic bags and vegetable wraps). The compost product is currently too contaminated to be sold to the public or used in public gardens.

More education is needed to clarify:

- who manages and pays for recycling
- where non-curbside materials can be recycled
- where the recyclables go and how they are processed

Education and outreach play a key role in waste reduction, diversion, and proper disposal of residual waste. The RDKS plans to prioritize data collection, such as curbside or set-out audits, coupled with education and will collaborate with haulers over the long term to develop a strategy to pass down fines to offenders.

- 12A. Perform audits, such as set-out audits, to assess curbside participation rates or curbside audits to assess the waste composition of the different waste streams, coupled with in-person education and out-reach. Issuing of fines may be considered for repeat offenders.
- 12B. Regularly update existing communication plan. Develop performance targets and monitor the performance of the implemented communication plan.
- 12C. Provide contractor education pertaining to bylaw requirements, contract requirements and the importance of reporting of non-compliance and contaminated waste loads. Implement incentives through contract adjustments or other means might be warranted.

Responsibility: RDKS



Year 1-10



CapEx: \$n/a
OpEx: \$n/a
RDKS staffing: 200 hrs

STRATEGY 13 Support ICI to Encourage Waste Diversion

Issue/Opportunity: The main economic activities within the RDKS include mining, forestry, energy, fishing, and transportation. The area is home to several mills and multiple hydro projects and there are a number of industrial work camps in the area. New mining, forestry, oil and gas and/or energy



developments in the region may result in a significant increase in waste from industrial work camps and construction.

Recognizing that 73% of the waste generated by the ICI sector in the region is landfilled and only 27% diverted, the RDKS needs to address the ICI sector with different approaches than the residential sector.

A recent waste composition study showed that the largest component of ICI waste was paper (21.3%), followed by compostable organics (19.7%), plastic (14.9%), and household hygiene (14.0%).

This strategy warrants an on-going focus. Clear communication is needed to ensure the ICI sector meets applicable bylaw requirements. The RDKS is wanting to establish an ICI waste diversion working group with a focus on helping the biggest waste generators to divert more waste, reduce business costs, and identify circular economy opportunities. For example the RDKS may be able to facilitate the capture of surplus food from grocery stores or hotels to go to people in need via not-for profit organizations, or as animal feed.

- 13A. Support private collectors with an updated hauler information package to encourage better ICI recycling amongst its customers.
- 13B. Promote available waste diversion opportunities and provide or support diversion education to commercial generators.
- 13C. Establish an ICI waste diversion working group to focus on the largest waste generators and find waste diversion solutions that can benefit many parties. In collaboration with waste haulers, develop a common approach allowing haulers to pass down fines for contaminated waste loads to the waste generator.



Year 1-10



CapEx: \$n/a
OpEx: \$n/a
RDKS staffing: 50 hrs

Responsibility: RDKS and member municipalities

STRATEGY 14 Reduce Recycling Costs

Issue/Opportunity: The RDKS pays for the collection, transportation, and processing fees for all PPP recycling services it offers, with the exception of the Recycle BC-supported depot at the Stewart Transfer Station for residential streams. The RDKS wants to emphasize the importance of stewardship organizations taking more responsibility for recycling in rural communities (refer to concerns and options as outlined in Strategy 10 Lobby for Improved Accessibility to EPR). The RDKS is actively working to increase the level of financial support provided by Recycle BC for residential recycling at the Kitwanga Transfer Station and for curbside collection in the Greater Terrace Area.

Cardboard from the ICI sector is not eligible for Recycle BC funding. In the parts of the region that are not eligible for Recycle BC financial support, the cost to collect and transport PPP to a processing facility and ship it to market is extremely high.

As a last resort, the RDKS would like to have the ability to set an upper cost threshold for acceptable recycling costs. If the cost threshold is exceeded, the RDKS would consider alternative lower cost



options (e.g. composting, burning or landfilling). Once the recycling costs exceed the agreed threshold, alternatives to recycling are implemented until recycling costs can be reduced below the agreed threshold. A cost threshold should be revisited every year. Landfilling or burning of any recyclables would only be undertaken during undue financial hardship.

This strategy warrants an on-going focus and further actions to reduce other system costs are included in Strategy 33 for cost recovery options. Initial focus to reduce recycling costs will be placed on collaboration with stewards and establishing local processors and markets to reduce transportation costs.

- 14A. Maximize the partnership opportunities with stewardship organizations, such as for residential recycling at the Kitwanga Transfer Station and for curbside collection in the Greater Terrace Area.
- 14B. Undertake an efficiency review of the management of recyclables within the region.
- 14C. Pursue composting of paper products at locations where deemed feasible.
- 14D. Set cost threshold when alternative lower cost options (e.g. composting, burning or landfilling) are pursued until recycling is no longer cost prohibitive.



Year 1-10



CapEx: \$n/a
OpEx: \$n/a
RDKS staffing: 50 hrs

Responsibility: RDKS with support from member municipalities

STRATEGY 15 Improve Drop-off Options for Household Hazardous Waste where Gaps Exist

Issue/Opportunity: Although many household hazardous waste materials are regulated EPR materials, many of them still have limited drop-off options available in parts of the region, especially outside the Greater Terrace Area. The 2017 waste composition study showed that 4.7% of the overall garbage arriving at the Thornhill Transfer Station is made up of household hazardous waste³.

Generally no liquids (e.g. used oils/antifreeze, paints, pesticides, flammables, fertilizer) are collected at any RDKS facilities. RDKS promotes drop-off options available at private facilities but does not have any agreement with stewardship organizations such as Product Care or the B.C. Used Oil Management Association (BCUOMA). With the exception of Do Your Part Recycling, which accepts pesticides, flammable liquids, fertilizers for Product Care, there are no drop-off options for these hazardous wastes in the entire region.

Continuous focus needs to be given to the management of household hazardous waste considering the potentially high environmental impact of improper disposal. The RDKS wants to prioritize areas with limited options for hazardous waste collection. The RDKS wants to implement periodic roundup events

³ Hazardous waste included batteries, light bulbs, oil & antifreeze, paint, pesticides, medications, biohazard, needles, solvents, other hazardous waste and other non-hazardous waste, such as containers with product remaining (cosmetics, nail polish, health and beauty aids, sunscreen, bug spray, Windex, other relatively benign household cleaners/products).

to collect hazardous waste materials in locations where permanent drop-off options are not available or feasible to establish.

- 15A. Offer recurring roundup collection events for hazardous waste in potential partnership with stewardship organizations.
- 15B. Offer permanent drop-off options for targeted EPR materials at suitable transfer stations through partnership with stewardship organizations.
- 15C. Develop a targeted campaign for hazardous household waste with the purpose of informing residents and businesses of proper material management aimed to capture more materials.



Year 1-10



CapEx: \$n/a
OpEx: \$10 - 70K*
RDKS staffing: 100 hrs

Responsibility: RDKS with support from member municipalities

** \$60,000 assumed for HHW events every two years. An annual cost of \$10,000 for contractor to remove non-EPR materials from permanent drop-off sites. Although only regulated EPR materials would be accepted at permanent drop-off points, the RDKS anticipates that some non-EPR materials would be dropped off by residents. Assumed low as permanent drop-off infrastructure can be funded by stewards.*

1.4 Organics Diversion & System Efficiency

Current organics⁴ diversion initiatives undertaken by the RDKS include:

- Curbside organics collection to residents in the Terrace Service Area who live outside the City of Terrace.
- Operation of a composting facility at the Forceman Ridge Waste Management Facility using an in-vessel Gore™ cover system capable of processing 4,000 tonnes of organic material per year (see Figure 3).
- Production of compost, which will initially be used in the closure process of the Thornhill Landfill and Kitwanga Landfill to reduce costs of bringing in external material. Eventually the composting process will generate Class A compost, which may also be made available to the community for use on community gardens or parks.

⁴ Organic waste includes yard and garden waste, food scraps (including cooked foods, meat, dairy, grains, fruits and vegetables), and food-soiled paper/cardboard.



Figure 3 Composting facility at Forceman Ridge Waste Management Facility.

The RDKS is proposing four additional strategies and initiatives that aim to improve organics diversion through composting and overall system efficiency to increase waste diversion.

#	Strategy	Short-term Priority (Year 1-5)	Long-term Priority (Year 6-10+)
16	Establish organics processing capacity at suitable facilities	✓	✓
17	Amend solid waste bylaw to encourage waste diversion	✓	✓
18	Support communities to introduce curbside collection	✓	✓
19	Incentivize improved contractor and diversion performance	✓	✓

STRATEGY 16 Establish Organics Processing Capacity at Suitable Facilities

Issue/Opportunity: There is a need to establish additional organics processing capacity in targeted areas. Organic waste is costly to transport long distances and the RDKS has identified composting as a potential additional service at the Hazelton Waste Management Facility. There is already unused space for a potential future compost facility with a leachate catchment system at the Hazelton Waste Management Facility. Based on feedback from local residents there is also a need for compost in local gardens.

The District of Stewart has looked at composting options for the Stewart Transfer Station, but has not progressed due to concerns of wildlife protection and the lack of current suitable infrastructure. The RDKS wants to support the District of Stewart to identify feasible options for the community.

To make composting more affordable for small rural communities, the RDKS wants to lobby for the Organic Matter Recycling Regulation (OMRR⁵) to also include uncontaminated paper products (including cardboard) as approved feedstock, where these products are cost prohibitive to recycle. Provided a useful soil amendment can still be achieved this option would allow rural communities to compost cardboard and paper if it is cost effective.

- 16A. Lobby for the regulation governing organics management to include uncontaminated paper products as approved feedstock where recycling is cost prohibitive.
- 16B. Issue a request for qualifications to assess suitable designs and costs to establish a composting facility at Hazelton Waste Management Facility, and implement if deemed feasible.
- 16C. Support the District of Stewart to assess the feasibility of a small-scale compost facility and support implementation if deemed feasible.



Year 1-10



CapEx: \$200K*
OpEx: \$10 - 200K*
RDKS staffing: 60 hrs

Responsibility: RDKS with support from member municipalities

**\$200,000 consulting support in Year 2 & 3. \$200,000 in Year 5 for construction of compost facility at Hazelton the site. Some of the capital costs may be covered by external funding. \$10,000 as annual operating costs after Year 5.*

STRATEGY 17 Amend Solid Waste Bylaw to Encourage Waste Diversion

Issue/Opportunity: Within the Region there are a number of bylaws in place to encourage waste diversion and responsible management of waste materials. The RDKS has three different solid waste related bylaws and local municipalities have their own municipal bylaws. Controlled, restricted and prohibited materials are identified in the RDKS bylaws. However, the materials included in these categories vary between the two service areas. By eliminating differences between the two, the RDKS can create a more cohesive and fair waste management system.

The RDKS is able to issue fines between \$100 and \$1,000 for disposal offences. However, to date there has been limited follow up on reported non-compliances. A relatively common alternative approach to issuing fines for contaminated loads is to apply surcharges. Discounts could also be applied to materials that are of value or needed for operations, such as lower tipping fees for metal and organic materials in the Terrace Service Area.

The RDKS is committed to ensuring that recycling options exist and that sufficient resources are available to enforce bylaw amendments.

⁵ The OMRR governs the construction and operation of compost facilities, and the production, distribution, storage, sale and use of biosolids and compost. It provides guidance for local governments and compost and biosolids producers, on how to use organic material while protecting soil quality and drinking water sources.



- 17A. Amend the definition of organic materials and develop a separate category for clean wood waste. Include this new category under restricted material under both Bylaw 671 and 688.
- 17B. Amend the list of prohibited materials to be as consistent as possible between the two service areas, granted diversion options exist and are developed.
- 17C. Adjust the current fee schedule to encourage increased diversion. Consider surcharges on contaminated loads.
- 17D. Adjust the current fee schedule to allow agreements with stewards (e.g. Major Appliance Recycling Roundtable).



Year 1-10



CapEx: \$n/a
OpEx: \$n/a
RDKS staffing: 50 hrs

Responsibility: RDKS with support from member municipalities

STRATEGY 18 Support Communities to Introduce Curbside Collection

Issue/Opportunity: Many communities offer curbside collection for recyclables, organics and residual waste (garbage). The RDKS wants to take on a facilitating role to encourage communities to offer consistent services, where possible. For example, this could involve facilitating the communication between member municipalities and Recycle BC to seek opportunities to form partnerships with the steward and obtain financial support to cover recycling costs. Support to communities can be provided granted recycling/ organics processing facilities exist.

- 18A. Support the implementation of curbside collection of recyclables and/or organics in communities in the region.



Year 1-10



CapEx: \$n/a
OpEx: \$n/a
RDKS staffing: 40 hrs

Responsibility: RDKS and member municipalities

STRATEGY 19 Incentivize Improved Contractor and Diversion Performance

Issue/Opportunity: The RDKS facility contractors are currently bound to perform certain tasks under their contract's conditions. Additional incentives may be warranted to further improve the performance under these contracts, for example to increase diversion at RDKS facilities. The RDKS will regularly assess the need for more incentive based contracts.



19A. Explore the option of introducing an incentive based program to improve contractor and diversion performance through a combination of education, increased contractor involvement and potentially financial rewards.



Year 1-10



CapEx: \$n/a
OpEx: \$10K in Yr 3
RDKS staffing: 20 hrs

Responsibility: RDKS

1.5 Residual Waste Management at Existing Facilities

Current initiatives undertaken by the RDKS to manage residual waste at existing facilities include:

- Curbside collection of recyclables, organic waste, and residual waste in two service areas (Electoral Areas C and E).
- Acceptance of waste from curbside collection vehicles, residential self-hauled materials, and commercial customers at three transfer stations in Thornhill, Stewart and Kitwanga.
- Operation of five landfills owned by the RDKS.

Residents in other areas are serviced by member municipalities or by First Nation operations departments. Private companies offer subscription-based collection to both residential and commercial customers not serviced by local governments.

In addition to the landfills owned by the RDKS, there are five operational landfills owned by other parties located in Kitimat (municipal and private), Dease Lake, New Aiyansh, and Telegraph Creek.

The RDKS is proposing nine additional strategies and initiatives that aim to further improve residual waste management at existing facilities in the region.

#	Strategy	Short-term Priority (Year 1-5)	Long-term Priority (Year 6-10+)
20	Set limits for solid waste accepted from outside the service area	✓	
21	Reduce greenhouse gas emissions	✓	
22	Effectively use landfill airspace	✓	
23	Improve public accessibility to existing solid waste management facilities	✓	
24	Deliver operational services in-house	✓	



#	Strategy	Short-term Priority (Year 1-5)	Long-term Priority (Year 6-10+)
25	Close selected small landfills and replace with transfer stations	✓	✓
26	Engage with and communicate to citizens on waste management	✓	✓
27	Set limits and reporting requirement for liquid waste		✓
28	Assist in the prevention of illegal dumping		✓

STRATEGY 20 Set Limits for Solid Waste Accepted from Outside the Service Area

Issue/Opportunity: The RDKS solid waste management facilities are partially funded through tax requisition collected from the two service areas. Out-of-service-area waste generators (e.g. industrial waste) are currently charged a 25% surcharge for disposal at RDKS facilities which is set with the intention of offsetting the tax funded portion of the landfill airspace used.

When the landfill at Forceman Ridge WMF, located in the Terrace Service Area, was designed, the volumes of potential incoming industrial waste were estimated as much lower than current situation. Landfill airspace is being consumed at a faster rate than initially projected, largely due to the current LNG Canada project.

With current funding models for the two service areas, the Terrace Service Area is experiencing greater tipping fee revenues as more waste is accepted from industrial sources in this service area. The Hazelton and Highway 37 North Service Area is not experiencing the same financial benefit as less industrial waste is accepted at the facilities in this service area.

With large industrial work camps in the region and the LNG construction project in Kitimat there is a potential opportunity to accept more industrial waste from industry over the next few years and increase additional revenue through collection of tipping fees. Preference will be given to industrial materials that do not unnecessarily take up landfill airspace, such as organics, clean wood, and contaminated soil that can be used on-site as cover material.

The RDKS will first focus on developing a policy for out-of-service-area waste and then on determining the value of airspace and setting surcharges for out-of-service-area waste based thereon.

- 20A. Develop a policy that specifies the type and maximum amount of out-of-service-area waste accepted.
- 20B. Reassess the value of landfill airspace and significantly increase surcharge for out-of-service-area waste.
- 20C. Develop policy to allow disposal from neighbouring Regional Districts.

Responsibility: RDKS



Year 1-5



CapEx: \$n/a
OpEx: \$10K*
RDKS staffing: 20 hrs

**\$10,000 consulting support in Year 4 to reassess value of airspace.*

STRATEGY 21 Reduce Greenhouse Gas Emissions

Issue/Opportunity: The RDKS reports annually on GHG emissions relating to solid waste management, including landfill gas (LFG) management and organic waste composting in an effort to reduce organizational GHG emissions. The collection system for LFG has not yet been established at the Forceman Ridge facility, and will not be legally required until 2069. Early installation of an active LFG management system can be considered a voluntary GHG emission reduction initiative which can generate some tradable carbon credits for the RDKS. The RDKS will focus on continuing current effort to reduce both the generation and emission of GHG and investigate opportunities for carbon credits and revenue sources. Any revenue obtained from carbon credits will need to be allocated to the service area where the carbon credits were generated.

- 21A. Assess eligibility for carbon credits for GHG reduction efforts in solid waste operations, assess cost- benefit of pursuing.

Responsibility: RDKS



Year 1-5



CapEx: \$n/a
OpEx: \$15K*
RDKS staffing: 30 hrs

**\$15,000 consulting support to perform cost-benefit analysis in Year 5.*

STRATEGY 22 Effectively Use Landfill Airspace

Issue/Opportunity: Remaining airspace at existing landfills, such as the Forceman Ridge WMF, should be considered invaluable as siting of a new facility or expansion of the current one may be challenging. For example, airspace should not be consumed by landfilling recyclable materials. The RDKS wants to review the current operations, such as procedures, waste placement, and compaction to identify areas of improvement, set goals, and work with the contractor in reaching these goals including potentially incentivize.

- 22A. Enforce existing bylaws to control the waste disposed and minimize unnecessary airspace consumption.
- 22B. Review the landfill operations including the use of operational soil and alternative daily covers and waste placement and compaction. Based on findings consider providing, recommending, or requiring additional contractor training to improve operations.
- 22C. Consider segregating materials, such as asphalt shingles, to be used for landfill operations thereby offsetting some need for operational soils while saving landfill airspace.



Year 1-5



CapEx: \$n/a
OpEx: \$n/a
RDKS staffing: 100 hrs

Responsibility: RDKS

STRATEGY 23 Improve Public Accessibility to Existing Solid Waste Management Facilities

Issue/Opportunity: One of the main comments received through the April 2019 Public Solid Waste Survey relates to facility accessibility. There is a strong interest in having increased access to waste management facilities.

The primary focus of the RDKS will be to review current operating hours at selected facilities to enhance accessibility. The review should consider opening hours of private facilities that offer solid waste services, contractor agreements, and risk of increased illegal dumping.

23A. Adjust operating hours at transfer stations based on public feedback without raising operational costs significantly, by maintaining the total hours of operation.

23B. Develop seasonal operating hours at targeted RDKS facilities.

Responsibility: RDKS



Year 1-3



CapEx: \$n/a
OpEx: \$n/a
RDKS staffing: 50 hrs

STRATEGY 24 Deliver Operational Services In-house

Issue/Opportunity: The RDKS has made significant capital investments in its solid waste management infrastructure. Ensuring that operations are optimized to get maximum benefit from the infrastructure and services is a priority. The RDKS has spent significant resourcing managing operations contractors at some sites, in particular remote ones. Operations contracts are challenging to secure for remote facilities. There are very few proponents willing to bid on operational contracts for remote facilities, and as a result of limited competition the operational costs of these facilities become inflated.

In the short term, the RDKS will assess the cost-benefit of in-house vs. contracted staff for facility operations, taking into account current contracts and existing contractor relationships.

24A. Assess the cost-benefit of using contractor vs. in-house staff to operate RDKS facilities, and transition to in-house service if determined to be beneficial.

24B. For facilities operated by contractors, review contract incentives to better incentivize waste diversion and site cleanliness.

Responsibility: RDKS



Year 1-5



CapEx: \$n/a
OpEx: \$15K*
RDKS staffing: 30 hrs

**\$15,000 for cost-benefit assessment in Year 4.*

STRATEGY 25 Close Selected Small Landfills and Replace with Transfer Stations

Issue/Opportunity: The RDKS operates some smaller landfills, which typically require significant costs to operate and maintain on a per tonne basis. Due to the limited amount of waste disposed and fixed



costs associated with landfilling, the cost per tonne of waste landfilled is considerably higher than at a larger landfill. There are opportunities to reduce operating costs to the RDKS by closing some of the smaller landfills and establishing transfer stations at these sites. This approach was already taken by the RDKS at Kitwanga, where a transfer station was established in 2017 in conjunction with the closure of the existing landfill.

There are currently two smaller landfills that could benefit from being replaced by transfer stations: Rosswood Landfill and Iskut Landfill.

The Rosswood Landfill, which is approximately a 30-minute drive north of Terrace, is intended for residential MSW generated from the Rosswood community of 150 - 200 residents. There are no tipping fees at this landfill. The RDKS has observed that some Terrace Service Area residents drive out to this landfill to avoid paying tipping fees at the Thornhill Transfer Station. If the landfill were to close, and a transfer station built, waste from Rosswood would be sent to the Forceman Ridge WMF.

The Iskut Landfill is also relatively small, and services both the Iskut Band and residents of Electoral Area D. The RDKS has experienced on-going issues with maintaining compliance with the site's operational certificate. In collaboration with Iskut Band, the RDKS wants to investigate the cost/benefits of closing the current landfill and establishing a transfer station that can offer improved waste diversion opportunities for the area. There is a potential to collaborate with Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC) to offset some of the capital and operating costs. The RDKS will need to assess the feasibility of accepting waste at the Meziadin Landfill from a transfer station in Iskut.

The RDKS will focus on maintaining the level of service at these two landfills, while basing a decision of closure on the remaining life of the smaller landfills, and the related cost of expansion or closure (e.g. environmental controls, transfer station construction and operation, and hauling of waste).

- 25A. Assess cost/benefit of closing Rosswood and Iskut landfills by determining community need for transfer stations and implement if deemed feasible.
- 25B. Consider options to continue to operate the Iskut Landfill for demolition and land clearing waste.



Year 1-10



CapEx: \$1M*

OpEx: \$300K*

RDKS staffing: 100 hrs

Responsibility: RDKS

**\$30,000 cost-benefit analysis in Year 1, \$270,000 consulting support to plan and design a transfer station in Year 3-5, and \$1million for one transfer station in Year 6.*

STRATEGY 26 Engage with and Communicate to Citizens on Waste Management

Issue/Opportunity: The RDKS has identified the need to increase public education about the region's landfills, landfill closures and gas capture programs, and the need for responsible residual waste management. The RDKS Board has set a strategic mandate for the organization as a whole to increase



efforts to engage and communicate with residents. This strategy should be given on-going focus, while carefully considering staff requirements and the effectiveness of the strategy.

- 26A. Establish an education site at the Thornhill Closed Landfill to educate the public and schools in responsible management of residual waste.
- 26B. Offering tours at suitable waste management facilities.



Year 1-10



CapEx: \$n/a
OpEx: \$n/a
RDKS staffing: 100 hrs

Responsibility: RDKS

STRATEGY 27 Set Limits and Reporting Requirement for Liquid Waste

Issue/Opportunity: Septage is accepted for treatment at Forceman Ridge and Hazelton Waste Management Facilities as well as Meziadin and Iskut Landfills. The types of liquid waste accepted are outlined in RDKS bylaws. There are currently only three liquid waste haulers with active disposal permits (two for the treatment facility at Forceman Ridge WMF and the one for the facility at Hazelton WMF). There are no records of active permits at the Meziadin or Iskut Landfills. The reporting requirement for the haulers is currently limited to specifying quantity and if the waste originates from residential or commercial sources. Current reporting requirements provide the RDKS with limited control of the liquid waste accepted, its source and quality, which reduces the ability to enforce applicable bylaws.

The RDKS will develop policy to provide clear direction and unbiased decision making for acceptance of liquid waste and focus on improved record keeping at the landfills. RDKS will ensure that it has a Liquid Waste Management Plan that includes the liquid waste management facilities located at RDKS solid waste management facilities.



- 27A. Develop policy that requires haulers to report additional details on the quantity, source and type of waste disposed at facility (as part of annual permit).
- 27B. Improve record keeping as it pertains to active permits and liquid waste accepted at the landfill at Hazelton WMF and Iskut and Meziadin Landfills.
- 27C. Develop education program aimed at generators of liquid waste.

Responsibility: RDKS



Year 6-10



CapEx: \$n/a
OpEx: \$n/a
RDKS staffing: 50 hrs

STRATEGY 28 Assist in the Prevention of Illegal Dumping

Issue/Opportunity: Illegal dumping⁶ is an ongoing issue for the RDKS. Materials found at illegal dump sites are often those that would have been collected in a residential curbside program or could have been dropped-off free of charge at the appropriate depots. Some of the main factors influencing illegal dumping include the perceived inconvenience to access disposal facilities, and a lack of education around available disposal options, and avoidance of anticipated disposal costs. Residents may be unaware of convenient disposal options in their area.

- 28A. Utilize the existing illegal dumping working group to develop an illegal dumping strategy aimed to improve tracking and reduce the number of illegal dumping incidents.
- 28B. Implement strategy including survey of illegally dumped materials, public outreach, and enforcement.

Responsibility: RDKS and member municipalities



Year 6-10



CapEx: \$n/a
OpEx: \$n/a
RDKS staffing: 100 hrs

1.6 Waste Management at New Facilities or in New Service Areas

The RDKS consists of two solid waste management Service Areas: Terrace Service Area and Hazelton and Highway 37 North Service Area. The two Service Areas were established in July 2015 under Bylaws 657⁷ and 658⁸. The entire region does not receive solid waste services from the RDKS;

⁶ "Illegal dumping" refers to the intentional disposal of waste materials in unauthorized locations.

⁷ Kitimat-Stikine Hazelton and Stewart Area Solid Waste and Recyclable Material Management Service Establishment Bylaw No. 657, 2015.

⁸ Kitimat-Stikine Terrace Service Area Solid Waste and Recyclable Management Service Establishment Bylaw No. 658, 2015.



however, approximately 75% of the population is provided solid waste management services by the RDKS. The majority of the population not receiving solid waste management services by the RDKS reside in the District of Kitimat.

The RDKS is proposing three strategies for expanding the current service areas and for establishing new solid waste facilities within these areas.

#	Strategy	Short-term Priority (Year 1-5)	Long-term Priority (Year 6-10+)
29	Develop new agreement between the RDKS and the District of Kitimat, including provisions for use of the landfill at Forceman Ridge WMF.	✓	
30	Include Dease Lake in the RDKS Service Area	✓	✓
31	Increase RDKS service area to include Telegraph Creek Landfill (and transfer station)		✓

STRATEGY 29 Develop New Agreement between the RDKS and the District of Kitimat, including Provisions for Use of the Landfill at Forceman Ridge WMF

Issue/Opportunity: The District of Kitimat (Kitimat) is currently not included in either of the two RDKS Service Areas. Waste originating from Kitimat is therefore considered out-of-service-area waste and is subject to a surcharge if received at an RDKS solid waste management facility.

In 2019, Kitimat developed a Solid Waste Management Strategy and Action Plan with the objective of developing and selecting options to improve Kitimat’s waste diversion and disposal system. The Plan was approved in February 2020. Kitimat owns the Kitimat Landfill, which is operated by a private contractor under contract. All residential and commercial residual waste generated and collected in Kitimat is disposed at the site. Waste is also accepted from Kitimaat Village (Haisla Nation). Kitimat estimates there are approximately three years of remaining capacity in Phase 2 of the Kitimat Landfill and they are not able to expand into Phase 3 without significant capital investment in design and operational improvements.

Kitimat recently approved the introduction of three stream curbside collection starting in 2021. The RDKS and Kitimat may be able to align curbside collection contracts in the future, which should be a fairly smooth transition as the collection programs are similarly designed. Currently the same contractor is providing curbside collection services in both areas. Collaboration through Service Area expansion or a Forceman Ridge WMF user agreement could potentially generate additional revenue for the RDKS in the range of \$750,000-\$900,000 annually based on current disposal rate at the Kitimat landfill, Terrace Service Area taxation rate, and tipping fees.



- 29A. Assess the costs and benefits of including Kitimat in the RDKS Greater Terrace curbside collection program. Develop cost sharing between Kitimat and RDKS to create a system fair to all.
- 29B. Assess the costs and benefits of including Kitimat in the RDKS Terrace Service Area, building a transfer station in Kitimat, and hauling waste to Forceman Ridge WMF. Develop options for cost sharing and responsibilities related to the Kitimat Landfill and the new transfer station.
- 29C. Assess the costs and benefits of permitting Kitimat to access the landfill at Forceman Ridge WMF without joining the Terrace Service Area. If deemed the best option, develop an agreement between the two parties.



Year 1-5



CapEx: \$TBD*
OpEx: \$25K*
RDKS staffing: 150 hrs

Responsibility: RDKS and District of Kitimat

**\$25,000 for cost-benefit study in Year 1. The study will determine the associated capital cost.*

STRATEGY 30 Include Dease Lake in the RDKS Service Area

Issue/Opportunity: The Dease Lake Landfill is owned by Ministry of Transportation and Infrastructure (MOTI) and operated by a local road maintenance contractor. The landfill receives approximately 100 tonnes of waste a year (2017 estimate) from the surrounding community; however, there is no scale to confirm accurate quantities. Waste is also accepted from Telegraph Creek. MOTI has expressed an interest in handing landfill ownership and operation over to the RDKS. The RDKS is not interested in taking over the landfill ownership or liability. If the RDKS takes over operational responsibility of the Dease Lake Landfill, the landfill would become a facility under the Hazelton and Highway 37 North Service Area. The MOTI would be responsible for capital costs for the landfill, including future closure and post-closure costs.

There are existing environmental impact liability issues with this site. If the RDKS takes over operational responsibility of Dease Lake Landfill, two options would need to be considered; either continuing the landfill operations or assisting MOTI with the landfill closure and the establishment of a transfer station. The RDKS would operate the transfer station and be responsible for hauling of waste to a disposal site (most likely to Meziadin Landfill). The funding and ownership of a potential transfer station would need to be considered and assessed.

30A. Assess feasibility of developing an agreement with MOTI where RDKS is responsible for operations of the landfill and any future transfer station, while landfill liability remains with MOTI, and implement if deemed feasible.



Year 6-8



CapEx: \$n/a
OpEx: \$40K*
RDKS staffing: 50 hrs

Responsibility: RDKS, Tahltan /Telegraph Creek Band, MOTI

**\$40,000 in consulting fees in Year 6.*

STRATEGY 31 Increase RDKS Service Area to Include Telegraph Creek Landfill (and Transfer Station)

Issue/Opportunity: Telegraph Creek Landfill is owned by Telegraph Creek Band, which is part of the Tahltan Nation. Waste is no longer accepted for disposal at the Telegraph Creek Landfill and Telegraph Creek is currently hauling one 40 cubic yard bin of waste to Dease Lake Landfill on a weekly basis.

The RDKS contributes funding to the Telegraph Creek Band for facility use by Electoral Area D residents through a cost-sharing agreement. The RDKS has had limited input on long-term development of the site and are open to increasing the level of involvement in matters relating waste management.

The closure of the Telegraph Creek landfill and the hauling of waste may impact the RDKS, especially if the Dease Lake Landfill is included in the RDKS service areas as discussed in Strategy 30 . The RDKS would like to have a higher level of involvement in the planning and decision-making process for the Telegraph Creek Landfill and transfer station.

31A. Increase the RDKS's involvement in the planning and decision-making process for the Telegraph Creek Landfill and transfer station. Review the current agreement and propose an amendment, if warranted.



Year 6-7



CapEx: \$n/a
OpEx: \$n/a
RDKS staffing: 50 hrs

Responsibility: RDKS, Tahltan /Telegraph Creek Band

1.7 Cost Recovery and Financial Sustainability

The RDKS consists of two solid waste management Service Areas: Terrace Service Area and Hazelton and Highway 37 North Service Area. These were established in July 2015 under Bylaws 657⁹ and 658¹⁰. The two RDKS Service Areas have different cost recovery models tailored to each area. Each Service Area is financed separately, and the cost recovery is outlined in Section 4 of each bylaw. Cost and revenue sharing is currently not possible between the two service areas under current bylaws as per the Local Government Act (*Part 11, Division 2, Items 378-380*).

The RDKS' solid waste management system has undergone some major changes over the past few years, including the construction of a new landfill, the expansion of another with significant upgrades, and the construction of three new transfer stations; two with integrated recycling depots. Additional changes include the closure of four landfills—two RDKS-owned and two owned by member municipalities. These upgrades have required significant capital investments. The upgrades and added services have also resulted in increased and difficult-to-predict operational costs in both service areas.

The Terrace Service Area is currently operated with a surplus; however, the Hazelton and Hwy 37 North Service Area is experiencing higher than expected capital and operating costs and an annual deficit.

During the planning process a Financial Working Group (FWG) met twice to discuss the current cost recovery models, options to improve the cost recovery, and the member communities' ideas, concerns, and observations. The FWG is made up of financial representatives from member municipalities and First Nations within the RDKS.

The development of cost recovery options was directed by the five Guiding Financial Principals developed in collaboration with the RDKS and the FWG. These five principals are:

1. Strive for long-term financial sustainability
2. Take advantage of economies of scale, where possible
3. Provide good and equal level of service
4. Provide equitable service to all residents in the same service area
5. Improve operating efficiencies of current solid waste management services and facilities

The RDKS is proposing four additional strategies and initiatives that aim to further improve the current cost recovery and financial sustainability in the region.

#	Strategy	Short-term Priority (Year 1-5)	Long-term Priority (Year 6-10+)
32	Review cost recovery model within the service areas to provide fair cost sharing	✓	✓
33	Reduce costs	✓	✓
34	Increase revenue	✓	✓
35	Implement indirect cost sharing between service areas		✓

⁹ Kitimat-Stikine Hazeltons and Stewart Area Solid Waste and Recyclable Material Management Service Establishment Bylaw No. 657, 2015.

¹⁰ Kitimat-Stikine Terrace Service Area Solid Waste and Recyclable Management Service Establishment Bylaw No. 658, 2015.



STRATEGY 32 Review Cost Recovery Model within the Service Areas to Provide Fair Cost Sharing

Issue/Opportunity: Over the past five years, facility operating costs in both service areas have increased substantially, as shown in Figure 4 below. The cost per capita to operate the solid waste facilities in the Hazelton and Highway 37 North Service Area is about three to four times higher than the cost of operating the facilities in the Terrace Service Area. The significantly higher per-capita facility operating cost is due to the substantially smaller population base, the greater number of solid waste facilities, and the greater distance between facilities in the Hazelton and Highway 37 North Service Area.

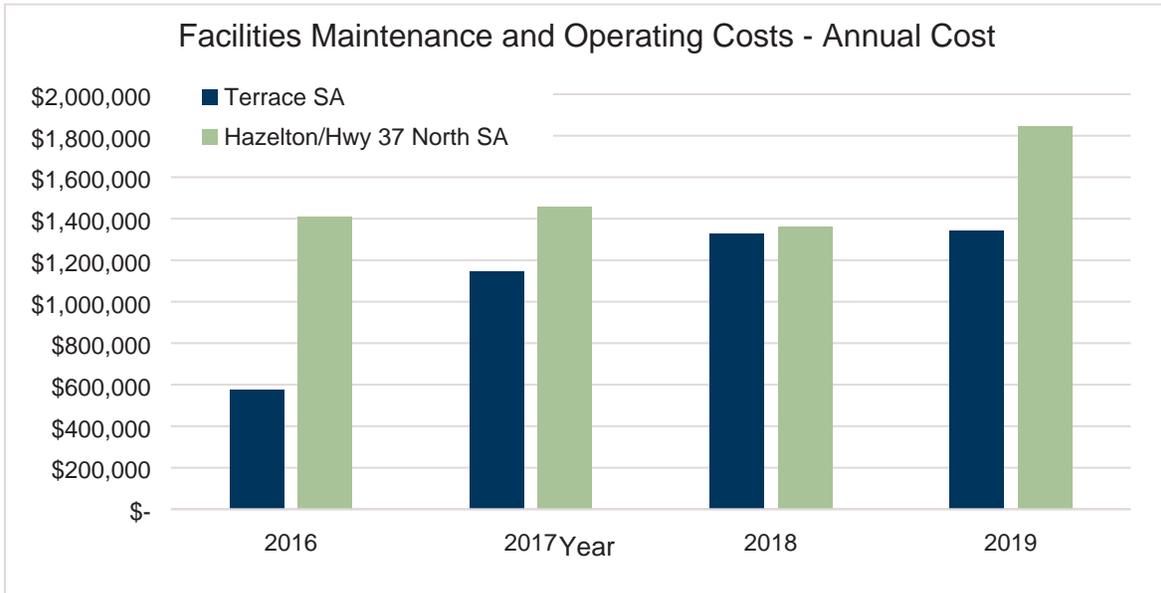


Figure 4 Annual facility maintenance and operating costs for service areas over last four years.

Based on estimated waste tonnages accepted in the Hazelton and Highway 37 North Service Area where no weigh scales exist, the per-tonne facility operating costs in the Hazelton and Highway 37 North Service Area are likely more than double the per-tonne costs in the Terrace Service Area. The per-tonne disposal cost in the Terrace Service Area has decreased over the past three years which is primarily due to the increase in landfilled waste from industrial and commercial sources. The Hazelton and Highway 37 North Service Area does not have the same access to revenue through disposal of industrial waste at this time. The per-tonne disposal cost increased for the Hazelton and Highway 37 North Service Area between 2018 and 2019 which is mainly the result of operating costs related to the Stewart Transfer Station.

The two Service Areas were established in 2015 prior to the completion of the major capital investments and service changes in the regional district, and both have different funding models. The RDKS may want to review the long-term sustainability of the cost recovery models, considering it has been five years since the two Service Areas were formed and operating costs have increased substantially since that time.

The RDKS wants to develop a number of key performance indicators (KPIs) considering cost per capita, household or business, and cost per tonne of waste generated or disposed. The KPIs will assist with evaluating the current cost recovery models against the Guiding Financial Principals outlined section above. KPIs normalize costs to a common denominator (such as per capita or household),



which allows for a standard comparison of costs between service areas. Using normalized KPIs is particularly important when comparing costs between two different service areas with significantly different populations.

There may not be a clear understanding of the high cost of waste management among residents and business owners and the RDKS wants to enhance messaging around waste management costs.

- 32A. Develop KPIs to assist in evaluation of the current cost recovery models between service areas. Adjust cost recovery models to facilitate a continued service delivery fair to all residents and businesses.
- 32B. Include messaging around waste management cost in RDKS's public education efforts.

Responsibility: RDKS



Year 1-10



CapEx: \$n/a
OpEx: \$20K*
RDKS staffing: 50 hrs

**\$20,000 in consulting fees in Year 5.*

STRATEGY 33 Reduce Costs

Issue/Opportunity: Directing efforts to reduce cost is a natural way to balance the budgets. Cost reductions can sometimes be found through improved operating efficiencies. Cost saving efforts should be considered in conjunction with potential impacts to levels of service or quality provided. All cost saving efforts should aim to avoid compromising the existing service levels being provided to residents.

Many areas for improvement have been identified during the SWMP development process and are included as part of specific strategies that relate to the waste hierarchy of reduce, reuse, recycle and residual management. One important example is that the RDKS wants to increase the number of service agreements with stewardship organizations such as Recycle BC and other stewards with the aim of offset some collection costs.

The service area that struggles with the highest operational costs is the Hazelton and Highway 37 North Service Area. It is currently operating with a deficit, mainly due to high transportation costs, higher than expected operating costs, hauling distances, and the limited market for recyclable materials.

The RDKS is committed to reducing costs by focusing on the following areas:

- Reviewing material management including compaction and co-hauling/back-hauling of waste material.
- Reassessing the operating hours of selected facilities, the use of RDKS equipment, and the allocation of staffing to specific tasks.

- Exploring the opportunity of performing tasks in-house using RDKS staff members, where currently contracted staff are used.
- Developing long-term goals and strategies, including potential investment aimed to increase diversion and bylaw adherence.
- Closing selected small landfills and establish transfer stations (refer to Strategy 25).

The RDKS acknowledges that all major system changes come at a price and this must be accounted before implementing changes aimed to achieve overall cost savings.

- 33A. Complete detailed hauling analysis to assess the feasibility of alternative co-hauling and back-hauling options.
- 33B. Perform a cost-benefit analysis of baling and/or compacting recyclable materials hauled from the Hazelton and Highway 37 North Service Area.
- 33C. Regularly revisit agreements and operating procedures to explore options to reduce cost while maintaining service level and quality.
- 33D. Develop long-term goals and strategies, including potential investment, with the purpose of reducing cost in the long term.
- 33E. Complete operational reviews for each facility, which would include a review of staffing, past operating performance, primary operating costs, and identification of areas for improvement.



Year 1-10



CapEx: \$n/a
OpEx: \$100,000*
RDKS staffing: 100 hrs

Responsibility: RDKS

** Fees for efficiency reviews over years 1 to 5.*

STRATEGY 34 Increase Revenue

Issue/Opportunity: The RDKS's main revenue sources include requisition through taxation, cost-sharing agreements with First Nation communities, tipping fees, and curbside collection fees. These revenue sources are aimed at covering the solid waste management operations, whereas loans and grants are used to pay for capital projects.

Since the Forceman Ridge WMF started accepting waste in 2017, the amount of industrial waste and soil accepted at the facility has increased substantially. Under the existing bylaw, soil that is suitable for cover is charged a reduced rate of \$55.00/tonne, whereas contaminated soil is charged \$65-\$78/tonne, depending on the level of contamination. General refuse is charged \$110/tonne. Industrial waste and any waste generated outside the Service Area is charged a 25% surcharge in addition to the posted tipping fees. Recent financial modelling and assessment of the surcharge indicate that the RDKS may want to increase the surcharge, from 25% to around 100%, for the industrial waste and waste generated outside the Service Area to ensure sufficient funds exist to expand into the next landfill phase once the current one has reached capacity.

The RDKS wants to further review the surcharge applied to industrial waste, out-of-service-area waste, as well as the tipping fee charged for soil material. A revised surcharge for industrial waste and tipping fee for soil will be developed with consideration of the following:



- The full cost of the landfill, including planning, design, operations, closure, and post-closure costs. As a best practice, the tipping fee should be established to cover all landfill costs over its entire lifespan (including the post-closure period). By considering the full cost of the landfill, the value of the remaining available airspace can be quantified.
- The tipping point at which it is more economical for industry to dispose of waste at another facility or construct their own landfill.
- The benefits and costs of accepting contaminated soil at a discounted tipping fee (compared to general garbage).

The RDKS Board has voted to increase tax requisition in the Hazelton and Highway 37 North Service Area to recover the 2019 deficit (and future anticipated deficits) over the next 5 years. Additional efforts to increase revenue, particularly for the Hazelton and Highway 37 North Service Area, should be considered to reduce the cost burden on residents and businesses. Currently, there are no tipping fees charged at the Landfill at Hazelton WMF and the Meziadin Landfill (with the exception of select ICI loads). Assuming a tipping fee of \$110/tonne, this represents an additional potential revenue stream of up to \$650,000.

The introduction of user-pay tipping fees in the Hazelton and Highway 37 North Service Area is consistent with the Guiding Principles of the SWMP. A user-pay system incentivizes residents and businesses to divert more material and reduce the amount of waste disposed. The RDKS is considering introducing tipping fees for large waste loads only, originating from commercial sources.

Should tipping fees be considered for residential users, a model could be set up where each household in the Service Area is given a set waste volume or number of visits for free (or for an annual fee) each year and waste beyond that would be subject to tipping fees. The communities of the District of Stewart, Village of Hazelton, District of New Hazelton, Gitanyow, Gitwangak, Gitsegukla, Witset, Gitanmaax, Glen Vowell, Hagwilget, and Kispiox currently receive curbside pickup of garbage, and residents could be provided with a set number of self-haul visits for free.

It is recognized that tax requisition will likely need to be adjusted if tipping fees are introduced in the Hazelton and Highway 37 North Service Area. Communications related to the implementation of tipping fees should clearly indicate that the objective is to charge residents an amount that is more proportional to the amount of waste they are disposing (user-pay system). Communications should clearly explain the total cost to residents if revenues are collected through a combination of tipping fees and tax requisition and compare the proposed costs to the total costs that residents are paying under the current tax-based cost recovery model. It is understood that residents may feel like they are paying twice if tipping fees are introduced.

- 34A. Regularly review and update the current cost model for the landfill at Forceman Ridge WMF and adjust tipping fees for industrial and out-of-service-area waste as needed.
- 34B. Assess the costs and benefits of introducing a “user-pay” cost recovery model in the Hazelton and Highway 37 North Service Area by introducing tipping fees and adjust tax requisition based on new tipping fee structure. Implement a “user-pay” cost recovery model if deemed beneficial to residents, businesses and the RDKS while following the Guiding Financial Principals.



Year 1-10



CapEx: \$n/a
OpEx: \$20K*
RDKS staffing: 100 hrs

Responsibility: RDKS

**\$20,000 for consulting fees over Year 4-5.*

STRATEGY 35 Implement Indirect Cost Sharing between Service Areas

Issue/Opportunity: The Terrace Service Area is currently operating in a surplus and the Hazelton and Highway 37 North Service area is operating in a deficit. Under the current bylaws and Local Government Act, cost and revenue sharing between the two service areas is not allowed.

Bylaws No. 657 and 658 were established in 2015 based on the current and projected facility operating costs and revenues at that time. As discussed above, operating costs in both service areas have increased significantly over the last five years. Tax requisition in the Hazelton and Highway 37 North Service Area has recently been increased substantially in order to cover the increasing facility operating costs.

The Forceman Ridge WMF receives a significant quantity of waste from industrial sources. The RDKS can consider the feasibility of redirecting waste to the Hazelton and Highway 37 North disposal facilities by providing incentives to industrial users to haul directly to the Meziadin Landfill or Hazelton WMF. However, the round-trip hauling time from Terrace to the Hazelton WMF or Meziadin Landfill is a barrier to redirecting waste to these facilities. Even if industrial waste haulers are incentivized to dispose at these facilities (for example, through reduced tipping fees), the economics of hauling an additional four to six hours may be too much of a financial barrier. A feasibility assessment would need to consider the suitability to receive industrial waste, hauling distance, environmental impact and costs to producers and haulers.



35A. Assess the feasibility of redirecting industrial waste to the Hazelton WMF and/or Meziadin Landfill to allow indirect cost sharing.



Year 5-10



CapEx: \$n/a
OpEx: \$40K*
RDKS staffing: 50 hrs

Responsibility: RDKS and District of Kitimat

**\$40,000 in consulting fees in Year 6.*

2) KEY CONSIDERATIONS FOR DEVELOPING & ASSESSING PROPOSED STRATEGIES

During the planning process, the RDKS has worked closely with the consultant, Morrison Hershfield, and PTAC to ensure that a wide range of factors have been considered during the development of potential options, the selection of proposed strategies and determining associated actions.

Some of the key considerations used for developing and assessing proposed strategies during the planning process include:

General:

- **Alignment with existing or proposed provincial strategies and initiatives** – the guiding principles proposed by the Ministry were adopted for the SWMP development.
- **The potential of a policy / waste management service solution to result in significant waste stream reduction** – the waste composition results helped to guide decisions on waste streams that the RDKS still needs to prioritize to reduce landfill disposal.
- **Potential challenges administrating policy once introduced** – in developing operational costs the RDKS has considered new staffing requirements.
- **Opportunity for public-private partnerships** – the RDKS has proposed strategies that encourage partnerships, and the PTAC were actively involved in identifying potential partnerships that may be important for specific strategies.
- **Flexibility to adapt policy to changing circumstances over time** – one of the main focus areas of the new SWMP is to improve system efficiency. The proposed strategies have been developed to allow the RDKS flexibility to adapt policy if necessary.
- **Risk of failure** – the RDKS has made it clear that the remaining landfill capacity should be considered invaluable as siting of a new facility or expansion of the current one may be challenging. The siting, design, and construction of a landfill such as the Forceman Ridge Waste Management Facility would require major capital investment.



Environmental:

- **Linkages to the pollution prevention hierarchy and prioritization of the first 3 Rs** – the planning process explored potential options in accordance with the pollution prevention hierarchy with focus on the 3 Rs (reduction, reuse, and recycling).
- **Facility discharges to the environment and level of associated environmental risk** – the RDKS has prioritized improved drop-off options for hazardous waste, which the RDKS wants to ensure are managed in an environmentally responsible manner.
- **Associated direct environmental benefits** – the RDKS will focus on continuing to reduce both the generation and emission of greenhouse gases associated with Forceman Ridge landfill, divert more organic waste and produce a high quality compost for local use.
- **Associated ancillary environmental benefits** – The proposed strategies include strategies to prevent waste and support the use reusable items, products with recycled content, etc.

Social:

- **Associated social benefits** – the proposed strategies involve empowering residents through increased public awareness and education and increased accessibility to waste management services. Education on system costs and policy changes are important to gain community buy-in and influence behaviour changes.
- **Ability to create opportunities for new partnerships** – many partnership opportunities have been identified, many which have potential to create low-barrier workforce opportunities/training.
- **Opportunities for collaboration with neighbouring regional districts** – collaboration is likely to focus on sharing of educational and public outreach materials.
- **Opportunities for increased private sector involvement and benefit to the region** – the RDKS is proposing to establish an ICI working group to increase private sector involvement.

Many of proposed strategies involve feasibility and cost-benefit assessments for reviewing particular aspects of the waste management system prior to implementing changes. The RDKS is committed to considering environmental, social and economic impacts as part of all assessments, in particular for studies involving the establishment of solid waste infrastructure. Only cost-benefit assessments that show a strong case are likely to lead to implementation. For cost-benefits assessments the RDKS can consider economic benefits (revenues, employment opportunities), available recycling infrastructure and end-markets for collected materials, transportation costs, RDKS staff implications, costs, potential savings and costs to taxpayers and consumers compared to alternatives, fairness and equity regarding the distribution of accrued costs and benefits, etc.

3) NEXT STEPS

During the PTAC meetings on June 25, committee members are presented a summary of all proposed strategies as highlighted in this Memo. There will be an opportunity to provide feedback to ensure that these preferred options have been accurately captured based on previous PTAC meetings. Committee members will also be asked to vote to show if the proposed strategies and priorities (short- and long term) are supported. Only the strategies and priorities, which are supported by PTAC will be used to develop the new SWMP. These proposed strategies and priorities will be brought to the Regional District Board for evaluation and sign-off prior to taking the draft plan to the Public for consultation later in 2020.

Appendix 32 – Morrison Hershfield Letters of Recommendation for the SWMP



MORRISON HERSHFIELD

January 30, 2020

Erin Blaney, BSc., EPt
Environmental Services Coordinator
300-4545 Lazelle Avenue
Terrace, B.C.
V8G 4E1
Email: eblaney@rdks.bc.ca

Dear Ms. Blaney:

Re: Strategies to include as part of Preferred Options

Under the Environmental Management Act, regional districts are required to have a solid waste management plan (SWMP), which must be developed following the solid waste management planning guidelines provided by the Ministry of Environment and Climate Change Strategy (the Ministry) for content and process.

The Regional District of Kitimat Stikine (RDKS) is in the process of developing a new SWMP. During the last meeting with the Public and Technical Advisory Committee (PTAC), potential reduce and reuse strategies and options were discussed and PTAC members were asked to indicate their individual preferences and priorities of the strategies discussed. A copy of the votes are attached to this letter.

Morrison Hershfield recommends that the attached list of strategies and priorities (refer to Table 1) are carried over into the PTAC meeting later this spring when the overall preferred options will be selected. During this meeting the PTAC members will have a second opportunity to review the selected reuse and reduce strategies together with those for recycling, residual waste management and cost recovery. The selected preferred options will form the basis of the draft SWMP, which will be brought to public consultation in the early fall of 2020.

Sincerely,

A handwritten signature in black ink that reads "Veronica Bartlett".

Veronica Bartlett, M.Sc.
Solid Waste Planner, Environment
Morrison Hershfield Limited

P:\2019\190497600-RDKS SOLID WASTE MANAGEMENT PLAN\08. WORKING\01 REDUCE AND REUSE OPTIONS MEMO\LTR_2020-01-30-RECOMMENDATION_REDUCE_REUSE_FOR_PREFERRED_OPTIONS_190497600_FINAL.DOCX

Table 1 Strategies to be considered for inclusion as part of the Preferred Options

REDUCE				
#	Strategy	High Priority (0-5 yrs)	Lower Priority (5-10+ yrs)	Comments on Priorities
1	Lobby for reduction of single-use items and packaging	✓		Lobby at Provincial level is highest priority.
2	Support member municipalities with implementation of bylaw(s) to eliminate the distribution of single-use items		✓	
3	Encourage voluntary reduction of single-use items by businesses	✓		Developing and implementing outreach campaigns is of key priority with potential to learn from Metro Vancouver.
4	Adopt a preferential purchasing policy for green procurement that supports reduce, reuse and the use of recycled content		✓	The majority of PTAC either assigned the strategy low priority or not to be pursued. Even though PTAC was not in full support of this strategy, it is important for the RDKS to 'walk the talk' and perform actions consistent with the guiding principles of the SWMP. RDKS already have some green procurement practices in place informally. Formalizing through policy is lower priority, but yet important to ensure a more consistent approach across all departments.
5	Promote waste reduction ideas through targeted campaigns	✓	✓	Continued efforts needed to promote waste reduction ideas using readily available campaigns. Waste reduction of clothing is suitable is a high priority since campaign materials are available and clothing make up almost 9% of the garbage collected at curbside.

REUSE				
#	Strategy	High Priority (0-5 yrs)	Lower Priority (5-10+ yrs)	Comments on Priorities
6	Support reuse through share sheds and reuse stores	✓	✓	<p>Priority to support and promote existing reuse organizations.</p> <p>Lower priority to commence pilot of share shed and/or allowing space at RDKS facility for sale elsewhere, due to due financial impacts.</p> <p>PTAC asked to include an assessment of the feasibility of partnering with the private sector to set-up a reuse store for C&D waste.</p>
7	Support reuse and/or repair events	✓	✓	<p>Seeking federal funding to run a pilot for a regional reuse event is of high priority.</p>
8	Develop a contractor's guide to reduction, reuse and recycling	✓		
9	Reuse of construction and demolition materials through deconstruction		✓	<p>Priority to the encouragement of local reuse opportunities of demolition materials by updating the Construction Site Waste Management information brochure.</p>

PREFERENCES PROVIDED BY PTAC MEMBERS BY VOTING USING STICKERS

REDUCE				
#	Strategy	High Priority (0-5 High Years)	Low Priority (5-10+ Yrs)	Not in the interest of the RD
1	Lobby for reduction of single-use items and packaging	10 (4 with A as priority, 2 with B as priority)	1	0
2	Support member-municipalities with implementation of bylaw(s) to eliminate the distribution of single-use items	1	7 (one with A as priority)	0
3	Encourage voluntary reduction of single-use items by businesses	6 (2 with A as priority)	1 - with B as priority	0
4	Adopt a preferential purchasing policy for green procurement that support reduce, reuse, and the use of recycled content	1	2	4
5	Promote waste reduction through targeted campaigns	3	4	0
REUSE				



#	Strategy	High Priority (0-5 Years)	Low Priority (5-10+ Yrs)	Not in the interest of the RD
6	Support reuse through share sheds and reuse stores.	3	5	1
7	Support reuse &/or repair events	4	4	0
8	Develop a contractors guide to reduction, reuse, and recycling	6	1	0
9	Reuse of construction and demolition materials through deconstruction	3	4	0



MORRISON HERSHFIELD

February 28, 2020

Erin Blaney, BSc., EPT
Environmental Services Coordinator
300-4545 Lazelle Avenue
Terrace, B.C.
V8G 4E1
Email: eblaney@rdks.bc.ca

Dear Ms. Blaney:

Re: Recycling and Organics Diversion Strategies to include as part of Preferred Options

Under the Environmental Management Act, regional districts are required to have a solid waste management plan (SWMP), which must be developed following the solid waste management planning guidelines provided by the Ministry of Environment and Climate Change Strategy (the Ministry) for content and process.

The Regional District of Kitimat Stikine (RDKS) is in the process of developing a new SWMP. During the Public and Technical Advisory Committee (PTAC) meeting held on February 11, 2020, potential recycling and organics diversion strategies and options were discussed and PTAC members were asked to indicate their individual preferences and priorities of the strategies discussed.

Morrison Hershfield recommends that the attached list of recycling and organics diversion strategies and priorities (refer to Table 1 and 2) are carried over into the PTAC meeting later this spring when the overall Preferred Options are evaluated and selected. MH's recommendation includes all but one of the strategies presented in the Memo: *Recycling Options to Consider for Inclusion in the Solid Waste Management Plan*, and at the February 11, 2020 PTAC meeting. Based on the feedback received from PTAC members, *Strategy 6. Consider options for mattress recycling* was removed from further considerations. Figure 1 and 2 show graphs of the results from preferences and priorities placed by PTAC members.

Furthermore, based on discussions with PTAC at the February 11 meeting, MH recommends to include an additional option under Strategy 5. The additional option recommended for inclusion is:

5C. Develop a targeted campaign for hazardous household waste with the purpose of informing residents and businesses of proper material management aimed to capture more materials.

The PTAC members will have a second opportunity to review the selected recycling and organics diversion strategies together with those for reduce and reuse, residual waste

management and cost recovery during the Preferred Options meeting this spring. The selected preferred options will form the basis of the draft SWMP, which will be brought to public consultation in the early fall of 2020.

Sincerely,

A handwritten signature in black ink, appearing to read "Veronica Bartlett". The signature is fluid and cursive, with a long horizontal stroke at the end.

Veronica Bartlett, M.Sc.
Solid Waste Planner, Environment
Morrison Hershfield Limited

\\MH.LOCAL\DATA\PROJ\2019\190497600-RDKS SOLID WASTE MANAGEMENT PLAN\08. WORKING\02 RECYCLING MEMO\LTR_2020-02-28-RECOMMENDATION_RECYCLING AND ORGANICS DIVERSION_FOR PREFERRED OPTIONS_190497600_FNL.DOCX

Table 1 Recycling strategies to be considered for inclusion as part of the Preferred Options.

RECYCLING				
#	Strategy	Short-term Priority (0-5 yrs)	Long-term Priority (5-10+ yrs)	Comments on Priorities
1	Lobby for improved accessibility to EPR programs	✓		Extra focus to be given to lobbying for inclusion of new materials, regardless of the source (residential or ICI), under the Recycling Regulation.
2	Provide continuous diversion education and outreach programs coupled with enforcement	✓	✓	Data collection, such as curbside or set-out audits, coupled with education is high priority. Long-term priority to collaborate with haulers to develop strategy to pass down fines to offenders.
3	Support ICI to encourage waste diversion	✓	✓	Strategy warranted both short-term and long-term focus. Clear communication is needed to ensure ICI meet applicable bylaw requirements.
4	Reduce recycling costs	✓	✓	Strategy warranted both short-term and long-term focus. Focus on collaboration with stewards and establishing local processors and markets to reduce transportation costs.
5	Improve drop-off options for household hazardous waste where gaps exist	✓	✓	The support for this strategy was divided between short- and long-term focus. MH recommends continuous focus is given the management of household hazardous waste considering the potentially high environmental impact of improper disposal. Areas with limited options for hazardous waste collection should be prioritized.
6	Consider options for mattress recycling			This strategy was identified as long-term priority or no priority by PTAC members and is therefore recommended to be removed from further consideration.
7	Increase diversion of C&D waste	✓		Bylaws are in place requiring diversion of certain C&D materials; these bylaws should be better enforced.

Table 2 Organics and system efficiency strategies to be considered for inclusion as part of the Preferred Options.

ORGANICS DIVERSION & SYSTEM EFFECIENCY				
#	Strategy	Short-term Priority (0-5 yrs)	Long-term Priority (5-10+ yrs)	Comments on Priorities
8	Establish organics processing capacity at suitable facilities	✓	✓	Focus on lobbying for inclusion of <i>recyclable cardboard and paper</i> as material suitable for composting under OMRR.
9	Amend solid waste bylaw to encourage waste diversion	✓	✓	Ensure processing and recycling options exist and that sufficient resources are available to enforce bylaw amendments.
10	Support communities to introduce curbside collection	✓	✓	Support to be given granted recycling/ organics processing facilities exist. The support for this strategy was divided between short- and long-term focus.
11	Incentivize improved contractor and diversion performance	✓	✓	The support for this strategy was divided between short- and long-term focus. The RDKS is recommended to regularly assess the need for more incentive based contracts.

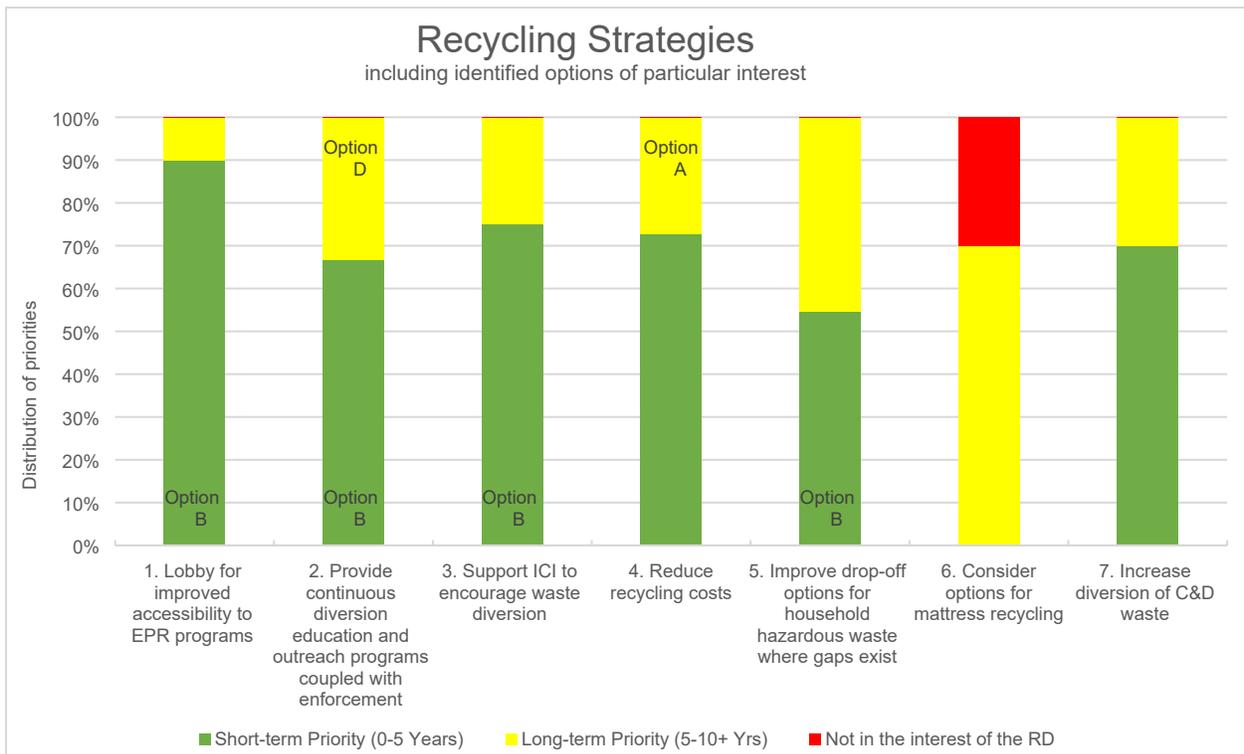


Figure 1 Distribution of PTAC member priorities placed on the presented recycling strategies.

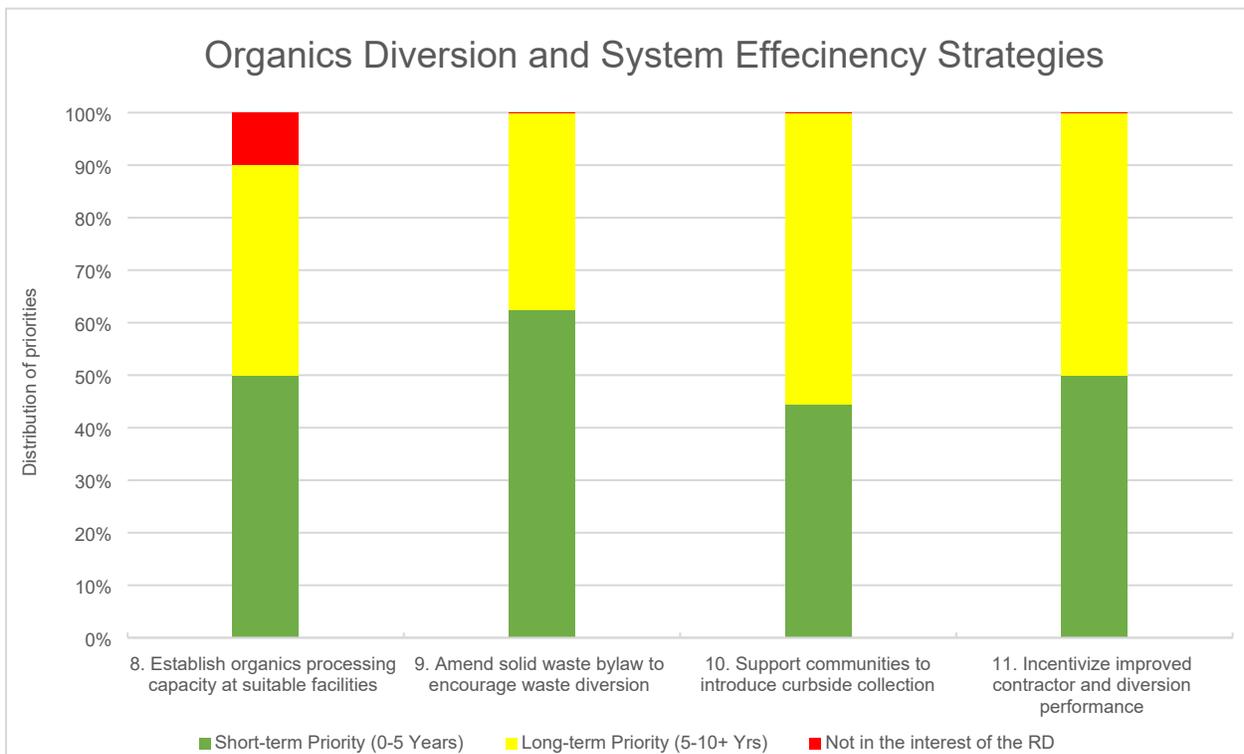


Figure 2 Distribution of PTAC member priorities placed on the presented organics diversion and system efficiency strategies PTAC did not highlight any specific options for these strategies of particular interest.



MORRISON HERSHFIELD

March 25, 2020

Erin Blaney, BSc., EPT
Environmental Services Coordinator
300-4545 Lazelle Avenue
Terrace, B.C.
V8G 4E1
Email: eblaney@rdks.bc.ca

Dear Ms. Blaney:

Re: Strategies for Residual Waste Management at Existing Facilities to include as part of Preferred Options

Under the Environmental Management Act, regional districts are required to have a solid waste management plan (SWMP), which must be developed following the solid waste management planning guidelines provided by the Ministry of Environment and Climate Change Strategy (the Ministry) for content and process.

The Regional District of Kitimat Stikine (RDKS) is in the process of developing a new SWMP. During the Public and Technical Advisory Committee (PTAC) meeting held on March 10, 2020, potential strategies and options for improved operation and management of residual waste at existing facilities were discussed. The PTAC members were asked to indicate their individual preferences and priorities of the strategies discussed.

Morrison Hershfield (MH) recommends that the strategies listed in the attached table (refer to Table 1) are carried over into the PTAC meeting later this spring when the overall Preferred Options are evaluated and selected. MH's recommendation includes all strategies presented in the Memo: *Options for Residual Waste Management at Existing Facilities to Consider for Inclusion in the Solid Waste Management Plan*, and at the March 10, 2020 PTAC meeting. The PTAC members assigned long-term or no priority to Strategy 5 - Close selected small landfills and replace with transfer stations. However, MH recommends keeping this Strategy for reconsideration under the evaluation and selection of Preferred Options. The operation of small landfills may pose significant costs to the RDKS while adhering to environmental regulation and, in the case of Iskut Landfill, maintaining compliance with operational certificates. Figure 1 shows the graphed results of the preferences and priorities placed by PTAC members.

Furthermore, based on discussion among the PTAC members, MH recommends updating Option B under Strategy 6 - Effectively use landfill airspace, to include additional corrective actions optional to the RDKS. The recommended updates are shown in **bold** below:

6B. Review the landfill operations including the use of operational soil and alternative daily covers and waste placement and compaction. Based on findings consider providing, **recommending, or requiring additional** contractor training to improve operations.

The PTAC members will have a second opportunity to review the selected strategies for residual waste management at existing facilities together with those for reduce and reuse, recycling and organics diversion, residual waste management at new facilities, and cost recovery during the Preferred Options meeting this spring. The selected preferred options will form the basis of the draft SWMP, which will be brought to public consultation in the early fall of 2020.

Sincerely,



Veronica Bartlett, M.Sc.
Solid Waste Planner, Environment
Morrison Hershfield Limited



Eva Robertsson, M.Sc., EIT
Environmental Engineer, Solid Waste
Morrison Hershfield Limited

Table 1 Strategies for improved operations and residual waste management at existing facilities to be considered for inclusion as part of the Preferred Options.

RESIDUAL WASTE MANAGEMENT AT EXISTING FACILITIES				
#	Strategy	Short-term Priority (0-5 yrs)	Long-term Priority (5-10+ yrs)	Comments on Priorities
1	Set limits for solid waste accepted from outside the service area	✓		Focus on developing a policy for out-of-service-area waste, which could be as strict as RDKS determines necessary. Additional focus on determining the value of airspace and setting surcharges for out-of-service-area waste based thereon.
2	Set limits and reporting requirement for liquid waste		✓	Develop policy to provide clear direction and unbiased decision making for acceptance of liquid waste. Focus on improving record keeping at the landfills at Hazelton WMF, Iskut and Meziadin. MH also suggests the RDKS ensures that it has a Liquid Waste Management Plan that includes the liquid waste management facilities located at RDKS solid waste management facilities.
3	Reduce greenhouse gas emissions	✓		Focus on continuing RDKS's effort to reduce both the generation and emission of GHG through voluntary waste management initiatives (e.g. collection and flaring of LFG at Thornhill Landfill) and investigate opportunities for carbon credits and revenue sources.
4	Assist in the prevention of illegal dumping		✓	Reducing illegal dumping is important, however; not in the immediate future according to priorities placed by PTAC members.
5	Close selected small landfills and replace with transfer stations	✓	✓	Although considered a long-term or no priority by the PTAC members, MH recommends the RDKS includes Strategy 5 as both a short- and long-term priority. Focus on maintaining the level of service, while basing a decision of closure on the remaining life of the smaller landfills, and the related cost of expansion or closure (e.g. environmental controls, transfer station construction and operation, and hauling of waste). It should also be noted that no PTAC representatives from the potentially affected areas of Rosswood and Iskut were at the meeting on March 10, 2020.
6	Effectively use landfill airspace	✓		Effective use of landfill airspace should be considered in the short term as well as on a continuous basis. The RDKS may want to review the current operations, identify areas of improvement, set goals, and work with the contractor in reaching these goals including potentially incentivize.

7	Improve public accessibility to existing solid waste management facilities	✓		Every PTAC member who provided feedback in this strategy assigned it short-term priority. Primary focus should be given to reviewing the current operating hours at selected facilities to maintain the public's interest and collaboration in responsible solid waste management.
8	Engage and communicate to citizens on waste management	✓	✓	This strategy should be given short- and long-term focus, while carefully considering staff requirements and the effectiveness of the strategy.
9	Deliver operational services in-house	✓		In the short term assess the cost-benefit of in-house vs. contracted staff for facility operations. MH recommends that RDKS take into consideration current contracts and existing contractor relationships.

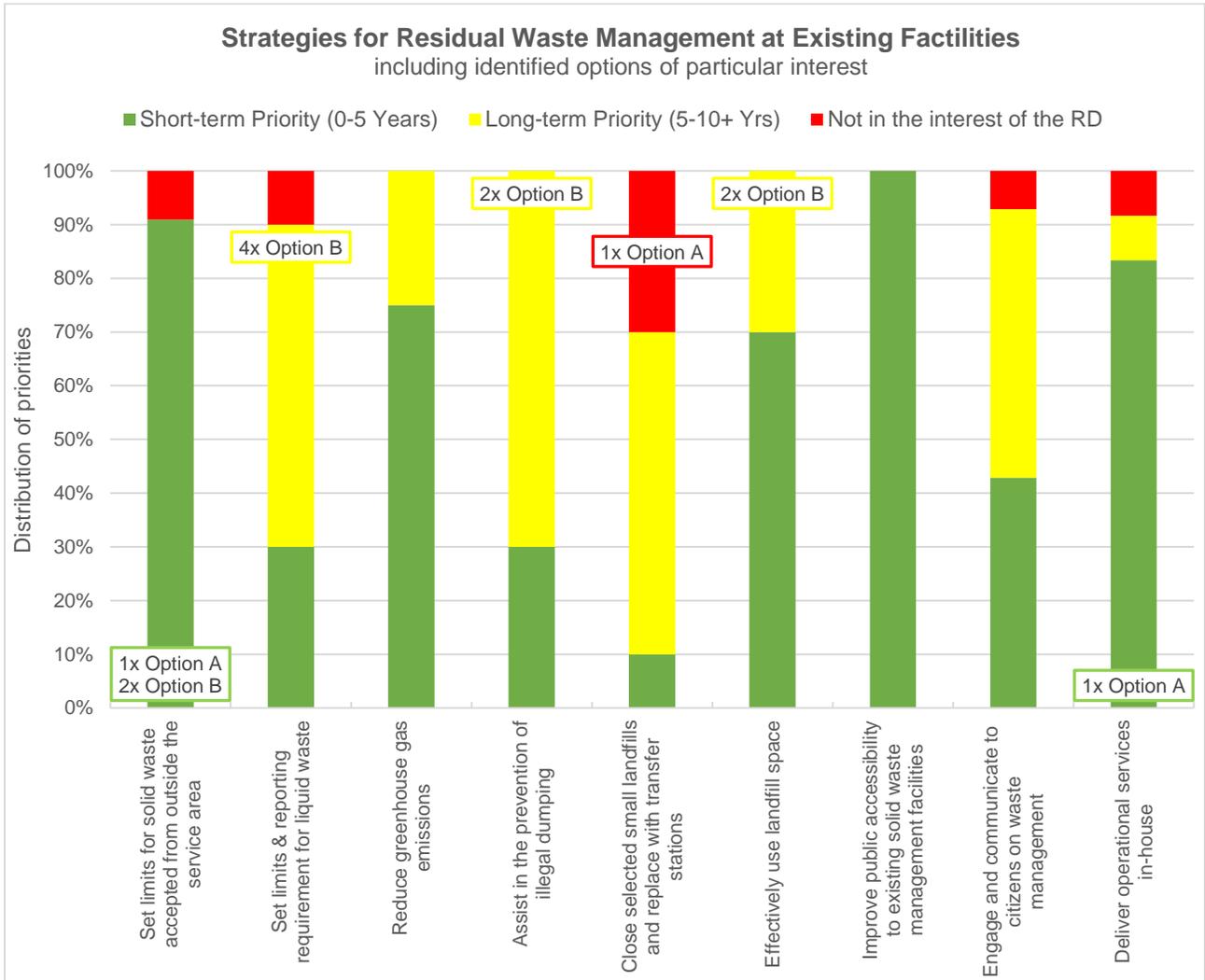


Figure 1 Distribution of PTAC member priorities placed on the presented strategies.



MORRISON HERSHFIELD

June 2, 2020

Erin Blaney, BSc., EPT
Environmental Services Coordinator
Regional District of Kitimat Stikine
300-4545 Lazelle Avenue
Terrace, B.C.
V8G 4E1
Email: eblaney@rdks.bc.ca

Dear Ms. Blaney:

Re: Strategies for New Facilities & Service Areas and Cost Recovery in the RDKS to include as part of Preferred Options

Under the Environmental Management Act, regional districts are required to have a solid waste management plan (SWMP), which must be developed following the solid waste management planning guidelines provided by the Ministry of Environment and Climate Change Strategy (the Ministry) for content and process.

The Regional District of Kitimat Stikine (RDKS) is in the process of developing a new SWMP. During the Public and Technical Advisory Committee (PTAC) meeting held on May 28, 2020, potential strategies and options for waste management at new facilities or in new service areas and for cost recovery were discussed. The PTAC members were asked to indicate their individual preferences and priorities of the strategies discussed. The results from this feedback is presented in Figure 1 and 2 below.

Morrison Hershfield (MH) recommends that the strategies listed in the attached tables (refer to Table 1 and 2) are carried over into the PTAC meeting later this spring when the overall Preferred Options are evaluated and selected. MH's recommendation includes all strategies presented during the meeting and detailed in the Memos:

- *Options for Waste Management at New Facilities or in New Service Areas to Consider for Inclusion in the Solid Waste Management Plan – FINAL, May 20, 2020*
- *Options for Cost Recovery to Consider for Inclusion in the Solid Waste Management Plan – FINAL, May 20, 2020*

The PTAC members assigned long-term or no priority to Cost Recovery Strategy 4. Direct or indirect cost sharing between service areas. However, MH recommends keeping this Strategy for reconsideration under the evaluation and selection of Preferred Options, with sole focus on indirect cost sharing. Based on PTAC feedback and discussion MH recommends Cost

Recovery Option 4A - Review feasibility of amending bylaws to combine service areas to allow for direct cost and revenue sharing, is removed from further assessment under the Preferred Options and SWMP.

The PTAC members will have a last opportunity to review the selected strategies together with those for reduce and reuse, recycling and organics diversion, and residual waste management at existing facilities during the Preferred Options meeting on June 25. PTAC members will then be asked to vote on which options should ultimately be part of the new draft SWMP. Prior to public consultation, the content of the draft SWMP will require evaluation and sign off by the Regional District Board. A workshop with the Board will take place on August 21 and it will determine the preferred direction for each of the updated plan elements, which will be brought to the public for consultation in the fall of 2020.

Sincerely,



Veronica Bartlett, M.Sc.
Solid Waste Planner, Environment
Morrison Hershfield Limited



Eva Robertsson, M.Sc., EIT
Environmental Engineer, Solid Waste
Morrison Hershfield Limited

Table 1 Strategies for waste management at new facilities or in new service areas to be considered for inclusion as part of the Preferred Options.

STRATEGIES FOR NEW FACILITIES AND SERVICE AREAS				
#	Strategy	Short-term Priority (0-5 yrs)	Long-term Priority (5-10+ yrs)	Comments on Priorities
1	Develop new agreement between the district of Kitimat, the Kitimat Landfill, and the RKDS	✓		Strategy should be given short-term priority and all 3 options presented explored as all received support from the PTAC.
2	Increase RDKS service area to include Telegraph Creek Landfill (and transfer station)		✓	Strategy should be assessed further, however not necessarily in the short-term.
3	Include Dease Lake in the RDKS service area	✓	✓	Strategy should be assessed further and the PTAC finds this priority more urgent than that related to Telegraph Creek.

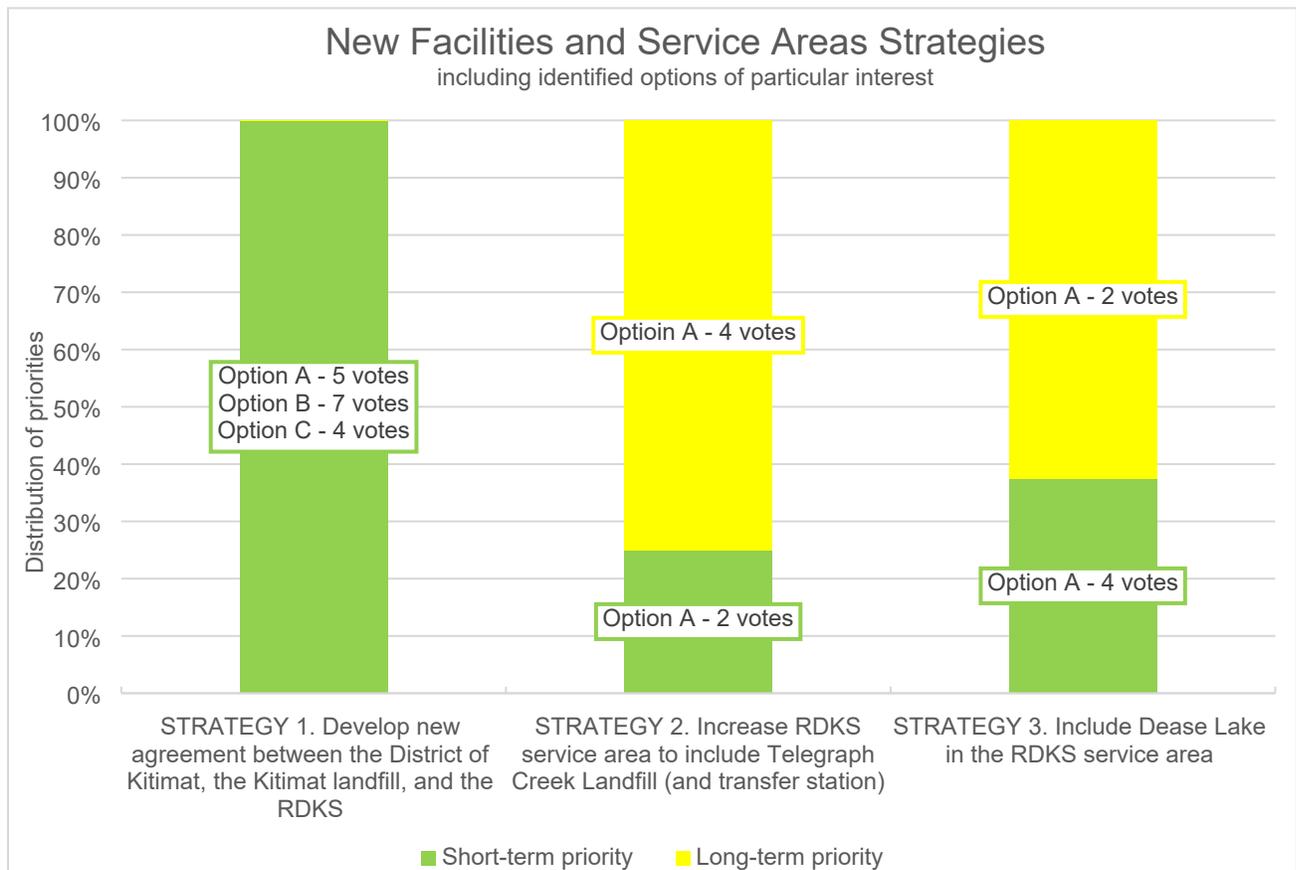


Figure 1 Distribution of PTAC member priorities placed on the presented strategies for new facilities and service.

Table 2 Strategies for improved cost recovery in the RDKS to be considered for inclusion as part of the Preferred Options.

COST RECOVERY STRATEGIES				
#	Strategy	Short-term Priority (0-5 yrs)	Long-term Priority (5-10+ yrs)	Comments on Priorities
1	Review cost recovery model within the Service Areas to provide fair cost sharing	✓	✓	Strategy should be given short-term and continuous focus. Extra focus should be given developing KPIs and evaluating and adjusting the cost recovery models as needed, based on PTAC feedback.
2	Reduce cost	✓	✓	Strategy should be given short-term and continuous focus. PTAC identified baling and/or compacting recyclables in the Hazelton and Highway 37 North Service Area and performing facility operational reviews as the two most important options.
3	Increase revenue	✓	✓	Strategy should be given short-term and continuous focus in both service areas.
4	Direct and indirect cost sharing between service areas		✓	8 out of 11 PTAC members providing feedback either assigned the strategy long-term or no priority. MH suggest the strategy is moved in to the Preferred Options but with sole focus on indirect cost sharing with removal of the direct cost sharing option.
5	Expand service area	✓	✓	The strategy should be given both short- and long-term priority. Assessing collaboration options with the District of Kitimat should be given main priority based on the PTAC feedback. The option to collaborate with the District of Kitimat is also the most likely to have the smallest negative financial impact on the RDKS, if any, of the presented options.

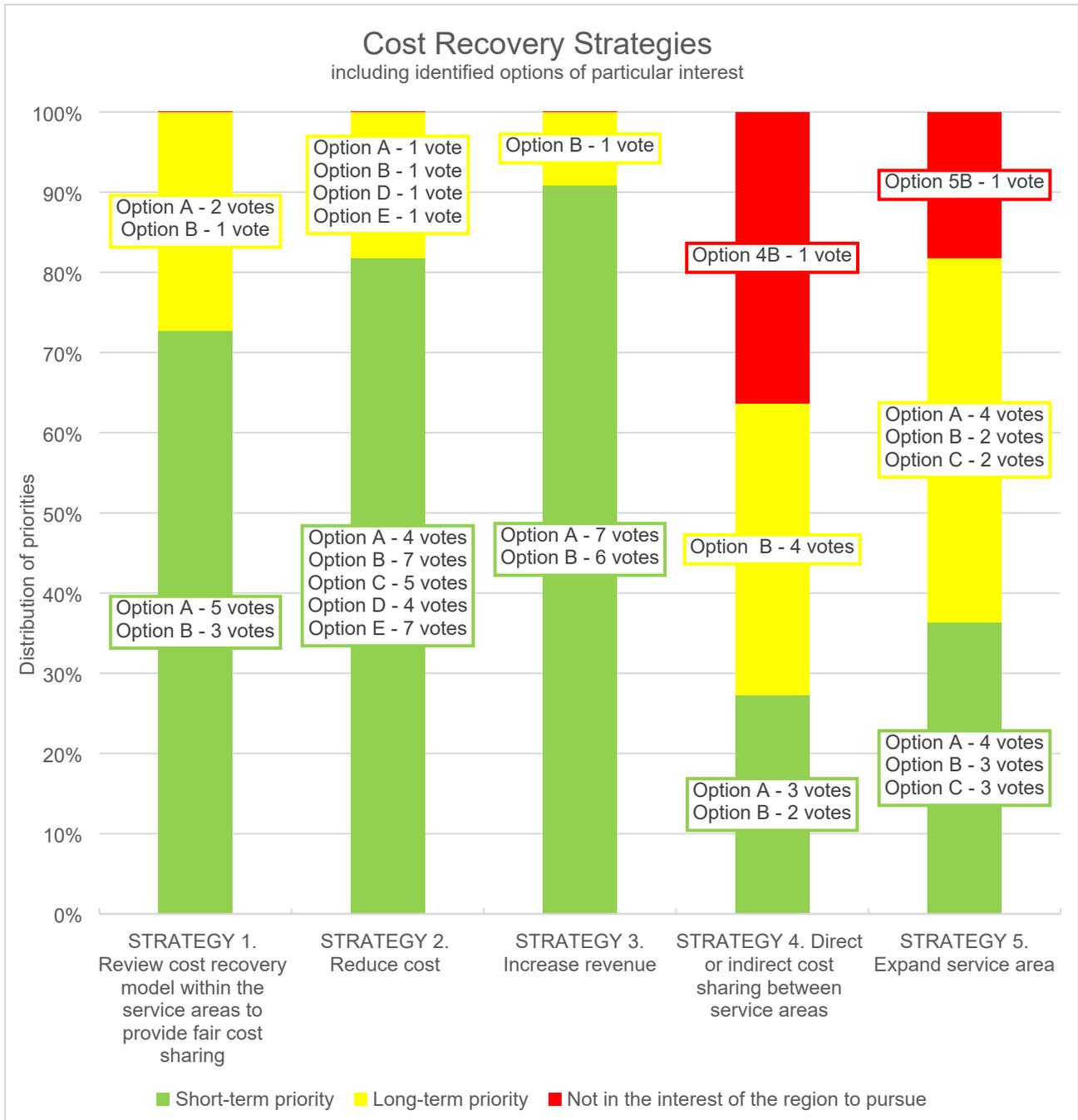


Figure 2 Distribution of PTAC member priorities placed on the presented cost recovery strategies.

Appendix 33 – Public and Technical Advisory Committee Meeting Agendas and Minutes

Please see the agendas and minutes for the RDKS Public and Technical Advisory Committee meetings online at <https://kitimatstikine.civicweb.net/filepro/documents/28329> or visit www.rdks.bc.ca and click on *Minutes and Agendas*.

Appendix 34 – Financial Working Group Meeting Agendas and Minutes



Love this place.
Reduce your waste.



Regional District of
Kitimat-Stikine

Meeting of the Financial Working Group (FWG) to be held in the Regional District of Kitimat-Stikine Board Room, 1st Floor-4545 Lazelle Avenue, Terrace, B.C., February 11, 2020, to commence at 1:00 PM.

AGENDA

Page

A. CALL TO ORDER:

B. AMENDMENTS TO THE AGENDA:

C. APPROVAL OF AGENDA:

D. DELEGATIONS & GUESTS:

1. Curtis Jung, Solid Waste Engineer
Eva Robertsson, Environmental Engineer
Morrison Hershfield, Waste Management Consultant
 - Introductions
 - Overview of Solid Waste Management Plan review process
 - Overview of RDKS solid waste service funding models
 - Trend, short and long-term challenges
 - Guiding Financial Principles
 - Cost recovery strategies
 - Discussion
 - Next steps - identify preferred options for further assessment

E. ADOPTION OF MINUTES:

F. CORRESPONDENCE:

G. REPORTS:

1. Report from: RDKS Administration, dated February 7, 2020, re: Financial Working Group Terms of Reference. 3 - 5

H. ADJOURNMENT:

NEXT MEETING DATE: Conference call, March 10, 2020



Regional District of
Kitimat-Stikine

To: Financial Working Group (FWG)
From: Regional District of Kitimat-Stikine (RDKS) Administration
Date: February 7, 2020
Re: **Financial Working Group Terms of Reference**

Attachments:

- (1) Financial Working Group Terms of Reference (2 pages)

Recommendation:

That the Financial Working Group recommend the Terms of Reference for approval by the Regional District of Kitimat-Stikine Board.

Background:

The Financial Working Group (FWG) has been formed to provide insight and recommendations on the financial implications and feasibility of any initiatives, projects, and programs proposed in the new Solid Waste Management Plan (SWMP). The FWG will report to the Regional District Board, and meeting minutes will be shared with both the Regional District Board and the SWMP Public and Technical Advisory Committee (PTAC).

The attached Terms of Reference (Attachment #1) outline the key deliverables, purpose, and structure of the FWG in detail.



Financial Working Group: Terms of Reference

Purpose and Scope

The purpose of the Financial Working Group (FWG) is to provide financial input on the development of the Solid Waste Management Plan (SWMP). Input from the committee will be sought on:

- Financial Reports and memoranda developed as part of the planning process,
- Guiding financial principles, goals and targets,
- Assisting with identification, development and evaluation of financial options for the proposed plan,

Committee members will be expected to:

- Review provided information and offer comments and suggestions to members,
- Express their organizations' interests or concerns regarding financial content of the new SWMP to the committee, and;
- Recommend proposed financial policies that are in the best interests of all residents of the region, balancing both community and industry needs.

Authority

The group provides feedback to the RDKS Board. The Board is the final decision-making authority.

Membership

The FWG shall consist of members representing the financial leadership of local government stakeholders within the RDKS including:

- CFO of Regional District of Kitimat-Stikine,
- CFO's or financial delegates from member municipalities,
- CFO's or financial delegates from First Nations communities,

Voting Structure

All members each get one vote.

Members are encouraged to work collaboratively and to be committed to reaching consensus where possible. Any members unable to agree with a decision may have their objections noted in the minutes.

Term

The group will serve until the SWMP is approved by the RDKS Board.

Roles and Responsibilities

The Chair will be the RDKS CFO or may be delegated to the RDKS Deputy CFO.

RDKS staff will prepare agendas in consultation with the Chair.

RDKS staff and/or consultants are responsible for preparing the reports for each meeting.

Regular communications between the RDKS and FWG members between meetings will be by email or other accepted form of communication.



Meeting Conduct

The FWG is anticipated to need to meet five times with additional meetings being at the call of the Chair. Meetings will take place in the RDKS boardroom unless otherwise specified. The option to attend meetings electronically will be provided, with some meetings being preferable for members to attend in person.

All group members are considered equal and will therefore have equal opportunity to contribute at meetings. All members must respect the opinions of others.

Quorum

Quorum shall be a minimum of three voting members.

Reporting

FWG reports to the RDKS Board.

Meeting minutes will be provided to the Public and Technical Advisory Committee and the RDKS Board.

Resources and Budget

RDKS will provide the meeting space and equipment. If a meeting is scheduled over a mealtime, the RDKS will provide light refreshments.

Participation in the committee is voluntary and the RDKS does not offer remuneration for members' time.

Travel assistance is provided for members following the current RDKS travel guidelines.

Deliverables

During each meeting recommendations and action lists will be recorded. Members may from time to time be requested to generate individual written comments. A member who misses a meeting may submit his or her input by email within three business days of the meeting.

Review

Once approved, these Terms of Reference will remain in place until the SWMP is approved by the RDKS Board.



CONSTRUCTION & DEMOLITION WASTE

ACCEPTABLE

- Plywood & OSB
- Painted or treated wood
- Windows & doors
- Insulation
- Flooring
- Drywall

UNACCEPTABLE

- Clean wood waste
- Tires
- Batteries
- Cardboard
- Metal
- Materials containing asbestos

GARBAGE



MORRISON HERSHFIELD

Cost Recovery Options Solid Waste Management Plan

FWG Meeting - February 11, 2020

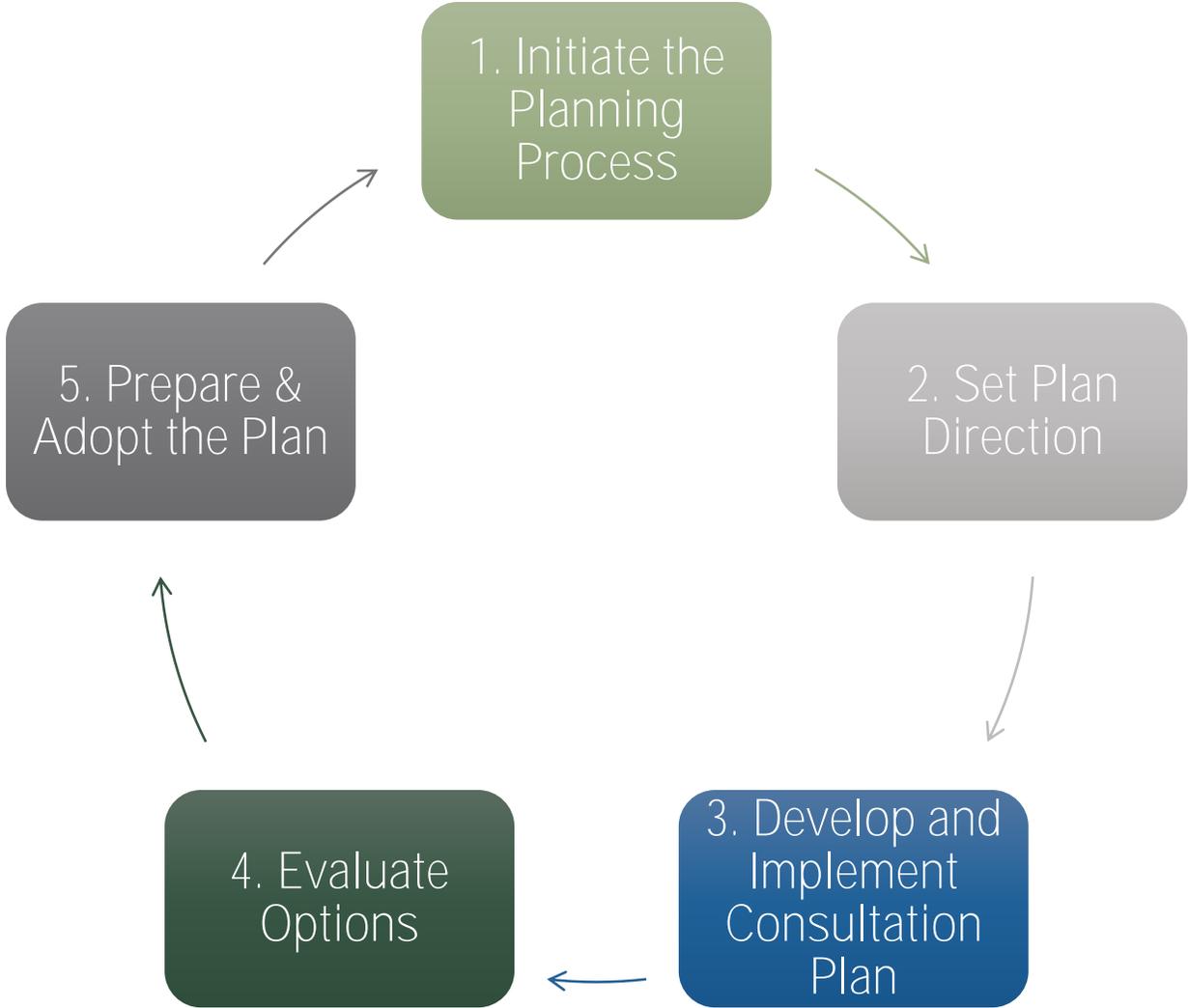


Regional District of
Kitimat-Stikine

Outline

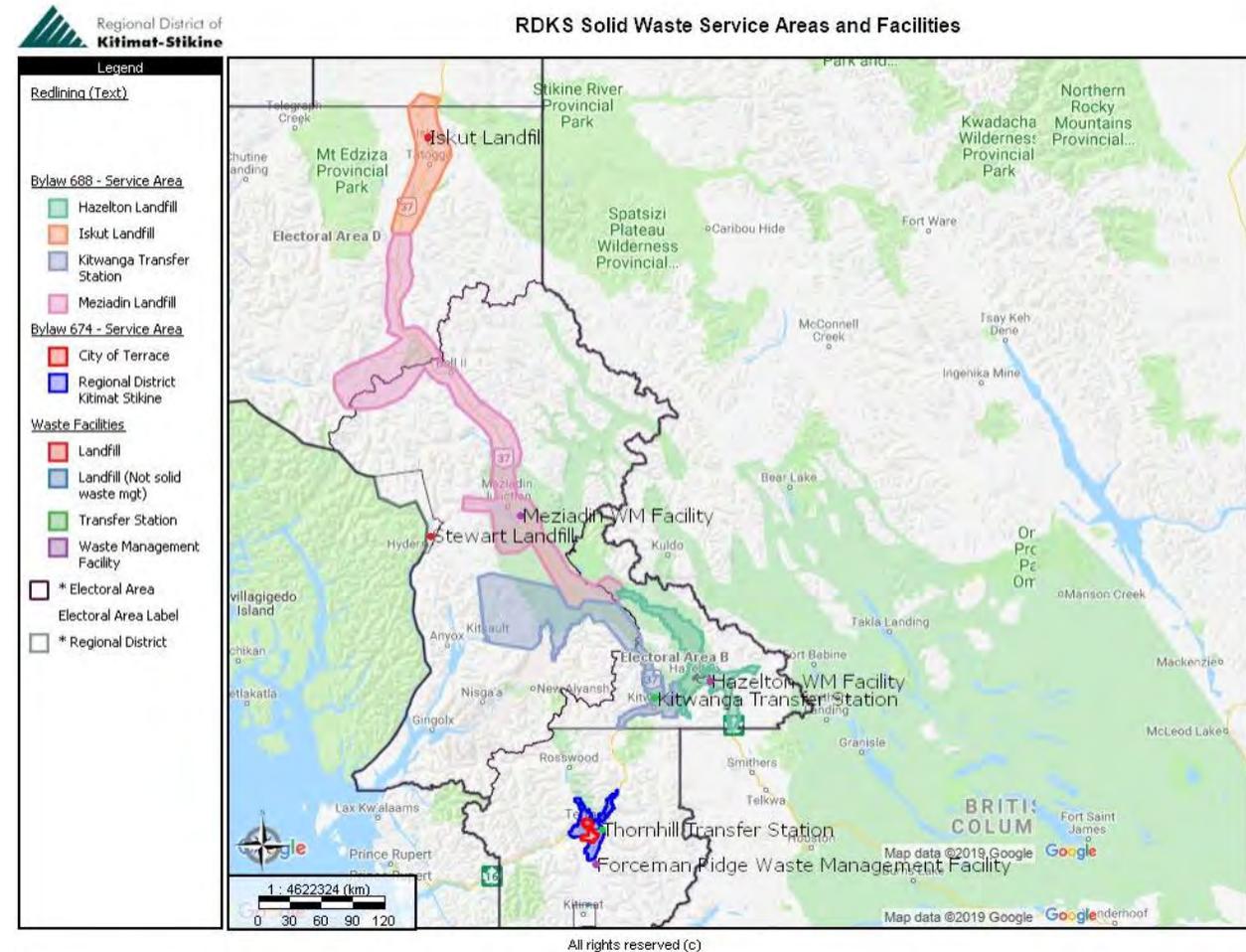
- Introductions
- Overview of solid waste management plan review process
- Overview of RDKS solid waste service funding models
- Trends, short and long term challenges
- Guiding Financial Principles
- Cost recovery strategies
- Discussion
- Next steps – identify preferred options for further assessment

Overview of Plan Review Process



Service Areas

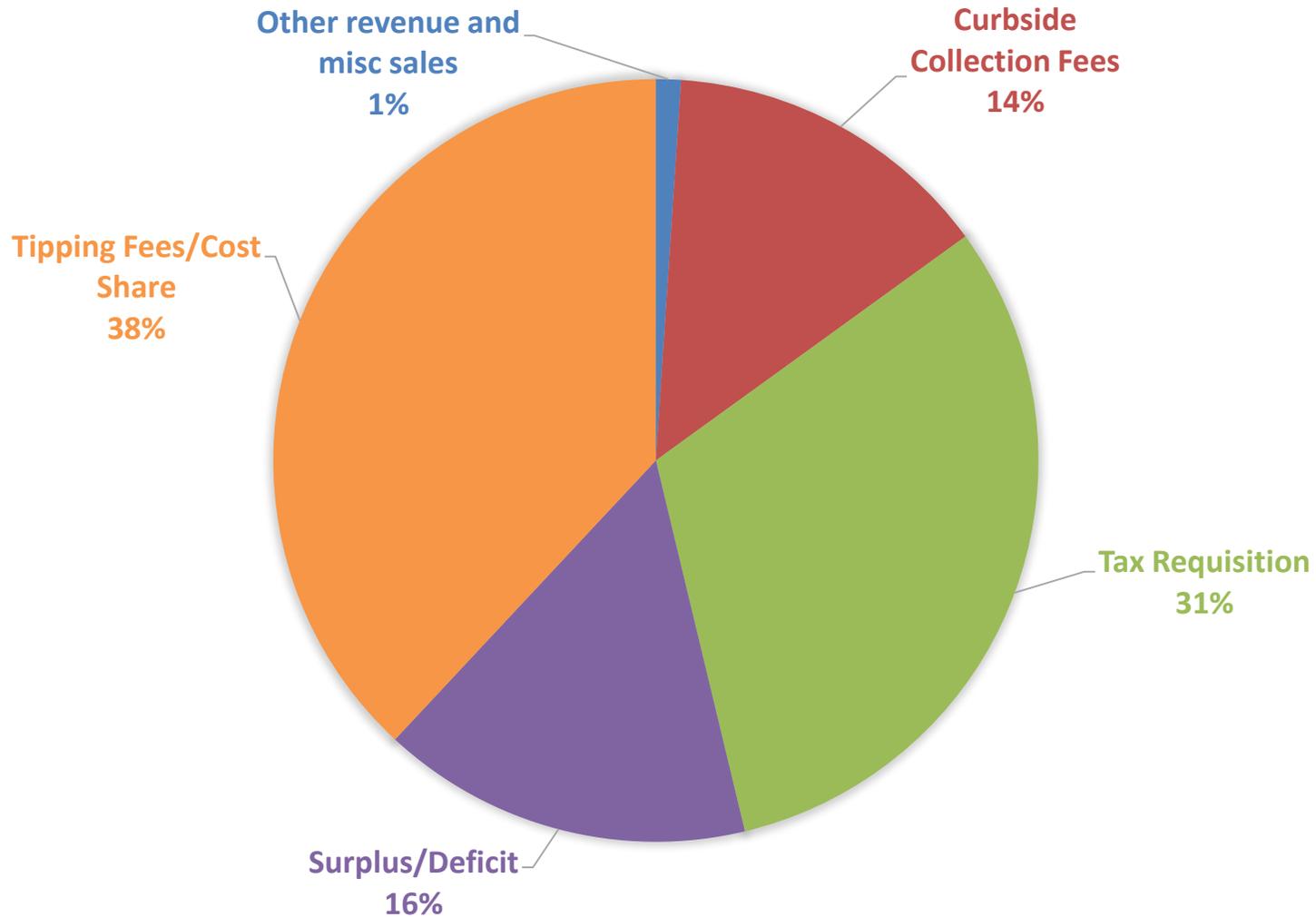
- Terrace Service Area
 - Bylaw No. 658, 659, 671, 682
 - 50% of waste from ICI sector
 - 50% from residential, C&D, and self-haul.
- Hazelton & Highway 37 North Service Area
 - Bylaw No. 657, 688
 - Higher portion of waste from residential sector
 - Less ICI activity



Funding Model -Terrace Service Area

- Revenues (2019)

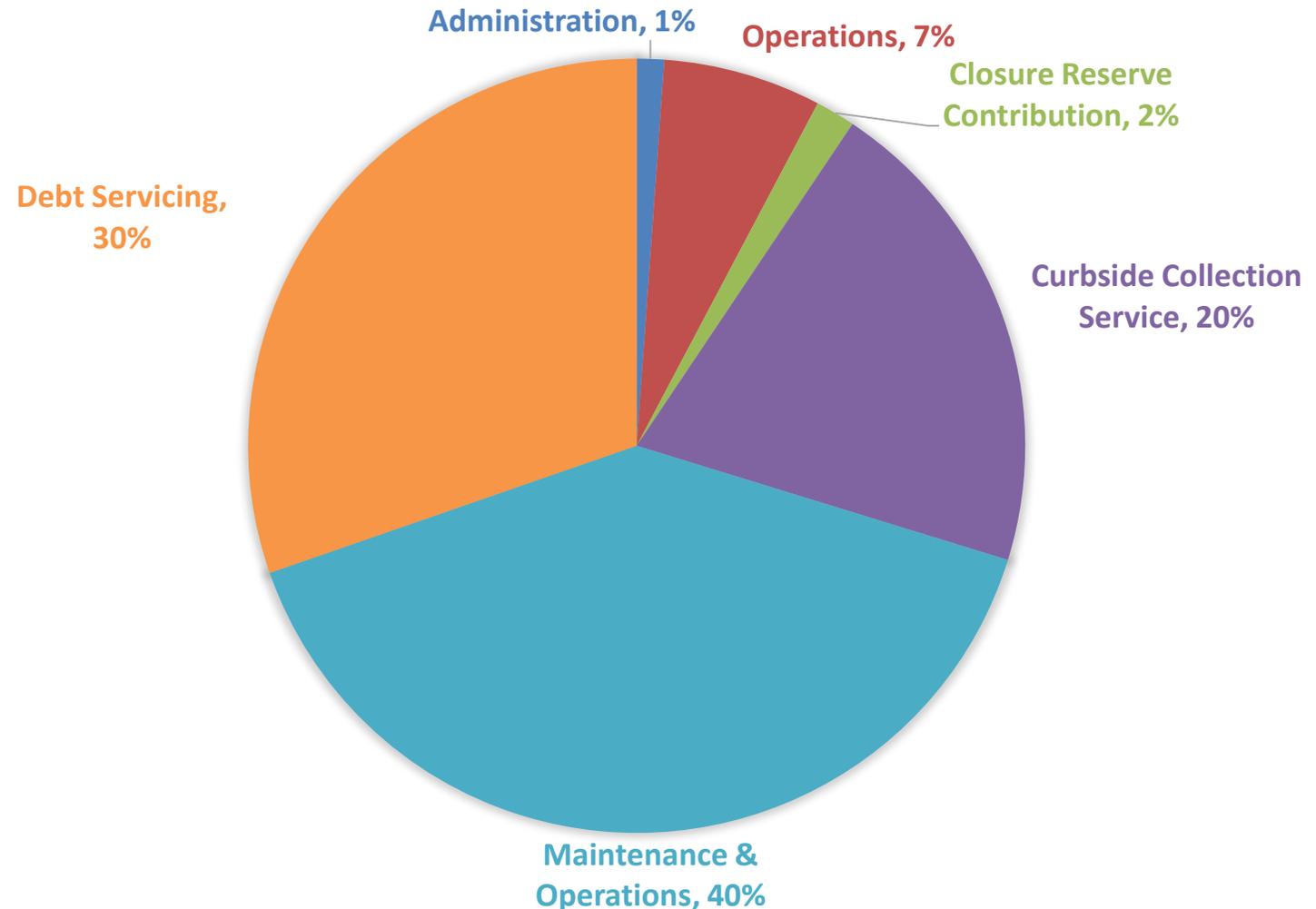
- 50% of revenue from tipping fees and curbside collection fees (user fees)
- 30% of revenue from tax requisition



Funding Model - Terrace Service Area

■ Costs (2019)

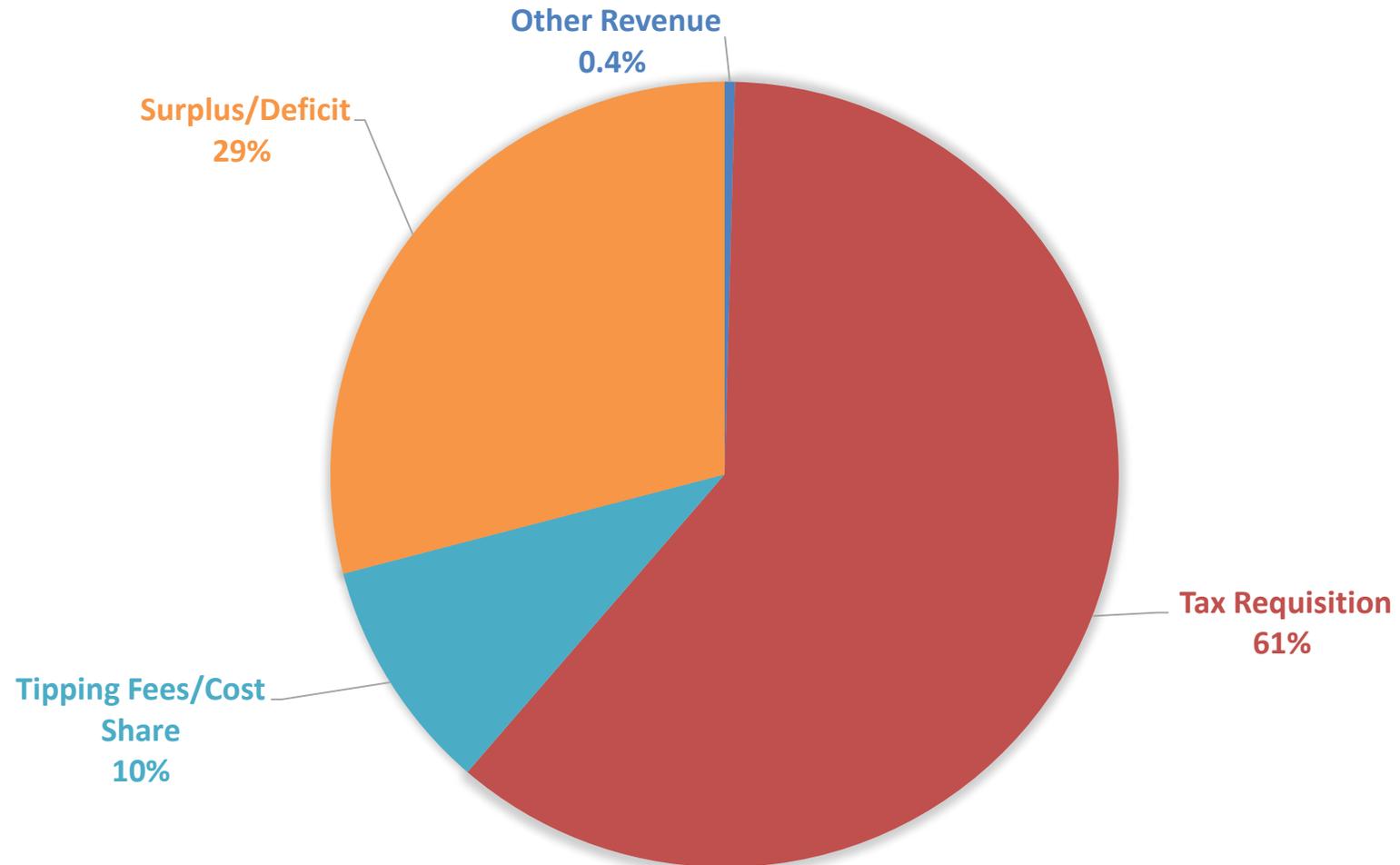
- History of borrowing to fund large capital projects (30% of costs for debt financing)
- 40% of costs for facilities maintenance/operations
- 20% of costs to provide curbside collection services



Funding Model - Hazelton and Highway 37 North Service Area

■ Revenues (2019)

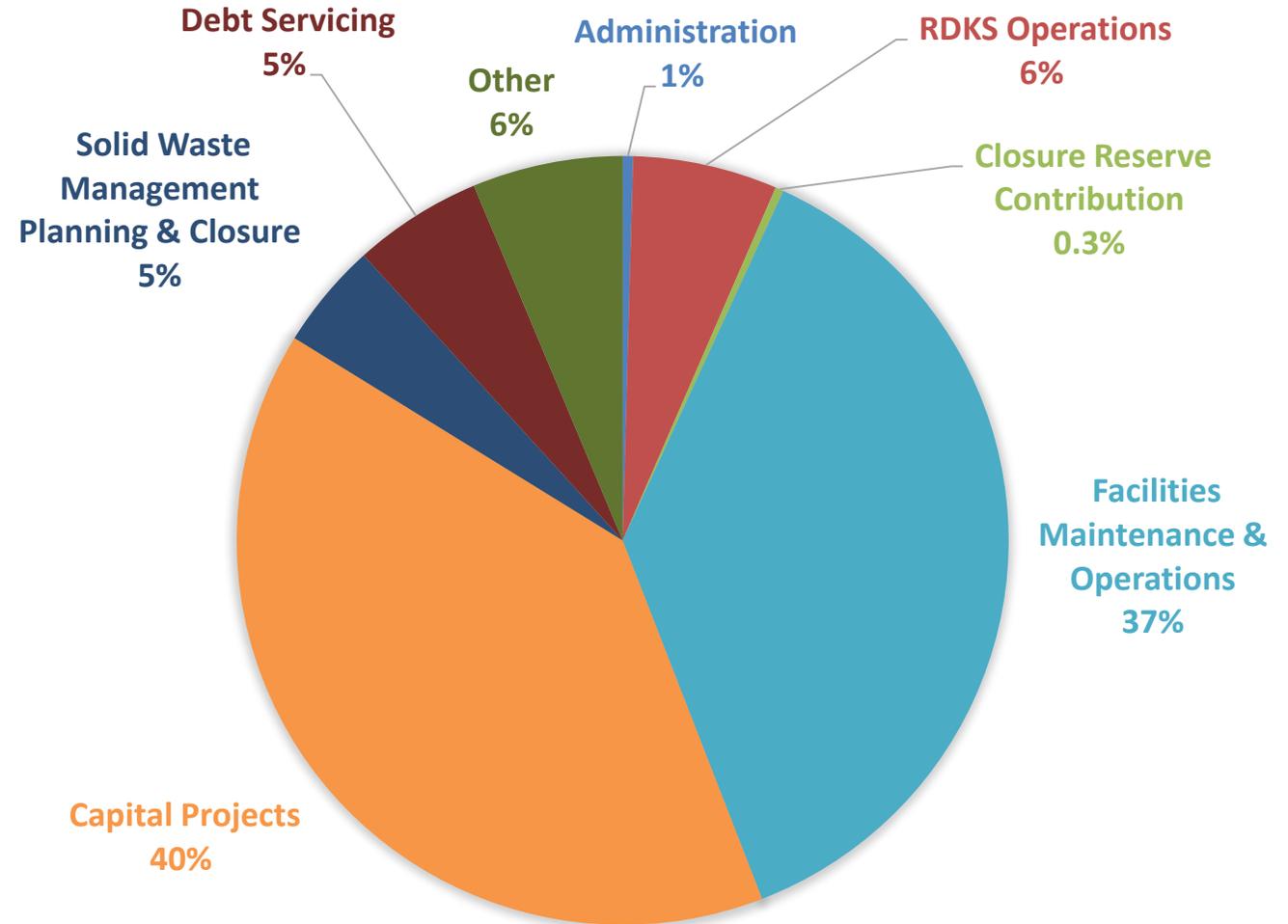
- 60% of revenue from tax requisition
- 10% of revenue from First Nation Cost Share and landfill tipping fees



Funding Model - Hazelton and Highway 37 North Service Area

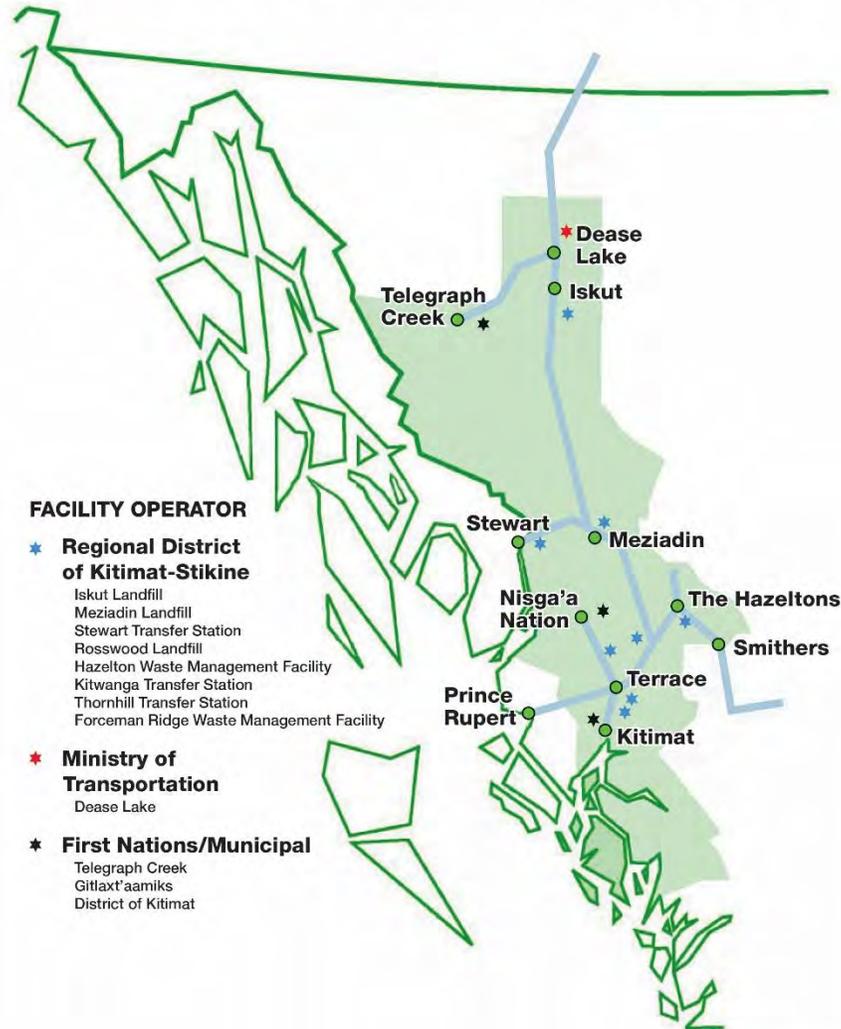
■ Costs (2019)

- 43% of costs for facilities maintenance/operations
- 40% of costs for capital projects



Solid Waste Assets and Liabilities

SOLID WASTE FACILITIES



Love this place.
Reduce your waste.

Trends Over the Next Five Years

- Terrace Service Area
 - Major capital projects complete, primarily operational costs
 - Potential to increase tipping fee revenue from ICI sources
- Hazelton and Highway 37 North Service Area
 - Approximately \$710,000 in capital projects planned in 2020
 - Significant increase in taxation to generate additional revenue (approved CoW budget 2020)



System Revenues and Costs

- Revenues

- Tipping Fees
- User Fees
- Taxation
- Financial incentives from stewardship organizations (e.g. Recycle BC)

- Costs

- Facility operating costs
- Capital costs
- Admin and overhead costs
- Debt servicing costs

Short and Long Term Risks

- Revenues

- Reduced tipping fee revenue due to increased waste diversion
- Waste leakage (illegal dumping and/or waste leaving RDKS due to increased tipping fees)
- Uncertain markets for recyclables

- Costs

- Increased facility operating costs
- Uncertainty related landfill closure and expansion – timing and costs
- Uncertain markets for recyclables

- Other?

Proposed Guiding Financial Principles

- Long term financial sustainability
- Take advantage of economies of scale, where possible.
- Provide good and equal level of service
- Other?

Cost Recovery Strategies

- Strategy 1 – Reduce costs and improve operational efficiencies
- Strategy 2 – Generate additional revenues
- Strategy 3 – Cost sharing between service areas
- Strategy 4 – Expand service area



Cost Recovery Strategies

Strategy 1: Reduce costs and improve operational efficiencies

- Assess waste hauling and recyclable processing costs
 - \$/tonne, \$/haul?
 - Review hauling frequency
 - Co-haul and backhaul options
 - Bail or compact loads
 - New agreements with stewards
- Review facility operations and service agreements
 - Operating hours (align or modify hours)
 - Maximize equipment use and productivity
 - Staff resource allocation
 - New agreements with stewards
- Review service delivery model – RDKS vs. Contracted Operations

Cost Recovery Strategies

Strategy 2: Generate Additional Revenue

- Enforcement of bylaws, fines or surcharges
- Review surcharges for out of region waste and waste from industry
- Review current tipping fee structure in Terrace Service Area (regular MSW, contaminated soil, etc.)
- Assess potential tipping fees from Hazelton and Highway 37 North Service Area
- Raise tariffs (tax requisition) to keep pace with inflation
- Accept waste from outside the RDKS (to increase tipping fee revenue)

Cost Recovery Strategies

Strategy 3: Cost and Revenue Sharing between Service Areas

- Redirect waste to other service areas (ex. industrial waste to Hazelton and/or Meziadin landfills instead of Forceman Ridge Waste Management Facility)
- Amend current bylaws to allow cost sharing and revenue sharing.

Cost Recovery Strategies

Strategy 4: Expand Service Area

- Assess the financial implications of including District of Kitimat in the Terrace Service Area
- Assess the financial implications of including Dease Lake landfill in Hazelton & Highway 37 North Service Area

Discussion

- Which ones are the most realistic strategies with benefits for all parties?
- What are the main benefits and costs with each one?
- What is an acceptable level of service?

Next Steps - PTAC

- Select preferred cost recovery strategies for additional analysis
- PTAC to consider options for:
 - Recycling (Feb 11)
 - Residual waste management at existing facilities (March 10)
 - New service areas and Cost Recovery Options (April 7)
- PTAC to determine Preferred Options to include in the draft SWMP for Board approval and public consultation (May 5)

Next Steps - FWG

- Today select preferred cost recovery strategies for additional analysis
- February: Provide additional information to help MH prepare cost recovery strategies memo (draft due mid March)
- Potential teleconference in early march to discuss memo content

Questions? Comments?

Thank you

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Eva Robertsson
Environmental Engineer
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MORRISON HERSHFIELD



Minutes of the Financial Working Group (FWG) meeting held Tuesday February 11, 2020 in the Regional District of Kitimat-Stikine (RDKS) Board Room, 1st Floor–4545 Lazelle Avenue, Terrace, B.C, commenced at 1:01 p.m.

Members Present:

Yvonne Koerner, Chair	Chief Financial Officer, RDKS
Lori Greenlaw	Director of Finance, City of Terrace
Joe Almeida	Deputy Director of Finance, District of Kitimat
Lina Gasser	Chief Administrative Officer, Village of Hazelton
Tammy McKeown	Chief Administrative Officer, District of Stewart
Maggie Dennis	Band Manager, Iskut Band

Staff Present:

Steve Prouse	Acting Manager, Works & Services, RDKS
Megan Haley	Solid Waste Manager, RDKS
Erin Blaney	Acting Environmental Services Coordinator, RDKS
Mary Tress	Intern Environmental Services Assistant, RDKS
Linda Ferretti	Recording Secretary, RDKS

Members Absent:

Doris Fraser	Haisla Nation Council
Alex Stevens	Chief Financial Officer, Laxgalts'ap Nisga'a Village Council

CALL TO ORDER:

Chair Koerner called the meeting to order.

AMENDMENTS TO AGENDA:

No Amendments to the Agenda.

APPROVAL OF AGENDA:

The February 11, 2020 Financial Working Group Agenda was accepted as presented.

DELEGATIONS & GUESTS:

Curtis Jung, Solid Waste Engineer
Eva Robertsson, Environmental Engineer
Morrison Hershfield. Waste Management Consultant

The consultants gave an overview of the solid waste management plan review process; RDKS solid waste service funding models; Trends, short and long-term challenges; Guiding Financial Principles; and Cost recovery strategies.

Next steps – identify preferred options for further assessment



ADOPTION OF MINUTES:

CORRESPONDENCE:

REPORTS:

Consensus was that the report from RDKS Administration, dated February 7, 2020, regarding Financial Working Group Terms of Reference, be received and that the Financial Working Group recommend the Terms of Reference for approval by the Regional District of Kitimat-Stikine.

ADJOURNMENT:

The meeting adjourned at 2:53 p.m.

NEXT MEETING DATE: March 10, 2020 @ 12:00 p.m. via conference call.



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Reduce your waste.



Regional District of
Kitimat-Stikine

Meeting of the Financial Working Group (FWG) to be held electronically via Microsoft Teams, May 13, 2020, to commence at 1:00 PM.

AGENDA

Page

A. CALL TO ORDER:

B. AMENDMENTS TO THE AGENDA:

C. APPROVAL OF AGENDA:

D. DELEGATIONS & GUESTS:

1. Curtis Jung, Solid Waste Engineer
Eva Robertsson, Environmental Engineer
Morrison Hershfield, Waste Management Consultant 3 - 17
 - Introduction
 - Recap
 - Guiding Financial Principles
 - Two Service Areas
 - Cost Recovery Strategies
 - Discussion
 - Next Steps

E. ADOPTION OF MINUTES:

1. Minutes of the February 11, 2020 Meeting of the Financial Working Group. 18 - 19

F. CORRESPONDENCE:

G. REPORTS:

1. Report from RDKS Administration, dated May 7, 2020, re: Feedback on Cost Recovery Options for the Solid Waste Management Plan. 20 - 39

H. ADJOURNMENT:

NEXT MEETING DATE: TBD



Cost Recovery Options for Inclusion in the Draft Solid Waste Management Plan

FWG Meeting 2 – May 13, 2020



Regional District of
Kitimat-Stikine



Outline

- Introduction
- Recap
- Guiding Financial Principles
- Two Service Areas
- Cost Recovery Strategies
- Discussion
- Next steps

Introduction

Meeting & FWG purpose

- Present an overview of the strategies and options developed guided by the outcome of the FWG meeting in February
- Provide an opportunity to share feedback on the content of presented in the memo and to express your organizations' interests or concerns in its context



Recap

FWG Meeting on February 11, 2020

- Overview of the cost recovery models in the two RDKS service areas
- Trends, short- and long-term challenges
- Guiding Financial Principles
- Cost recovery strategies
- Discussion and feedback



Guiding Financial Principles

Long-term financial sustainability

Take advantage of economies of scale, where possible

Provide good and equal level of service

Provide equitable service to all residents in the same service area

Improve operating efficiencies of current solid waste management services and facilities



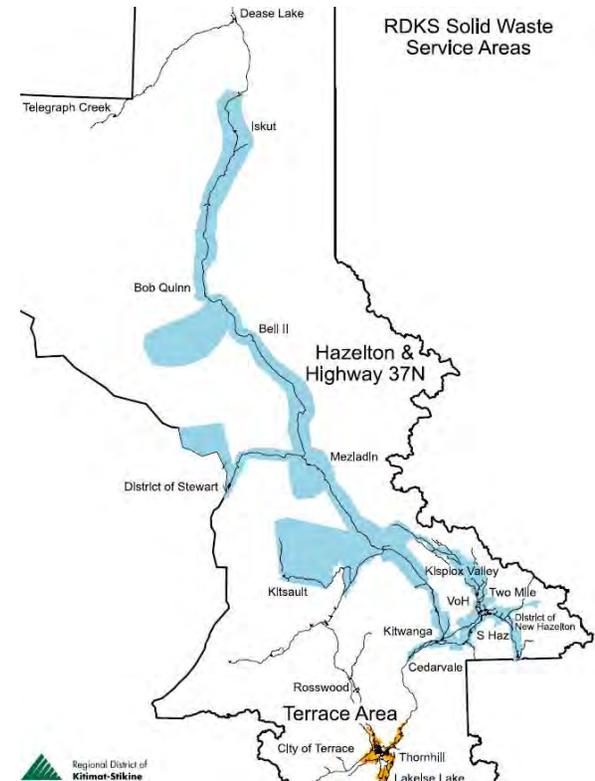
Two Service Areas

Terrace Service Area

- Funded by tipping fees, user fees and tax requisition
- Operating on a surplus
- 3 facilities
 - Forceman Ridge Waste Management Facility
 - Thornhill Transfer Station
 - Rosswood Landfill

Hazelton & Highway 37 North Service Area

- Mainly funded by tax requisition
- Operating on a deficit
- 5 facilities + cost-sharing
 - Kitwanga and Stewart Transfer Stations
 - Hazelton WMF
 - Meziadin and Iskut Landfills
 - Cost-sharing for use of New Aiyansh Landfill and Telegraph Creek TS



Cost Recovery Strategies

- Strategy 1 – Review cost recovery model within the service areas to provide fair cost sharing (added)
- Strategy 2 – Reduce cost
- Strategy 3 – Increase revenue
- Strategy 4 – Direct or indirect cost sharing between service areas
- Strategy 5 – Expand service area



Cost Recovery Strategies

Strategy 1: Review cost recovery model within the service areas to provide fair cost sharing

- A. Develop KPIs to assist in evaluation of the current cost recovery models between service areas based a common factor (such as per capita or household). Adjust cost recovery models to facilitate a continued service delivery fair to all residents and businesses.
- B. Include messaging around waste management cost in RDKS's public education efforts.



Cost Recovery Strategies

Strategy 2: Reduce cost

- A. Complete detailed hauling analysis to assess the feasibility of alternative co-hauling and back-hauling options.
- B. Perform a cost-benefit analysis of baling and/or compacting recyclable materials hauled from the Hazelton and Highway 37 North Service Area.
- C. Regularly revisit agreements and operating procedures to explore options to reduce cost while maintaining level and quality of service.
- D. Develop long-term goals and strategies, including potential investment, with the purpose of reducing cost in the long term.
- E. Complete operational reviews for each facility, which would include a review of staffing, past operating performance, primary operating costs, and identification of areas for improvement.



Cost Recovery Strategies

Strategy 3: Increase revenue

- A. Regularly review and update the current cost model for the landfill at Forceman Ridge WMF, and adjust tipping fees for industrial and out-of-service-area waste as needed.
- B. Assess the costs and benefits of introducing a “user-pay” cost recovery model in the Hazelton and Highway 37 North Service Area by introducing tipping fees and adjust tax requisition based on new tipping fee structure. Implement a “user-pay” cost recovery model if deemed beneficial to residents, businesses and the RDKS while following the Guiding Financial Principals.



Cost Recovery Strategies

Strategy 4: Direct or indirect cost sharing between service areas

- A. Review feasibility of amending bylaws to combine service areas to allow for direct cost and revenue sharing
- B. Assess the feasibility of redirecting industrial waste to the Hazelton WMF and/or Meziadin Landfill to allow indirect cost sharing.



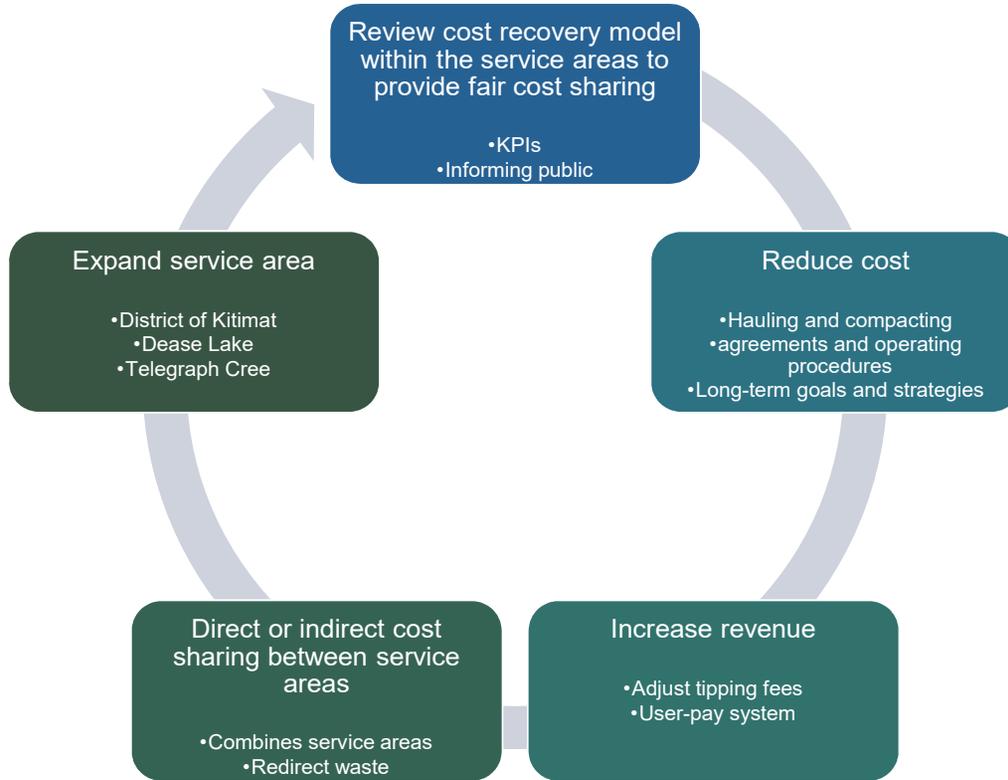
Cost Recovery Strategies

Strategy 5: Expand service area

- A. Assess the financial implications of District of Kitimat participating in the Terrace Service Area. The SWMP could be structured to allow, but not require, the District of Kitimat to use the Forceman Ridge WMF.
- B. Assess the financial implications of including Dease Lake in the Hazelton and Highway 37 North Service Area.
- C. Assess the financial implications of including Telegraph Creek Landfill and future transfer station in the Hazelton and Highway 37 North Service Area.



Discussion



Next Steps

- FWG provide feedback to RDKS or MH by end of Friday May 15th, 2020
- PTAC to select preferred cost recovery options to include as Preferred Options (end of May)
- PTAC to determine Preferred Options to include in the draft SWMP for Board approval and public consultation (end of June)
- Board to approve options, strategies and costs included in Draft SWMP (August)
- Public Consultation (September/October – exact timing to be confirmed)
- FWG will be involved again after the public have been consulted



Thank you!

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MORRISON HERSHFIELD

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Minutes of the Financial Working Group (FWG) meeting held Tuesday February 11, 2020 in the Regional District of Kitimat-Stikine (RDKS) Board Room, 1st Floor-4545 Lazelle Avenue, Terrace, B.C, commenced at 1:01 p.m.

Members Present:

Yvonne Koerner, Chair	Chief Financial Officer, RDKS
Lori Greenlaw	Director of Finance, City of Terrace
Joe Almeida	Deputy Director of Finance, District of Kitimat
Lina Gasser	Chief Administrative Officer, Village of Hazelton
Tammy McKeown	Chief Administrative Officer, District of Stewart
Maggie Dennis	Band Manager, Iskut Band

Staff Present:

Steve Prouse	Acting Manager, Works & Services, RDKS
Megan Haley	Solid Waste Manager, RDKS
Erin Blaney	Acting Environmental Services Coordinator, RDKS
Mary Tress	Intern Environmental Services Assistant, RDKS
Linda Ferretti	Recording Secretary, RDKS

Members Absent:

Doris Fraser	Haisla Nation Council
Alex Stevens	Chief Financial Officer, Laxgalts'ap Nisga'a Village Council

CALL TO ORDER:

Chair Koerner called the meeting to order.

AMENDMENTS TO AGENDA:

No Amendments to the Agenda.

APPROVAL OF AGENDA:

The February 11, 2020 Financial Working Group Agenda was accepted as presented.

DELEGATIONS & GUESTS:

Curtis Jung, Solid Waste Engineer
Eva Robertsson, Environmental Engineer
Morrison Hershfield, Waste Management Consultant

The consultants gave an overview of the solid waste management plan review process; RDKS solid waste service funding models; Trends, short and long-term challenges; Guiding Financial Principles; and Cost recovery strategies.

Next steps – identify preferred options for further assessment



ADOPTION OF MINUTES:

CORRESPONDENCE:

REPORTS:

Consensus was that the report from RDKS Administration, dated February 7, 2020, regarding Financial Working Group Terms of Reference, be received and that the Financial Working Group recommend the Terms of Reference for approval by the Regional District of Kitimat-Stikine.

ADJOURNMENT:

The meeting adjourned at 2:53 p.m.

NEXT MEETING DATE: March 10, 2020 @ 12:00 p.m. via conference call.



To: Solid Waste Management Plan Financial Working Group (FWG)
From: Regional District of Kitimat-Stikine (RDKS) Administration
Date: May 7, 2020
Re: **Feedback on Cost Recovery Options for the Solid Waste Management Plan**

Attachments:

- (1) Memo from Morrison Hershfield dated May 7, 2020 – Options for Cost Recovery to Consider for Inclusion in the Solid Waste Management Plan

Recommendation:

The Financial Working Group provide feedback to Administration on the Strategies outlined in the Memo from Morrison Hershfield dated May 7, 2020 Re: Options for Cost Recovery to Consider for Inclusion in the Solid Waste Management Plan

Background:

The Financial Working Group (FWG) was formed to provide insight and recommendations on the financial implications and feasibility of any initiatives, projects, and programs proposed in the new Solid Waste Management Plan (SWMP).

Solid waste consultant, Morrison Hershfield, developed the attached memo “Options for Cost Recovery to Consider for Inclusion in the Solid Waste Management Plan” using information provided by the Regional District Administration and the input provided by the Financial Working Group at the previous meeting on February 11, 2020.

The purpose of this meeting is to receive feedback from the members of the FWG on the attached memo. Feedback received will be incorporated into the memo prior to presenting to the Public and Technical Advisory Committee (PTAC).

MEMORANDUM



TO: Erin Blaney, Regional District of Kitimat Stikine

FROM: Curtis Jung and
Eva Robertsson,
Morrison Hershfield

PROJECT No.: 190497600

RE: Options for Cost Recovery to Consider for Inclusion in
the Solid Waste Management Plan

DATE: May 7, 2020

\\MH.LOCAL\DATA\PROJ\2019\190497600-RDKS SOLID WASTE MANAGEMENT PLAN\08. WORKING\05 COST RECOVERY\MEM-2020-05-07-COST RECOVERY_RDKS SWMP-190487600V2.DOCX

Under the Environmental Management Act, regional districts are required to have a solid waste management plan (SWMP), which must be developed following the solid waste management planning guidelines provided by the Ministry of Environment and Climate Change Strategy (the Ministry) for content and process.

The Regional District of Kitimat Stikine (RDKS) is in the process of developing a new SWMP. The planning process was initiated in 2017 and steps 1 and 2 of the planning process were completed in 2018, resulting in the formation of the Public and Technical Advisory Committee (PTAC), assessment of the current system, development of the consultation plan and development of six technical memos covering specific topics. In November 2019, Morrison Hershfield (MH) was commissioned to provide consulting support to continue developing the SWMP for the RDKS.

This is Morrison Hershfield's last technical memo in a series of five, each presenting potential management options on key solid waste related topics:

- Summary of Reduce and Reuse
- Recycling and Composting
- Residual Waste Management at Existing Facilities
- New Facilities and Service Areas for RDKS
- **Cost Recovery**

The content of each memo will be presented to the PTAC. The feedback on these memos will be considered as MH develops a final memo outlining Preferred Options to be included in the new draft SWMP, which will be brought to the public for consultation.

This memo provides context with respect to the current RDKS solid waste management cost recovery model and highlights current key challenges and opportunities that should be considered. The memo outlines a number of potential strategies and options the RDKS may want to pursue to improve cost recovery and maintain financial sustainability.

CONTEXT

The RDKS consists of two solid waste management Service Areas: Terrace Service Area and Hazelton and Highway 37 North Service Area. The two Service Areas were established in July 2015 under Bylaws 657¹ and 658². The service areas are financed separately under these bylaws and the cost recovery is outlined in Section 4 of each bylaw. Cost and revenue sharing is currently not possible

¹ Kitimat-Stikine Hazelton and Stewart Area Solid Waste and Recyclable Material Management Service Establishment Bylaw No. 657, 2015.

² Kitimat-Stikine Terrace Service Area Solid Waste and Recyclable Management Service Establishment Bylaw No. 658, 2015.

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between the two distinct service areas under current bylaws as per the Local Government Act (*Part 11, Division 2, Items 378-380*).

The RDKS' solid waste management system has undergone some major changes over the past few years, including the construction of a new landfill, the expansion of another with significant upgrades, and the construction of three new transfer stations, two with integrated recycling depots. Additional changes include the closure of four landfills—two RDKS-owned and two owned by member municipalities. These upgrades have required significant capital investments. The upgrades and added services have also resulted in increased and difficult-to-predict operational costs in both service areas.

The Terrace service area is currently operated with a surplus; however, the Hazelton and Hwy 37 North service area is experiencing higher than expected capital and operating costs and an annual deficit.

Morrison Hershfield representatives Curtis Jung and Eva Robertsson met with the Financial Working Group (FWG) on February 11, 2020, to discuss the current cost recovery models and the member communities' ideas, concerns and observations. The FWG is made up of financial representatives from member municipalities and First Nations within the RDKS. The initial meeting was aimed at guiding the development of this memo and development of the cost recovery strategies and options to be considered for inclusion in the SWMP.

This memo summarizes our review of options for enhancing and improving the current cost recovery models directed by the five Guiding Financial Principals developed in collaboration with the RDKS and the FWG. These five principals are:

1. Long-term financial sustainability
2. Take advantage of economies of scale, where possible
3. Provide good and equal level of service
4. Provide equitable service to all residents in the same service area
5. Improve operating efficiencies of current solid waste management services and facilities

The following sections provide an overview of the current cost recovery models and their associated challenges.

CURRENT COST RECOVERY MODELS AND CHALLENGES FACED

The two RDKS Service Areas have different cost recovery models tailored to each area. The details of the cost recovery models are outlined in Bylaws 657 and 658.

Terrace Service Area

The cost recovery model in the Terrace Service Area was originally established with the intent of covering 50% of the annual operating costs through tipping fee revenues and the balance through property taxes. The tax portion is calculated based on population and the value of improvements³ in the City of Terrace, Electoral Area C and Electoral Area E, and a population-based contribution from the Kitselas and Kitsumkalum on-reserve communities.

³ "improvements" means any building, fixture, structure or similar thing constructed or placed on or in land, or water over land, or on or in another improvement..." BC Assessment Act, [RSBC 1996] CHAPTER 20



In 2017, the RDKS found that significantly less waste than expected was brought to the Thornhill Transfer Station and the Forceman Ridge Waste Management Facility. This resulted in a revenue shortfall, which was partially offset by the structure of the contract with Bear Creek Group; the landfill operations contractor. The financial status of the Terrace Service Area has since changed and is now operating with a surplus, mainly due to the acceptance of soil and refuse from industry. Additional revenue streams in the Terrace Service Area are from curbside collection fees (service provided in the Greater Terrace Area and electoral areas) and First Nation cost-sharing revenue.

Approximately 31% of the annual operating costs were covered by taxes in 2019, 53% by tipping fees and other user fees, and 16% by surplus from the previous year. The industrial waste and soil accepted at the Forceman Ridge Waste Management Facility (WMF) contributed to almost \$700,000 in revenues, representing about half of the tipping fees collected in the Terrace Service Area in 2019.

Hazelton and Highway 37 North Service Area

The cost recovery model in Hazelton and Highway 37 North Service Area is almost exclusively funded by taxes and cost-sharing with First Nations. No tipping fees are charged on garbage from residential and commercial sources⁴ originating from within the Service Area. Waste accepted from outside the Service Area is charged a tipping fee with a 25% surcharge as outlined in Bylaw 688. The solid waste services in the Service Area are funded by taxes from incorporated and electoral areas, calculated based on population and the value of improvement in each community, and population-based contributions from First Nations.

The Hazelton and Highway 37 North Service Area has experienced higher than anticipated operating costs, particularly maintenance at the Hazelton WMF and the Iskut Landfill, since the service area was established. The Service Area is currently operating at a deficit. In January 2020, the RDKS Board voted to increase the tax requisition in the Service Area significantly to cover operating expenses and eliminate deficit in 5 years. The First Nations population-based contributions are also to increase.

The current financial status of the two Service Areas, associated challenges and other relevant information are summarized in Table 1 below.

Table 1. Summary of the financial status of the two RDKS service areas, the associated challenges and the additional information relevant to the respective cost recovery models.

	Terrace Service Area	Hazelton & Highway 37 North Service Area
Estimated Population	20,000	8,000
Annual surplus/deficit	Currently operating on an annual surplus.	Currently operating on an annual deficit.
Loan situation	Significant loan for capital projects with a 25 year financing period.	Small loan for capital projects compared to that for the Terrace Service Area. The tax requisition is not covering the loan repayments.

⁴ Tipping fees are currently charged on asbestos, contaminated soils and waste from industrial sites.



	Terrace Service Area	Hazelton & Highway 37 North Service Area
Cost recovery model	Funded by tipping fees, user fees and tax requisition.	Almost exclusively funded by tax requisition and population-based contributions. Strong opposition to tipping fee from community.
Out-of-service-area waste	Significant revenue stream from material (mainly soil) accepted from out-of-service-area charged a 25% surcharge.	Limited waste from out-of-service-area, mostly received at Meziadin Landfill from mining camps.
Other considerations	It took 15 years to decide on the site for Forceman Ridge WMF. The replacement value and the value of airspace at the landfill, is therefore high.	Smaller facilities, smaller population and larger distances compared to the Terrace Service Area results in higher operating costs and higher cost per system user and tonne of waste managed.

The following sections introduce five potential strategies for improving the current cost recovery models, which were developed to align with the established Financial Guiding Principles.

STRATEGY 1. REVIEW COST RECOVERY MODEL WITHIN THE SERVICE AREAS TO PROVIDE FAIR COST SHARING

Over the past five years, facility operating costs in both Service Areas have increased substantially. As shown in Figure 1 below, annual facility operating costs in the Terrace Service Area have increased from approximately \$574,000 in 2016 to \$1,239,000 in 2019. This significant cost increase is attributed to the commissioning of the Thornhill Transfer Station and Forceman Ridge Waste Management Facility, which opened at the end of 2016 and in the beginning of 2017, respectively. Annual facility operating costs in the Hazelton and Highway 37 North Service Area remained relatively consistent from 2016 to 2018, at approximately \$1,400,000 but increased significantly in 2019 up to \$1,800,000 as new facilities were completed and opened. The increase in the last year is mainly related to operations of the Stewart Transfer Station, Kitwanga Transfer Station, and Hazelton Waste Management Facility.

Table 2 below summarizes the facility maintenance and operations costs included for both service areas (as presented in Figure 1, Figure 2, and Figure 3).

Table 2. Facilities included in annual operating costs for each Service Area.

Terrace Service Area	Hazelton and Highway 37 North Service Area
<ul style="list-style-type: none"> ▪ Thornhill Transfer Station ▪ Forceman Ridge Waste Management Facility ▪ Rosswood Landfill ▪ Thornhill Landfill (closed) 	<ul style="list-style-type: none"> ▪ Hazelton Waste Management Facility ▪ Iskut Landfill ▪ Kitwanga Landfill (closed) ▪ Meziadin Landfill ▪ Kitwanga Transfer Station ▪ Stewart Transfer Station (2018 and 2019) ▪ Stewart Landfill (closed, contributions in 2018, 2019)



Figure 1 presents the annual facility maintenance and operating costs for the two service areas.

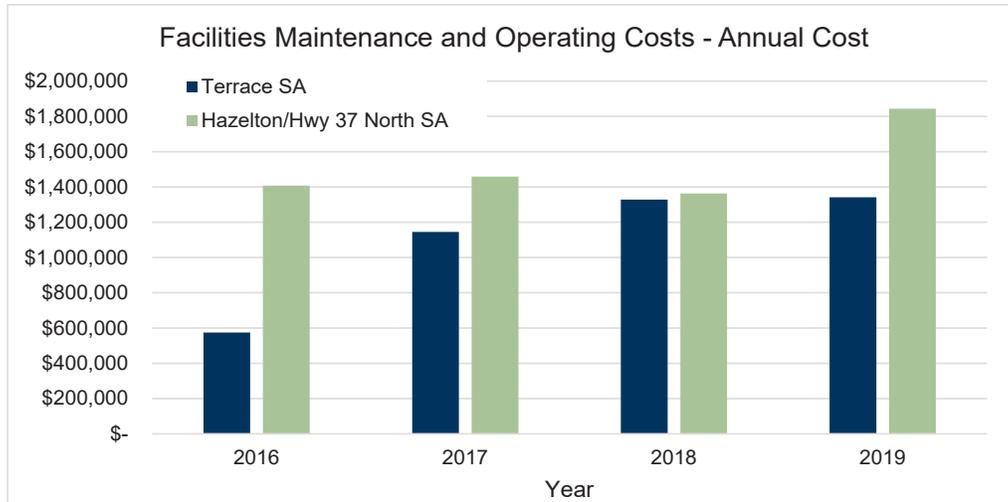


Figure 1. Annual Facility Maintenance and Operating Costs for Service Areas over last four years.

Figure 2 presents the annual facility maintenance and operating costs for the two service areas on a per-capita basis. For the purposes of this analysis, the populations of both service areas were assumed to be constant from 2016 to 2019, with the exception of the 2019 Hazelton and Highway 37 North Service Area population as the District of Stewart was added to the Service Area. The assumed population of the Terrace Service Area is 20,000 and the assumed population of the Hazelton and Highway 37 North Service Area is 8,000 (8,400 in 2019).

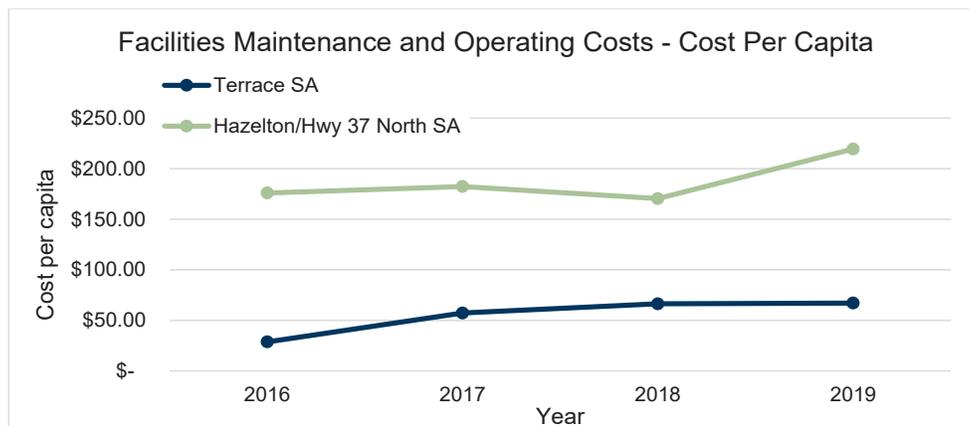


Figure 2. Facilities maintenance and operating costs for the Terrace and Hazelton and Highway 37 North Service Areas, presented as cost per capita.

As shown in Figure 2, the cost per capita to operate the solid waste facilities in the Hazelton and Highway 37 North Service Area is about three to four times higher than the cost of operating the facilities in the Terrace Service Area. The significantly higher per-capita facility operating costs are due to the substantially smaller population base, the greater number of solid waste facilities, and the greater distance between facilities in the Hazelton and Highway 37 North Service Area.



Figure 3 below shows the facility operating costs on a per-tonne basis. The total annual facility operating costs for all facilities in each service area (as summarized in Table 2) are divided by the total tonnes of garbage disposed at all landfills in the service area. In the Terrace Service Area, the primary disposal facility is the Forceman Ridge Landfill, but the tonnages also include waste disposed at the Rosswood Landfill. In the Hazelton and Highway 37 North Service Area, the primary disposal facilities are the landfill at Hazelton WMF and Meziadin Landfill. The other disposal facility owned and funded by the RDKS is the Iskut Landfill. Waste is transferred from the Kitwanga Transfer Station to Hazelton WMF and, as of 2019, from the Stewart Transfer Station to Meziadin Landfill.



Figure 3. Total facility operating cost per tonne garbage landfilled in both Service Areas.

Disposal data for the Terrace Service Area is available from 2017 to 2019 (scale records from the Thornhill Transfer Station and Forceman Ridge Landfill and assumed disposal tonnages at the Rosswood Landfill). None of the facilities in the Hazelton and Highway 37 North Service Area is equipped with a weigh scale and the disposal is therefore estimated based on accepted volumes. Estimated tonnages are available for 2017⁵ and 2018⁶. For the purpose of this report, MH estimates the 2019 tonnages based on the 2017 and 2018 average for the Service Area, plus estimated tonnages of the waste transferred from the District of Stewart. The data in Figure 3 indicates that the per-tonne facility operating costs in the Hazelton and Highway 37 North Service Area may be more than double the per-tonne costs in the Terrace Service Area. The decreasing per-tonne disposal cost in the Terrace Service Area since 2017 is primarily due to the increase in landfilled waste from industrial and commercial sources. The Hazelton and Highway 37 North Service Area does not have the same access to funding through disposal of industrial waste at this time. The increased per-tonne disposal cost seen for the Hazelton and Highway 37 North Service Area between 2018 and 2019 is mainly the result of the costs related to the Stewart Transfer Station.

As discussed above, the two Service Areas have different funding models. The funding models and formula used to calculate the cost to residents through taxes or population-based contributions were established in 2015, prior to the completion of the major capital investments and service changes in the regional district. The RDKS may want to review the long-term sustainability of the cost recovery

⁵ Background Information and Assessment of the Current Solid Waste System – 2018 Update, Rev. 1.1, January 4, 2019, RDKS

⁶ Annual Reports for Hazelton WMF, Meziadin Landfill, and Iskut Landfill.



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models, considering it has been five years since the two Service Areas were formed and operating costs have increased substantially since that time.

The objective of the cost recovery model is to generate sufficient revenue to cover all costs associated with the solid waste service (including garbage, recycling, and organics collection, processing, and disposal) while providing an acceptable level of service to residents in both Service Areas.

Two of the Guiding Financial Principles aim to provide an equal service level to residents in each Service Area. The cost recovery model for both Service Areas should consider the following key questions:

- How much does a resident pay for solid waste services?
 - Total cost to the resident for provision of solid waste services (via tax requisition, tipping fees, and/or a combination of both) by both the RDKS and municipal provided services (such as curbside collection). This may also include review of the cost share agreements in place for First Nations communities.
- What level of service is provided to the resident?
 - Consider both RDKS and municipal programs in place to collect, process, and dispose of garbage, recyclables, and organics.
 - Consider the collection programs in place and the proximity of drop-off facilities if curbside collection programs do not exist.

MH recommends that the RDKS develop a number of key performance indicators (KPIs) considering cost per capita, household or business, and cost per tonne of waste generated or disposed. The KPIs will assist with evaluating the current cost recovery models against the Guiding Financial Principles outlined in the Context section above. KPIs normalize costs to a common denominator (such as per capita or household), which allows for a standard comparison of costs between service areas. Using normalized KPIs is particularly important when comparing costs between two different service areas with significantly different populations.

There may not be a clear understanding of the high cost of waste management among residents and business owners. There may, for example, be a perception that recyclables are creating a resource and revenue stream for the RDKS, which is not the case, especially for the Hazelton and Highway 37 North Service Area due to high transportation costs and unfavorable market conditions for recyclable materials. The RDKS may want to include messaging around waste management costs in their public education efforts. The financial messaging could be communicated in the context of reuse and waste reduction activities.

Possible options to incorporate in the SWMP include:

- 1A. Develop KPIs to assist in evaluation of the current cost recovery models between service areas based a common factor (such as per capita or household). Adjust cost recovery models to facilitate a continued service delivery fair to all residents and businesses.
- 1B. Include messaging around waste management cost in RDKS's public education efforts.



STRATEGY 2. REDUCE COST

Directing efforts to reduce cost is a natural way to balance the budgets. Cost reductions can sometimes be found through improved operating efficiencies. Cost saving efforts should be considered in conjunction with potential impacts to levels of service or quality provided. All cost saving efforts should aim to avoid compromising the existing service levels being provided to residents.

The Hazelton and Highway 37 North Service Area is currently operating on a deficit, mainly due to high transportation costs, higher than expected operating costs, hauling distances, and the limited market for recyclable materials. The RDKS may want to assess current hauling cost between facilities and explore options for cost savings. Co-haul and back-haul options, baling or compacting loads, and new agreements with stewards are strategies that may reduce hauling costs. Co-hauling can be done within the RDKS or in collaboration with the private industry. Depending on data availability, hauling costs should be assessed for each waste stream (primarily garbage and recyclables) and should be normalized to allow comparison between costs (cost per haul and/or cost per tonne hauled material). The objective of a detailed hauling analysis is to identify haul routes and waste streams presenting the greatest opportunities to reduce costs and improve efficiencies.

As an example, the Yukon Government has been assessing options to reduce its high transportation costs for recyclables within the Territory by co-hauling the Yukon Liquor Corporation.

The RDKS is currently using back-haul⁷ for transporting recyclable material from the Hazelton and Highway 37 North Service Area to the processor in Terrace. The resulting cost per tonne of material hauled is considerably high⁸, and the RDKS may want to revisit the current hauling agreements. The Iskut Band has recently purchased a hauling company and owns a hauling truck. The band manager has expressed an interest in assessing opportunities to collaborate with the RDKS to increase efficiencies and reduce the cost to both parties.

The RDKS is currently paying a scaled fee to haul cardboard and paper products from the Hazelton and Highway 37 North Service Area to Terrace. The fee varies between \$48 and \$64 per mega bag depending on the number of bags hauled. The RDKS may want to consider baling or compacting selected materials, as this would increase hauling capacity while reducing the space required for material storage.

The RDKS is currently communicating with Recycle BC and other stewards with the aim of increasing the number of service agreements, as discussed in the previous memo on recycling and organics diversion⁹. Agreements with stewards would offset some of the costs associated with collection, storage, management and hauling of the recyclable products and materials.

The RDKS may also want to assess current facility operations with the aim of improving efficiencies and exploring cost saving alternatives. This could include reassessing the operating hours of selected facilities, the use of RDKS equipment, and the allocation of staffing to specific tasks. It is unlikely for cost savings to be found in the current operating contracts, considering the competitive labour market in the region.

The RDKS may want to explore the opportunity of performing all or some tasks in-house using RDKS staff members (currently contracted), as discussed in Strategy 9 presented in the MH memo on residual

⁷ The use of a commercial hauling truck otherwise returning empty after goods have been delivered. The primary delivery is goods, not waste materials.

⁸ Recycling Options to Consider for Inclusion in the Solid Waste Management Plan (MH, February 2020)



waste management at existing RDKS facilities⁹. Moving some of the operation in-house may reduce cost through:

- Sharing of staff and equipment resources between waste management facilities
- Greater control over operational efficiencies and staff messaging to site users
- Improved efficiencies and the elimination of RDKS staff hours required to provide operator support and oversight

Cost reduction strategies and options presented in previous memos are listed in Table 3. The presented options are not included under this Strategy - Reduce Cost, as these options already are covered under other strategies.

Additional cost saving initiatives include long-term investments such as increased public education, outreach, and engagement programs developed with the aim to increase diversion and bylaw adherence with the goal of reduced need for oversight and sustainable use of facilities and services.

Table 3. Cost reduction strategies and options presented in previous memos and selected by the Public Technical Advisory Committee to be included in the Preferred Options.

Recycling Options to Consider for Inclusion in the Solid Waste Management Plan (MH, February 2020)

STRATEGY 4. Reduce Recycling Costs

- 4A. Maximize partnership opportunities with stewardship organizations, such as for residential recycling at the Kitwanga Transfer Station and curbside collection in the Greater Terrace Area.
- 4B. Undertake an efficiency review of the management of recyclables within the region.
- 4C. Pursue composting of paper products at locations where deemed feasible.
- 4D. Set cost threshold when alternative lower cost options (e.g. composting, burning or landfilling) are pursued until recycling is no longer cost prohibitive.

STRATEGY 9. Amend Solid Waste Bylaw to Encourage Waste Diversion

- 9D. Adjust the current fee schedule to allow agreements with stewards such as MARR.

Options for Residual Waste Management at Existing Facilities to Consider for Inclusion in the Solid Waste Management Plan (MH, March 2020)

STRATEGY 5. Close Selected Small Landfills and Replace with Transfer Stations

- 5A. Assess cost/benefit of closing Roswood and Iskut landfills by determining community need for transfer stations, and implement if deemed feasible.
- 5B. Consider options to continue to operate the Iskut Landfill for demolition and land clearing waste.

STRATEGY 6. Effectively Use Landfill Airspace *(indirect cost savings through efficient use of airspace)*

- 6A. Enforce existing bylaws to control the waste disposed and minimize unnecessary airspace consumption.

⁹ Residual Waste Management at Existing Facilities to Consider for Inclusion in the Solid Waste Management Plan (MH, March 2020).



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- 6B. Review the landfill operations, including the use of operational soil and alternative daily covers and waste placement and compaction. Based on findings, consider providing, recommending or requiring additional contractor training to improve operations.

STRATEGY 9. Deliver Operational Services In-House

- 9A. Assess the cost-benefit of using contractor vs. in-house staff to operate RDKS facilities, and transition to in-house service if determined to be beneficial.

Additional possible options to incorporate in the SWMP include:

- 2A. Complete detailed hauling analysis to assess the feasibility of alternative co-hauling and back-hauling options.
- 2B. Perform a cost-benefit analysis of baling and/or compacting recyclable materials hauled from the Hazelton and Highway 37 North Service Area.
- 2C. Regularly revisit agreements and operating procedures to explore options to reduce cost while maintaining level and quality of service.
- 2D. Develop long-term goals and strategies, including potential investment, with the purpose of reducing cost in the long term.
- 2E. Complete operational reviews for each facility, which would include a review of staffing, past operating performance, primary operating costs, and identification of areas for improvement.

STRATEGY 3. INCREASE REVENUE

The RDKS's main revenue sources include requisition through taxation, cost-sharing agreements with First Nation communities, tipping fees, and curbside collection fees. These revenue sources are aimed at covering the solid waste management operations, whereas loans and grants are used to pay for capital projects. Figure 4 illustrates the distribution of the operational revenue streams in 2019 in the Terrace and Hazelton and Highway 37 North Service Areas. Though both service areas experienced a surplus in 2018, the Terrace Service Area is estimated to have a surplus of \$1,128,000 at the end of 2019, whereas the Hazelton and Highway 37 North Service Area is estimated to have a deficit of \$1,224,000.



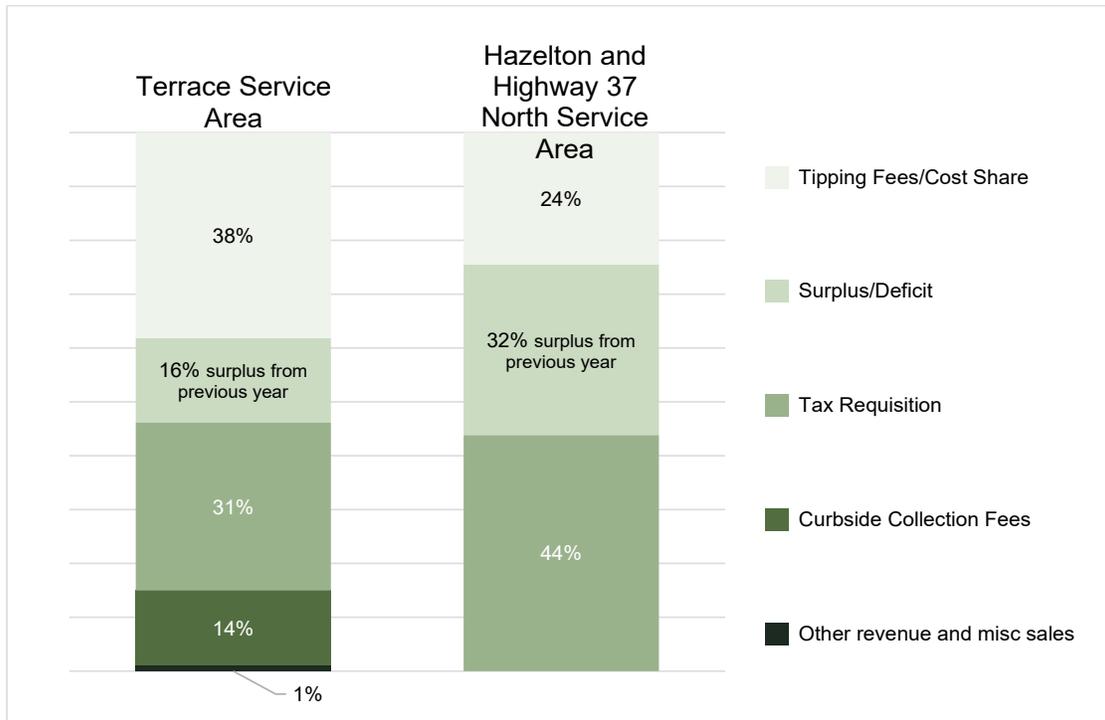


Figure 4. Distribution of revenue streams for each of the RDKS service areas Terrace Service Area and Hazelton and Highway 37 North Service Area in 2019.

Hazelton and Highway 37 North Service Area

The RDKS Board has voted to increase tax requisition to recover the 2019 deficit (and future anticipated deficits) over the next 5 years. Additional efforts to increase revenue, particularly for the Hazelton and Highway 37 North Service Area, should be considered to reduce the cost burden on residents and businesses.

Tipping fees have historically been opposed in the Hazelton and Highway 37 North Service Area; however, consideration thereof may be warranted at this time. In 2017, it was estimated that 5,900 tonnes of waste were disposed at the Landfill at Hazelton WMF and the Meziadin Landfill. Currently, there are no tipping fees charged at either facility (with the exception of select ICI loads). Assuming a tipping fee of \$110/tonne, this represents an additional potential revenue stream of up to \$650,000.

Introducing tipping fees in the Hazelton and Highway 37 North Service Area is consistent with a user-pay service delivery model. A user-pay model is based on the principle that users (residents and commercial customers) of the service should pay an amount that is proportional to the amount of waste they dispose. A user-pay system incentivizes residents to divert more material and reduce the amount of waste disposed.

A model could be set up where each household in the service area is given a set volume or number of visits for free (or for an annual fee) each year and waste beyond that would be subject to tipping fees. The communities of the District of Stewart, Village of Hazelton, District of New Hazelton, Gitanyow, Gitwangak, Gitsegukla, Witsset, Gitanmaax, Glen Vowell, Hagwilget, and Kispiox currently receive



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curbside pickup of garbage, and residents could be provided with a set number of self-haul visits for free. Alternatively, a cash or card-based system could be established that requires any resident using the facility to pay at the facility or pre-purchase disposal credits (card or coupons) at local retailers.

There are currently no scales at any facilities in the Hazelton and Highway 37 North Service Area. Therefore, tipping fees would be collected based on volume. An appropriate volume-based tipping fee structure would need to be established that is simple enough to enforce at all facilities yet of sufficient detail to allow for fair collection of fees from various users (residents and commercial users) with various load sizes and material types. One option is to allow a set number of bags per year free of charge, with an additional large load. This could be tracked using drivers' licenses and/or resident addresses.

It is recognized that tax requisition will likely need to be adjusted if tipping fees are introduced in the Hazelton and Highway 37 North Service Area. Communications related to the implementation of tipping fees should clearly indicate that the objective is to charge residents an amount that is more proportional to the amount of waste they are disposing (user-pay system). Communications should clearly explain the total cost to residents if revenues are collected through a combination of tipping fees and tax requisition and compare the proposed costs to the total costs that residents are paying now under current tax-based cost recovery model. It is understood that residents may feel like they are paying twice if tipping fees are introduced.

Terrace Service Area

The Terrace Service Area is currently funded through a combination of tipping fees and tax requisition. The cost recovery model for the Terrace Service Area was originally established assuming approximately 50% of the revenue would be generated from tipping fees and the 50% from tax requisition. As noted above, approximately 31% of the annual operating costs were covered by taxes in 2019, 53% by tipping fees and other user fees, and 16% by surplus from the previous year.

Since the Forceman Ridge WMF started accepting waste in 2017, the amount of industrial waste and soil accepted at the facility has increased substantially. In 2019, the industrial waste and soil accepted at the facility contributed to almost \$700,000 in revenues, representing about half of the tipping fees collected in the Service Area. Under Bylaw No. 671, soil that is suitable for cover is charged a reduced rate of \$55.00/tonne, whereas contaminated soil is charged \$65-\$78/tonne, depending on the level of contamination. Industrial waste and any waste generated outside the Service Area is charged a 25% surcharge, as prescribed under the same bylaw. In 2019, 1,821 tonnes of contaminated soil was accepted from industry at the Forceman Ridge WMF. An additional 2,441 tonnes of industrial waste (refuse; demolition, land clearing, and construction waste; and asbestos) was accepted for a total of 4,262 tonnes of soil and waste from industrial sources.

MH recommends that the RDKS review the surcharge applied industrial waste, out-of-service-area waste, as well as the reduced tipping fee charged for soil material. A revised surcharge for industrial waste and reduced rate for soil should be developed with consideration to the following:

- The full cost of the landfill, including planning, design, operations, closure and post-closure costs. As a best practice, the tipping fee should be established to cover all landfill costs over its entire lifespan (including the post-closure period). By considering the full cost of the landfill, the value of the remaining available airspace can be quantified.
- The tipping point at which it is more economical for industry to dispose of waste at another facility or construct their own landfill.



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- The benefits and costs of accepting contaminated soil at a discounted tipping fee (compared to general garbage). The material management plan in the Design, Operating and Closure Plan (DOCP) for the Landfill at Forceman Ridge WMF relies on some imported material. The RDKS may want to regularly monitor the use of operational soil to ensure that appropriate waste to cover ratio is achieved at the site as discussed in the memo on existing facilities¹⁰.

Possible options to incorporate in the SWMP include:

- 3A. Regularly review and update the current cost model for the landfill at Forceman Ridge WMF, and adjust tipping fees for industrial and out-of-service-area waste as needed.
- 3B. Assess the costs and benefits of introducing a “user-pay” cost recovery model in the Hazelton and Highway 37 North Service Area by introducing tipping fees and adjust tax requisition based on new tipping fee structure. Implement a “user-pay” cost recovery model if deemed beneficial to residents, businesses and the RDKS while following the Guiding Financial Principals.

STRATEGY 4. DIRECT OR INDIRECT COST SHARING BETWEEN SERVICE AREAS

Under the current bylaws and Local Government Act, cost and revenue sharing between the two service areas is not allowed. As discussed above, the Terrace Service Area is currently operating in a surplus and the Hazelton and Highway 37 North Service area is operating in a deficit. The following two sections explore the options for direct and indirect cost and revenue sharing between the two service areas.

Direct Cost Sharing

Bylaws No. 657 and 658 were established in 2015 based on the current and projected facility operating costs and revenues at that time. As discussed above, operating costs in both service areas have increased significantly over the last five years. Tax requisition in the Hazelton and Highway 37 North Service Area has recently been increased substantially in order to cover the increasing facility operating costs.

MH recommends that the RDKS review the feasibility of amending Bylaws No. 657 and 658 to combine service areas to allow for cost and revenue sharing. A challenge for the Hazelton and Highway 37 North Service Area is poor economies of scale. There are more solid waste facilities (transfer stations and landfills) in the Hazelton and Highway 37 North Service Area, resulting in higher operating costs as compared to the Terrace Service Area, yet the population in the Hazelton and Highway 37 North Service Area is less than half of the population in the Terrace Service Area.

Similar to the RDKS, there are several regional districts in BC that are challenged with providing solid waste management services to remote communities having high per-tonne disposal costs and poor economies of scale. However, the cost recovery model in several regional districts is based on the solid waste service area, including all communities within the regional district. This allows the regional districts to distribute the revenues from larger facilities (landfills servicing populations in larger communities) to cover the costs of operating smaller facilities with lower economies of scale.

Over \$600,000, almost 40% of the tipping fees collected at Forceman Ridge WMF, were collected from industry or sources outside the Terrace Service Area in 2019. Almost \$470,000 were collected from

¹⁰ Residual Waste Management at Existing Facilities to Consider for Inclusion in the Solid Waste Management Plan (MH, March 2020).



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industry at the Forceman Ridge WMF during the first four months of 2020 alone, which suggests this revenue stream likely is to increase as industry develops in the area. The industrial waste revenue stream would potentially benefit all RDKS residents if the two service areas were joined; reducing the financial burden on the Hazelton and Highway 37 North Service Area residents and businesses while limiting the effects experienced by those in the Terrace Service Area.

Indirect Cost Sharing

The Forceman Ridge WMF receives a significant quantity of waste from industrial sources. The Meziadin Landfill is located approximately 230 km north of Terrace, and the Hazelton WMF is located approximately 150 km northeast of Terrace.

The RDKS can consider the feasibility of redirecting waste to the Hazelton and Highway 37 North disposal facilities by providing incentives to industrial users to haul directly to the Meziadin Landfill or Hazelton WMF. Incentives may include reduced tipping fees for industrial users in the Hazelton and Highway 37 North Service Area. The hauling distance from the waste generation point to the disposal facility is one of the primary factors affecting the economics of waste disposal. The other factor is the tipping fee charged at the disposal facility. The round-trip hauling time from Terrace to the Hazelton WMF or Meziadin Landfill is a barrier to redirecting waste to these facilities. Even if industrial waste haulers are incentivized to dispose at these facilities (for example, through reduced tipping fees), the economics of hauling an additional four to six hours may be too much of a financial barrier.

Possible options to incorporate in the SWMP include:

- 4A. Review feasibility of amending bylaws to combine service areas to allow for direct cost and revenue sharing
- 4B. Assess the feasibility of redirecting industrial waste to the Hazelton WMF and/or Meziadin Landfill to allow indirect cost sharing.

STRATEGY 5. EXPAND SERVICE AREA

The RDKS is currently exploring options for expanding its service areas or including new facilities. These options relate to the District of Kitimat, Dease Lake Landfill, and Telegraph Creek Landfill and transfer station and are discussed further below.

Assess the Financial Implications of District of Kitimat Participating in the Terrace Service Area

In 2019, the District of Kitimat (Kitimat) developed a Solid Waste Management Strategy and Action Plan with the objective of developing and selecting options to improve the District's diversion and disposal system. Following up on the Action Plan developed in April 2019, the District retained Maura Walker & Associates (MWA) to assist with developing a strategy and recommended actions for implementation in 2020 and beyond. Significant actions scheduled for 2020 include the preparation of a landfill upgrade plan and an assessment to evaluate the cost effectiveness of participating in the Terrace Service Area under the RDKS.

Waste currently generated in Kitimat and the Village of Kitimaat (Haisla First Nation) is disposed at the Kitimat Landfill. Kitimat is currently operating in Phase 2 of the Kitimat Landfill, which is estimated to have up to three years of remaining capacity (to be confirmed). MH understands that, based on a detailed landfill conformance assessment and comments from the Ministry, Kitimat will not have the



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authority to expand into Phase 3 without significant capital investment in design and operational improvements. The Landfill Upgrade Plan scheduled for 2020 is expected to provide a conceptual cost estimate for the proposed upgrades, including weigh scales, additional drop-off areas, an organics processing facility, and an engineered liner and leachate collection system for Phase 3 of the landfill.

Considering that the capital investments associated with the Kitimat Landfill Upgrade Plan are expected to be significant, there is an opportunity at this time to evaluate the cost effectiveness of Kitimat participating in the Terrace Service Area. Given that the RDKS has landfill capacity and provides a similar service, there could be significant financial benefits to harmonizing services.

There are several options for the District of Kitimat to participate in the Terrace Service Area. Each option will require a different cost recovery model. Potential options include the following:

- **Full participation in the Terrace Service Area.** This would involve design and construction of a new Kitimat Transfer Station and the use of the Forceman Ridge WMF for disposal and composting. The RDKS may also offer curbside collection through the Greater Terrace Area curbside collection service. Kitimat would join the Terrace Service area and become part of the RDKS cost recovery model. Considerations associated with this option include the ownership and operating model of the transfer station and responsibilities for the Kitimat landfill liabilities, including closure activities.
- **Partial participation in the Terrace Service Area.** Under this option, Kitimat would proceed with establishing a transfer station and closing the Kitimat Landfill; however, it would remain outside of the Terrace Service Area and use the Forceman Ridge WMF as a user (i.e. pay tipping fees). Under current RDKS bylaws, waste from Kitimat would be charged the 25% surcharge for out-of-service-area waste.

Kitimat may decide to not join the RDKS and continue operating the Kitimat Landfill by expanding into Phase 3. The likelihood of this status quo scenario will need to be considered in the cost recovery model developed for the Terrace Service Area.

The RDKS can benefit from evaluating the pros and cons of Kitimat participating in the RDKS Terrace Service Area. Financial considerations and potential benefits will depend on the level of participation of Kitimat; however, these benefits may include the following:

- Assuming full participation by Kitimat, this would expand the population base of the Terrace Service Area, resulting in additional revenue from tax requisition (assuming the current cost recovery model remains the same).
- Additional tipping fee revenue from all garbage generated within Kitimat, which was previously being disposed at the Kitimat Landfill.

There would also be additional costs associated with Kitimat's participation in the Terrace Service Area, which may include additional curbside collection costs (if this option is preferred), additional education and outreach costs with an expanded service population, and additional facility operating costs (depending on preferred operating model of the transfer station in Kitimat).

Assess the Financial Implications of Including the Dease Lake in the Hazelton and Highway 37 North Service Area

The Dease Lake Landfill is currently owned by the Ministry of Transportation and Infrastructure (MOTI) and operated by a contractor hired by MOTI. The Dease Lake Landfill recently started receiving waste generated in Telegraph Creek, as the Telegraph Creek landfill was closed. A transfer station has been



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constructed to replace the closed landfill. No tipping fees are currently charged at the Dease Lake Landfill, as there is no scale at the site. It is MH's understanding that MOTI does not have any plans to introduce tipping fees at the site.

The RDKS is considering assessing the options of either taking over operations of the Dease Lake Landfill, or assist in landfill closure and transfer station development and operation. The landfill liability and ownership would remain with MOTI. Either the landfill or transfer station facility would fall under the Hazelton and Highway 37 North Service Area and associated cost recovery model. The RDKS will need to consider the long-term capital and operating costs.

The RDKS should contact MOTI to get an update on the status of the Dease Lake Landfill and future plans for the site. MH understands that the RDKS and MOTI have a meeting scheduled with the Ministry to discuss future options for the site and the best path forward. Factors that should be considered in future discussions between RDKS, MOTI, and Ministry include the following:

- Current cost recovery model of the Dease Lake Landfill, including revenues streams and operating costs. Review of how the facility is currently being funded.
- Historic, current, and planned usage of the site. Estimates may be available on how much waste was disposed by each party, which may impact the operational cost contributions assigned to each party.
- Review of cost sharing agreements with Telegraph Creek First Nation, as well as usage by the RDKS Electoral Area F and residents of Dease Lake First Nation.

The RDKS is also considering including Telegraph Creek in the Hazelton and Highway 37 North Service Area, should Dease Lake become a part of the RDKS. The cost recovery model for the Service Area would then need adjustment and the operations of the Telegraph Creek transfer station and closed landfill would have to be negotiated.

Additional information and discussion around expansion of the RDKS service areas are presented in MH's memo on residual waste management at new facilities and service areas¹¹.

Possible options to incorporate in the SWMP include:

- 5A. Assess the financial implications of District of Kitimat participating in the Terrace Service Area. The SWMP could be structured to allow, but not require, the District of Kitimat to use the Forceman Ridge WMF.
- 5B. Assess the financial implications of including Dease Lake in the Hazelton and Highway 37 North Service Area.
- 5C. Assess the financial implications of including Telegraph Creek Landfill and future transfer station in the Hazelton and Highway 37 North Service Area.

IMPACTS OF POTENTIAL STRATEGIES ON COST RECOVERY

Table 4 shows which stakeholder groups are affected by the strategies outlined in this memo.

¹¹ Options for Waste Management at New Facilities or in New Service Areas to Consider for Inclusion in the Solid Waste Management Plan (MH, April 2020)



Table 4. Organizations and categories of individuals impacted by the identified strategies for cost recovery.

#	Strategy	Terrace SA	Hazelton & Hwy 37 North SA	Industrial customers	Residents and local businesses	District of Kitimat	MOTI	Telegraph Creek Band	Village of Kitimaat (Haisla First Nation)	Comments
1	Review cost recovery model within the Service Areas to provide fair cost sharing									
	1A. Develop KPIs to assist in evaluation of the current cost recovery models between service areas based a common factor (such as per capita or household). Adjust cost recovery models to facilitate a continued service delivery fair to all residents and businesses.									
	1B. Include messaging around waste management cost in RDKS's public education efforts.									Providing open and honest communication to gain the trust and buy in from the public.
2	Reduce cost									
	2A. Complete detailed hauling analysis to assess the feasibility of alternative co-hauling and back-hauling options.									
	2B. Perform a cost-benefit analysis of baling and/or compacting recyclable materials hauled from the Hazelton and Highway 37 North Service Area.									The RDKS has recently been successful in negotiating scaled hauling fees, where the cost per mega bag decreases with the increase number of bags being hauled.
	2C. Regularly revisit agreements and operating procedures to explore options to reduce cost while maintaining level and quality of service. Develop long-term goals and strategies, including potential investment, with the purpose of reducing cost in the long term.									
	2D. Complete operational reviews for each facility, which would include a review of staffing, past operating performance, primary operating costs, and identification of areas for improvement.									



#	Strategy	Terrace SA	Hazelton & Hwy 37 North SA	Industrial customers	Residents and local businesses	District of Kitimat	MOTT	Telegraph Creek Band	Village of Kitimaat (Haisla First Nation)	Comments
3	Increase revenue									
	3A. Review the cost model for the landfill at Forceman Ridge WMF, and adjust tipping fees for industrial and out-of-service-area waste based on the results of the model. Develop “what-if” scenarios to assess the potential for additional revenue through increasing tipping fees.									
	3B. Assess the costs and benefits of introducing a “user-pay” cost recovery model in the Hazelton and Highway 37 North Service Area by introducing tipping fees and adjust tax requisition based on new tipping fee structure. Implement a “user-pay” cost recovery model if deemed beneficial to residents, businesses and the RDKS while following the Guiding Financial Principals.									
4	Direct or indirect cost sharing between service areas									
	4A. Review feasibility of amending bylaws to combine service areas to allow for direct cost and revenue sharing									Focus should be given to ensure the combing of the services areas is fair to all, and that the Terrace Service Area residents and businesses don't feel they are carrying the cost for both the capital investment in the Thornhill Transfer Station and the Forceman Ridge WMF
	4B. Assess the feasibility of redirecting industrial waste to the Hazelton WMF and/or Meziadin Landfill to allow indirect cost sharing.									





#	Strategy	Terrace SA	Hazelton & Hwy 37 North SA	Industrial customers	Residents and local businesses	District of Kitimat	MOTI	Telegraph Creek Band	Village of Kitimaat (Haisla First Nation)	Comments
5	Expand service area									
	5A. Assess the financial implications of District of Kitimat participating in the Terrace Service Area. The SWMP could be structured to allow, but not require, the District of Kitimat to use the Forceman Ridge WMF.									
	5B. Assess the financial implications of including the Dease Lake Landfill in the Hazelton and Highway 37 North Service Area.									
	5C. Assess the financial implications of including Telegraph Creek Landfill and future transfer station in the Hazelton and Highway 37 North Service Area.									



Minutes of the Financial Working Group (FWG) meeting held Wednesday May 13, 2020 via an electronic platform – Microsoft Teams, Terrace, B.C, commenced at 1:04 p.m.

Members Present:

Yvonne Koerner, Chair	Chief Financial Officer, RDKS
Lori Greenlaw	Director of Finance, City of Terrace
Carey McIver	Consultant, District of Kitimat
Lina Gasser	Chief Administrative Officer, Village of Hazelton
Jennifer Larson	Member Municipality, District of Stewart

Staff Present:

Steve Prouse	Acting Manager, Works & Services, RDKS
Megan Haley	Solid Waste Manager, RDKS
Erin Blaney	Acting Environmental Services Coordinator, RDKS

Members Absent:

Joe Almeida	Deputy Director of Finance, District of Kitimat
Robin Carle	Chief Financial Officer, District of New Hazelton
Doris Fraser	Haisla Nation Council
Alex Stevens	Chief Financial Officer, Laxgalts'ap Nisga'a Village Council
Maggie Dennis	Band Manager, Iskut Band

CALL TO ORDER:

Chair Koerner called the meeting to order.

AMENDMENTS TO AGENDA:

No Amendments to the Agenda.

APPROVAL OF AGENDA:

The May 13, 2020 Financial Working Group Agenda was accepted as presented.

DELEGATIONS & GUESTS:

Curtis Jung, Solid Waste Engineer
Eva Robertsson, Environmental Engineer
Morrison Hershfield. Waste Management Consultant

The consultants gave cost recovery options for inclusion in the Draft Solid Waste Management Plan.



Next steps -

- FWG provide feedback to RDKS or MH by end of Friday, May 15, 2020
- PTAC to select preferred cost recovery options to include as Preferred Options (end of May)
- PTAC to determine Preferred Options to include in the draft SWMP for Board approval and public consultation (end of June)
- Board to approve options, strategies and costs included in Draft SWMP (August)
- Public Consultation (September/October – exact timing to be confirmed)
- FWG will be involved again after the public have been consulted

ADOPTION OF MINUTES:

Presented were the minutes of the February 11, 2020 meeting of the Financial Working Group.

MOVED/SECONDED that the minutes of the Financial Working Group be accepted as presented.

Carried.

CORRESPONDENCE:

REPORTS:

MOVED/SECONDED that the report from RDKS Administration, dated May 7, 2020, regarding Feedback on Cost Recovery Options for the Solid Waste Management Plan, be received for information.

Carried.

ADJOURNMENT:

MOVED/SECONDED that the meeting be adjourned.

Carried.

Chair Koerner adjourned the meeting at 2:26 p.m.

NEXT MEETING DATE: TBD.

***Appendix 35 – Proposed Solid Waste Management Plan Draft for Board
Consideration***



MORRISON HERSHFIELD

DRAFT FOR BOARD CONSIDERATION Proposed Solid Waste Management Plan for the Regional District of Kitimat-Stikine

Presented to:

Megan Haley, BSc., P. Chem.

Solid Waste Manager

300-4545 Lazelle Avenue

Terrace, BC V8G 4E1

Presented by:

Veronica Bartlett, M.Sc.

Solid Waste Planner, Environment

Morrison Hershfield Limited



Report No. 190497600
September 25, 2020

LETTER OF TRANSMITTAL

September 25, 2020

Regional District of Kitimat-Stikine
300-4545 Lazelle Avenue
Terrace, BC V8G 4E1

Dear: Megan Haley, BSc., P. Chem., Solid Waste Manager

Re: Draft Solid Waste Management Plan for Board Consideration

Morrison Hershfield is pleased to submit the RDKS's Draft Solid Waste Management Plan (SWMP) for Board consideration. This Draft SWMP was developed with input from the members of the solid waste management Public Technical Advisory Committee (PTAC) and the RDKS administration. This Draft will be presented to the RDKS Board of Director for review and approval before being subject to Public Consultation. Once approved, the Final SWMP will replace the 1995 SWMP and proposes a path forward for the RDKS and member municipalities for managing of solid waste.

It has been a pleasure to work with the RDKS on the development of this Plan. Thank you for the opportunity to be of assistance.

CLOSURE

The Regional District of Kitimat-Stikine retained Morrison Hershfield to conduct the work described in this report, and this report has been prepared solely for this purpose.

This document, the information it contains, the information and basis on which it relies, and factors associated with implementation of suggestions contained in this report are subject to changes that are beyond the control of the author. The information provided by others is believed to be accurate and may not have been verified.

Morrison Hershfield does not accept responsibility for the use of this report for any purpose other than that stated above and does not accept responsibility to any third party for the use, in whole or in part, of the contents of this document. This report should be understood in its entirety, since sections taken out of context could lead to misinterpretation.

We trust the information presented in this report meets Client's requirements. If you have any questions or need addition details, please do not hesitate to contact one of the undersigned.

Morrison Hershfield Limited

Prepared by:

Reviewed By:

Veronica Bartlett
Solid Waste Planner
vbartlett@morrisonhershfield.com

Todd Baker
Senior Environmental Engineer
tbaker@morrisonhershfield.com

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GLOSSARY OF TERMS

Acronym	Meaning
C&D	Construction and Demolition waste
Disposal	Landfilling
Diversion	Activities that divert waste materials away from disposal as garbage to alternatives such as recycling or composting. Does not include combustion of waste to produce energy.
EPR	Extended producer responsibility
FTE	Full time equivalent
Generation	The sum of all materials discarded that require management as solid waste, including garbage, recycling, and organic waste.
HHW	Household hazardous waste
ICI	Industrial, commercial and institutional
KPI	Key Performance Indicator
LFG	Landfill gas
Ministry	BC Ministry of Environment and Climate Change Strategy
MOTI	BC Ministry of Transportation and Highways
MSW	Municipal solid waste
OCP	Official Community Plan
PPP	Residential packaging and printed paper
PMAC	Plan Monitoring Advisory Committee
PTAC	Public and Technical Advisory Committee
RAPP	Report all Poachers and Polluters
RDKS	Regional District of Kitimat-Stikine
Residual Waste	The portion of the solid waste stream not managed through recycling, composting or recovery activities. It is commonly referred to as “garbage” or MSW. Residual waste typically requires disposal at a landfill.
Single-use items	Products often made out of plastic, such as shopping bags, straws, utensils, and takeout containers, which are intended to be used only briefly before they are thrown away or recycled.
SWMP	Solid Waste Management Plan, also referred to as “the Plan”
TS	Transfer Station
WMF	Waste Management Facility
5R	5R pollution prevention hierarchy: reduce and reuse, recycle, energy recovery and residual waste management

EXECUTIVE SUMMARY

The Environmental Management Act requires each of BC’s regional districts to have a solid waste management plan. The Regional District of Kitimat-Stikine (RDKS) has developed a new Solid Waste Management Plan (SWMP or simply “the Plan”) to replace the SWMP that was approved in 1995. The purpose of the SWMP is to set out the direction of a region’s solid waste management for the next 10 years.

The RDKS initiated the process of developing a new SWMP in 2017 and the Plan development process has followed the five-step process shown in Figure 1. It follows the process outlined in “A Guide to Solid Waste Management Planning”, published by the Ministry of Environment and Climate Change Strategy (“the Ministry”) in 2016.

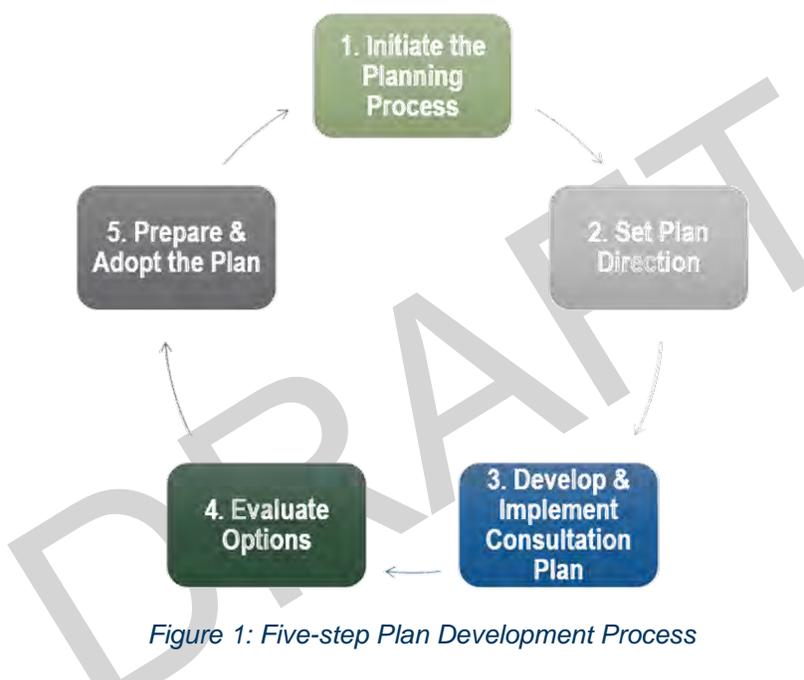


Figure 1: Five-step Plan Development Process

Steps 1, 2, and 3 were completed between 2018 and 2020 and these steps resulted in the formation of the Public and Technical Advisory Committee (PTAC), an assessment of the current system, the development of the consultation strategy, and a series of technical memoranda (memos) covering wide ranging aspects of the solid waste management system. Each technical memo contained a wealth of information that was discussed and considered by the PTAC.

During a meeting in June 2020, the PTAC evaluated and selected the preferred options (step 4), which are presented in this document as a draft version of the Plan. The final Plan will incorporate feedback from community consultation.

This report (the Draft Plan) sets out the guiding principles and Plan targets, describes the Plan area, summarizes the characteristics of the region (including population, population growth and main economic activities), and the current waste management system. It highlights current system performance, including disposal rate per person and estimated waste diversion. This Draft Plan

presents the preferred options selected by PTAC, which are hereby proposed as new strategies to address the region's future solid waste management needs.

The guiding principles developed by the Ministry were deemed suitable for the region and were adopted by PTAC. In addition, PTAC members added a ninth guiding principle to reflect the high importance placed by the RDKS to improve the operational efficiency of the current solid waste system. The guiding principles helped develop the direction for the strategies in the Plan.

A large waste composition study undertaken in 2017 indicated that there is still a significant quantity of disposed waste that could be diverted from landfilling. The three largest waste categories, which made up 55% of the overall waste stream accepted at Thornhill Transfer Station, were paper (19.6%), compostable organics (19.5%), and plastic (15.3%). All three waste categories are restricted from disposal in the Terrace Service Area.

The proposed strategies and actions described in this Draft Plan target the initial reduction of waste generation, increased reuse of waste materials, and increased recycling to minimize the residual waste stream that requires landfilling. Upon full implementation, these proposed strategies and actions could reduce the amount of waste sent to landfill from the current estimate of 672 kg per capita in 2019 to 663 kg/capita by 2025 and 556 kg per capita by 2030. Without the proposed strategies the disposal rate is expected to increase due to the significant increase in industrial waste accepted at the landfill at Forceman Ridge Waste Management Facility (WMF). In the long term, the RDKS will strive towards reaching an average annual disposal rate of 350 kg per capita (the provincial Ministry target) beyond the 10-year implementation period.

The key diversion initiatives in this Draft Plan are:

- Reducing single-use items and packaging and other materials
- Supporting reuse through opportunities for sharing resources (e.g. via share sheds, reuse stores, and/or repair events)
- Lobbying for improved accessibility to EPR programs and improving drop-off options for household hazardous waste where gaps exist
- Supporting ICI to encourage waste diversion
- Increasing diversion of construction and demolition waste
- Reducing recycling costs
- Establishing organics processing capacity at suitable facilities and help communities to encourage organics diversion
- Reducing operational inefficiencies
- Using landfill airspace effectively and set limits for solid waste accepted from outside the service area
- Supporting illegal dumping education and prevention strategies and programs
- Developing a new agreement between the RDKS and the District of Kitimat, including provisions for use of the landfill at Forceman Ridge WMF

The waste management function of the RDKS is divided into two service areas which are regulated under separate bylaws and are funded separately. The northern service area (Hazelton and Highway 37 North Service Area) is currently experiencing a deficit while the southern service area (Terrace Service Area) is experiencing a surplus, but not enough of a surplus to meet future asset management obligations. The RDKS solid waste management system experienced a major overhaul about 5 years ago and the RDKS has reached its maximum borrowing capacity. The landfill in the southern service area is filling up faster than originally anticipated and the RDKS has identified the risk of not being able to build up a capital reserve to fund the construction of the next phase; tipping fee rate adjustments are anticipated to mitigate the risk.

The RDKS developed a financial model to help identify and develop a sustainable short- and long-term funding model for the Terrace Service Area. In the spring of 2020 the Regional District Board of Directors approved a significant increase in tax requisition in the northern service area. The increased tax requisition is expected to cover the operating costs and eliminate the deficit in five years. During the SWMP implementation, the RDKS anticipates that some adjustments to the funding models of the two service areas will be made.

The RDKS will continue to use both tipping fees and taxation to fund the implementation of the SWMP. As indicated in the guiding principles, the RDKS is committed to supporting polluter and user-pay approaches and focus on incentive-based tipping fees that encourage segregation of materials and waste diversion rather than landfill disposal.

The implementation schedule for this Plan is 2022 to 2031. To implement the proposed strategies and achieve the diversion and disposal targets identified in this Plan, the RDKS will need to hire approximately one additional full time equivalent (FTE) position dedicated to new strategies and actions. In addition to staffing needs, the RDKS will need to spend between \$20,000 and \$1,100,000 annually to cover the costs for the proposed strategies presented in this Plan.

Implementation of the new Plan will be overseen by the Plan Monitoring Advisory Committee (PMAC). The RDKS will work with the PMAC to report to the Regional District Board of Directors (Board) on the Plan's progress and effectiveness on an annual basis. The PMAC will also act as a sounding board for the RDKS to review results of feasibility assessments, cost benefit analyses and for making suggestions on implementation. The PMAC's recommendations will be forwarded to the Board for approval and recommendation for action.

1. INTRODUCTION

In British Columbia, each regional district is mandated by the Provincial Environmental Management Act to develop a Solid Waste Management Plan (SWMP) that provides a long-term vision for solid waste management, including waste diversion and disposal activities. Plans are updated on a regular basis to ensure that the plan reflects the current needs of the regional district, as well as current market conditions, technologies, and regulations.

Under the Environmental Management Act, regional districts are required to have a SWMP, which must be developed following the solid waste management planning guidelines provided by the Ministry of Environment and Climate Change Strategy (the Ministry) for content and process¹.

The Regional District of Kitimat-Stikine (RDKS) initiated the process of developing a new SWMP in 2017 and steps 1 and 2 of the planning process were completed in 2018. This resulted in the formation of the Public and Technical Advisory Committee (PTAC), assessment of the current system, development of the consultation plan and development of six technical memos covering specific topics. Each of the six technical memos contained a wealth of information that was considered by the PTAC. In November 2019, Morrison Hershfield (MH) was commissioned to provide consulting support to continue developing the SWMP for the RDKS.

1.1 Guiding Principles

The Ministry has developed eight provincial guiding principles for Regional Districts to follow in developing their solid waste management plans. Regional Districts should include additional locally relevant guiding principles in their solid waste management plans.

After a discussion about the suitability of the Provincial guiding principles with members of the Public Technical Advisory Committee, all eight guiding principles were adopted to guide the planning process (principles 1 to 8). In addition, PTAC members added a ninth guiding principle.

The following are proposed guiding principles for the new SWMP that directs how the RDKS is managing waste materials in the Region:

1. Promote zero waste approaches and support a circular economy

The RDKS is committed to encouraging, wherever practical, a shift in thinking from waste as a residual requiring disposal to waste as a resource that can be utilized in closed-loop systems. Zero waste approaches aim to minimize waste generation and enable the sustainable use and reuse of products and materials. At the local level, the RDKS may look to remove barriers or encourage opportunities that will contribute to towards the establishment of a circular economy.

2. Promote the first 3 Rs (Reduce, Reuse and Recycle)

The RDKS wants to elevate the importance of waste prevention by prioritizing programming and provision of services for the first 3 Rs in the 5 R pollution prevention hierarchy (refer to Section

¹ Ministry of Environment and Climate Change Strategy: A Guide to Solid Waste Management Planning” (September 2016).

1.2). The SWMP includes programs and services that consider provincial and regional targets for waste reduction and environmental protection.

3. Maximize beneficial use of waste materials and manage waste and divertible materials appropriately

The Plan has been developed to maximize beneficial use of waste materials and manage residuals for disposal using best practices.

4. Support polluter and user-pay approaches, and manage incentives to maximize behaviour outcomes where practical

Producer and user responsibility for the management of products are supported in the Plan through the provision of user-fees, disposal restrictions on industry stewarded products, and support for local reuse businesses. The Plan also includes provisions for education and behaviour change strategies aimed at consumers and businesses to help foster further waste reduction, reuse and recycling.

5. Prevent organics and recyclables from going into the garbage wherever practical

The RDKS is committed to maintaining a system that prevents organics and recyclables from going into the garbage with an aim to provide clean feedstock of greater economic value (e.g. compost and recyclables) as well as to maximize its market uses and value. The Plan reinforces behaviours to reduce, reuse and recycle.

6. Collaborate with other Regional Districts wherever practical

Collaboration on many aspects of solid waste management (e.g., to access facilities and markets, share campaigns and programs) will support the most efficient and effective overall municipal solid waste system. The RDKS invited neighbouring regional districts to partake in the planning process and is committed to collaborating with other regional districts wherever practical during Plan implementation.

7. Develop collaborative partnerships with interested parties to achieve regional targets set in plans

The Plan identifies opportunities to strengthen partnerships with interested parties to achieve regional targets. All waste and recycling sector service providers, associations, and environmental organizations, product stewardship producers and agencies, and waste generators are key interested parties in achieving these targets.

8. Level the playing field within Regions for private and public solid waste management facilities

Solid waste management facilities within a given region should be subject to similar requirements. Waste management solutions proposed by private sector and by a regional district or municipality should be evaluated using the same criteria.

9. Improve operational efficiency of the current solid waste system.

The RDKS places a high importance on improving the operational efficiency of the current solid waste system. One of the main focus areas of the new SWMP is to improve operational efficiency. System efficiency applies to all solid waste management functions and levels of the waste hierarchy and have been incorporated into all aspects of the waste management system.

1.2 Pollution Prevention Hierarchy and Targets

In addition to the guiding principles, the SWMP will adopt the pollution prevention hierarchy as illustrated on Figure 2. The proposed strategies and actions are organized using the waste hierarchy (reduce, reuse, recycle, energy recovery and residual waste management).

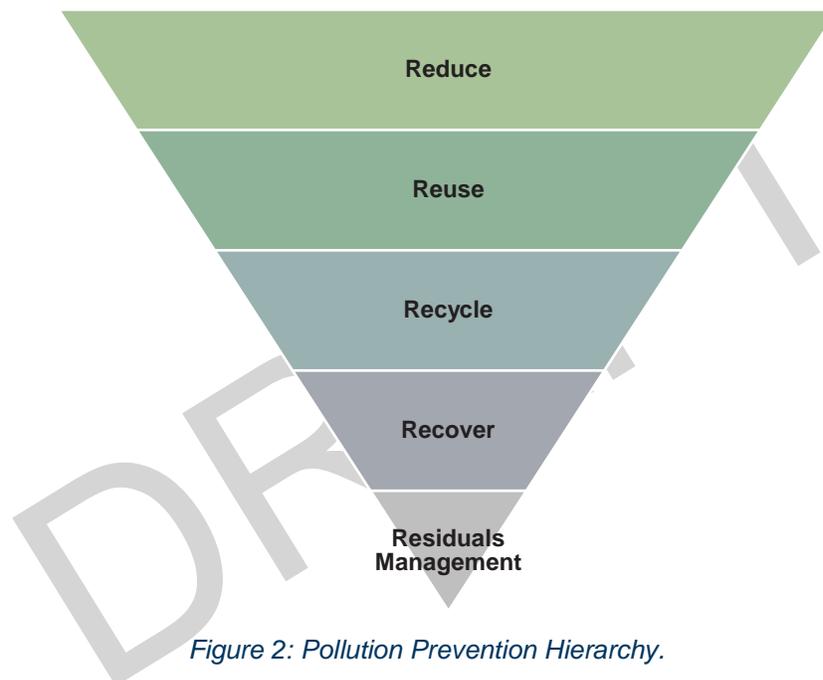


Figure 2: Pollution Prevention Hierarchy.

In 2013 the Ministry developed two provincial solid waste targets for 2020. The two targets are:

- Reduce the annual municipal solid waste disposal rate to 350 kg per capita
- Include 75% of BC's population under organic waste disposal restrictions

Recognizing that all regional districts are faced with different challenges, the MOE's Guide² suggests that regional districts should set locally relevant targets.

An overview of the current RDKS solid waste management system and its performance is presented in Section 3 and 4. The average annual disposal rate in the RDKS was 562 kg per capita in 2017, 544 kg per capita in 2018, and 662 kg per capita in 2019. The increase experienced between 2018 and 2019 is attributed to the increased generation of industrial waste and the

² Solid waste management planning guide published by the MOE 2016.

disposal thereof. The waste is disposed in the Terrace Service Area, however, it is generated outside of its boundaries by community members not included in the Terrace Service Area population. With this current trend of increased generation of industrial waste in the region, the annual disposal rate is expected to reach over 800 kg per capita in 2020.

An aggressive reduce, reuse, recycling program will be required to lower the disposal rate to the 2017 level by 2030, taking into consideration the expected significant increase in industrial waste over the next 10 years. An analysis of the RDKS disposed waste streams and composition suggests that the RDKS could reduce their current disposal rate to 663 kg per capita by 2025 and 556 kg per capita by 2030. This would require that the following additional waste reduction and diversion goals are reached by 2030:

- 5% overall waste reduction throughout the RDKS.
- 50% capture rate of compostable organics, paper, and recyclable plastics and diversion from the residential and industrial, commercial, and institutional (ICI) separated waste stream in the Terrace Service Area.
- 50% capture and diversion rate of building materials from the demolition, landclearing, and construction waste streams currently destined for disposal in the Terrace Service Area.
- 15% diversion of the disposed waste stream in the Hazelton and Highway 37 North Service Area.

Figure 3 shows the projected disposal rate change for the two RDKS service areas, including the calculated disposal rate for 2019. Figure 3 also shows the disposal targets for 2025 and 2030 with and without the industrial waste disposed in the Terrace Service Area. The projected average RDKS disposal rates without additional reductions and diversion efforts outlined in the draft SWMP are shown in the figure as the status quo.

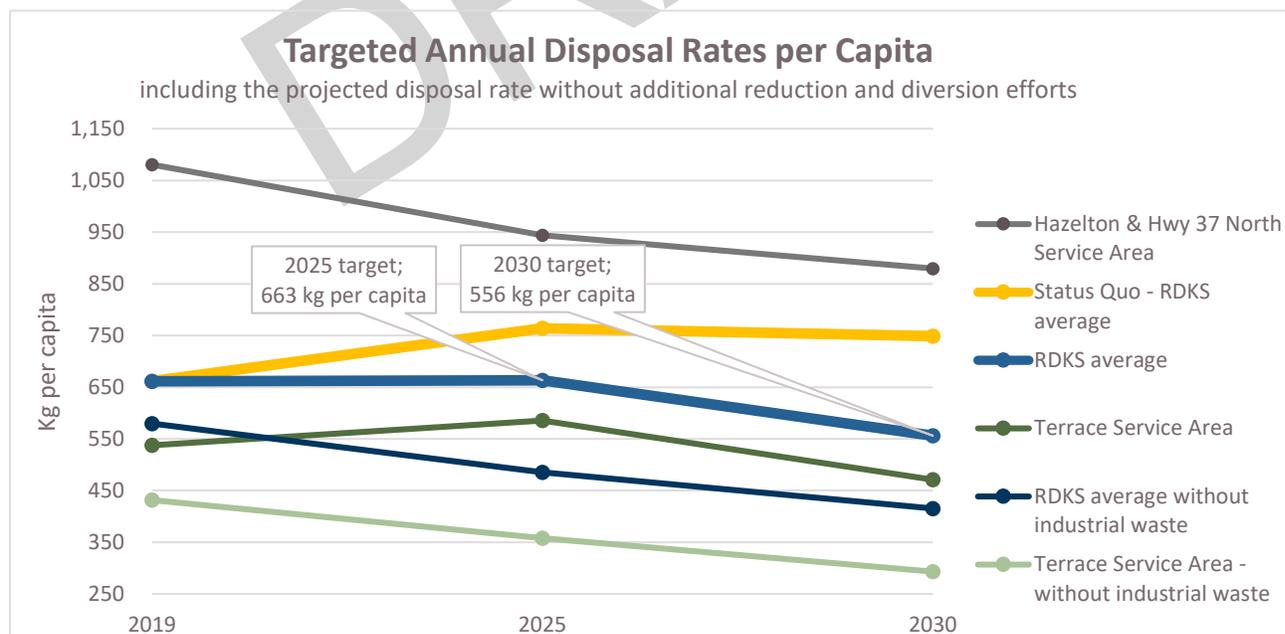


Figure 3: Targeted annual disposal rates per capita.

The RDKS will strive towards reaching an average annual disposal rate of 350 kg per capita in the long term. Meanwhile, the RDKS will continue to focus on diversion of organic waste, and additional diversion of paper and plastics to achieve a disposal target of 663 kg per capita by 2025 and a 2030 target of 556 kg per capita.

More than 75% of the RDKS service population is residing in the Terrace Service Area where organic materials are considered restricted from disposal and must be kept separated from the disposed waste³. This means the RDKS has reached the Ministry's second waste target. The RDKS is committed to exploring opportunities to decrease waste generation and landfill disposal and increase waste diversion, while providing socially, environmentally, and financially responsible service to its residents now and in the future.

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³ Kitimat-Stikine Terrace Area Waste Management Facility Regulation Bylaw No. 671, 2016

2. BACKGROUND

2.1 Plan History

The RDKS has developed a new SWMP to replace the SWMP that was approved in 1995. A Plan Monitoring Advisory Committee (PMAC) was established to monitor the progress of Plan implementation. A review of the implementation status of the 1995 Plan was documented and presented to the Regional District Board of Directors (Board) in January 2017. The Regional District Board authorized the review and update of the 1995 SWMP.

A report on the Background Information and Assessment of the Current Solid Waste System was finalized in January 2019 and it confirmed that the actions of the 1995 SWMP were largely complete and/or ongoing. Any gaps were identified as part of a report on Draft Topics for Solid Waste Management Plan (Jan 2019), which provides a list of identified major topics to consider in a Plan update.

A consultation strategy was developed to ensure adequate consultation with the general public and potentially affected stakeholders. The RDKS established a Public and Technical Advisory Committee (PTAC) to be involved in the Plan development process.

A public survey was conducted in March 2019. The survey presented multiple choice questions and allowed respondents to provide feedback and suggestions on improving the Region's waste management system. The feedback was taken into careful consideration throughout the planning process.

The RDKS, with support from consultants, worked closely with PTAC to identify key issues with the existing solid waste management system, review potential options for addressing the region's future needs, and develop / select preferred options for future waste management.

Several technical memoranda were prepared by consultants to support the PTAC in the discussion and evaluation of options. These documents are available on the RDKS' website and include:

- Efficiency for RDKS Solid Waste Programs and Facilities (February 2019)
- Reduction and reuse options (April 2019)
- Strategies to reduce single use items (April 2019)
- Food waste reduction strategy (April 2019)
- Waste management space in new commercial construction (April 2019)
- Deconstruction versus demolition (April 2019)
- Summary of Reduce and Reuse Options (MH, January 2020)
- Recycling and Composting (MH, February 2020)
- Residual Waste Management at Existing Facilities (MH, March 2020)
- New Facilities and Service Areas for RDKS (MH, May 2020)
- Cost Recovery (MH, May 2020)

During a meeting in June 2020, the PTAC evaluated and selected the preferred options, which are presented in this document as a draft version of the Plan. The final Plan will incorporate feedback from community consultation.

The main drivers for developing a new Plan include challenges, such as contamination of organics received at the compost facility, managing increasing waste quantities from industrial sources, operational inefficiencies, and rising recycling and waste management costs. The northern service area is currently experiencing a deficit while the southern service area is experiencing a surplus, but not enough of a surplus to meet future asset management obligations.

Section 5 presents the proposed strategies that are preferred by the PTAC. The main issues (i.e. challenges and opportunities) are summarized for each strategy and the basis for selecting each strategy is provided.

2.2 Plan Area

The current 1995 Solid Waste Management Plan applies to the entire RDKS geographic region shown on Figure 4. The RDKS is located in northwestern British Columbia and covers 104,465 square kilometres⁴. The RDKS is bounded by the Stikine region to the north and east, the Bulkley-Nechako Regional District to the east, Alaska and the North Coast Regional District to the west, and the Central Coast Regional District to the south.

In 2015, two solid waste service areas were established within the RDKS boundaries. The Hazelton and Highway 37 North Service Area and the Terrace Service Area were established under Bylaw No. 657 and 658. The Hazelton and Highway 37 North Service Area includes the District of New Hazelton, the Village of Hazelton, the District of Stewart, and Electoral Areas A, B and D. The Terrace Service Area includes the City of Terrace and all of Electoral Areas C and E. The boundaries for the two service areas are shown in Figure 5 below.

The RDKS does not provide waste services in areas that are not included in the two RDKS Service Areas. These include Electoral Area F, the District of Kitimat, and Nass Valley (including Nisga'a Nation located in Gitlaxt'aamiks). However, these areas are still included in the Plan Area.

⁴ Statistics Canada. 2017. Kitimat-Stikine, RD [Census division], British Columbia and British Columbia [Province] (table). Census Profile. 2016 Census. Statistics Canada Catalogue no. 98-316-X2016001. Ottawa. Released November 29, 2017. <https://www12.statcan.gc.ca/census-recensement/2016/dp-pd/prof/index.cfm?Lang=E> (accessed May 26, 2020).



Figure 4: Regional District of Kitimat-Stikine.

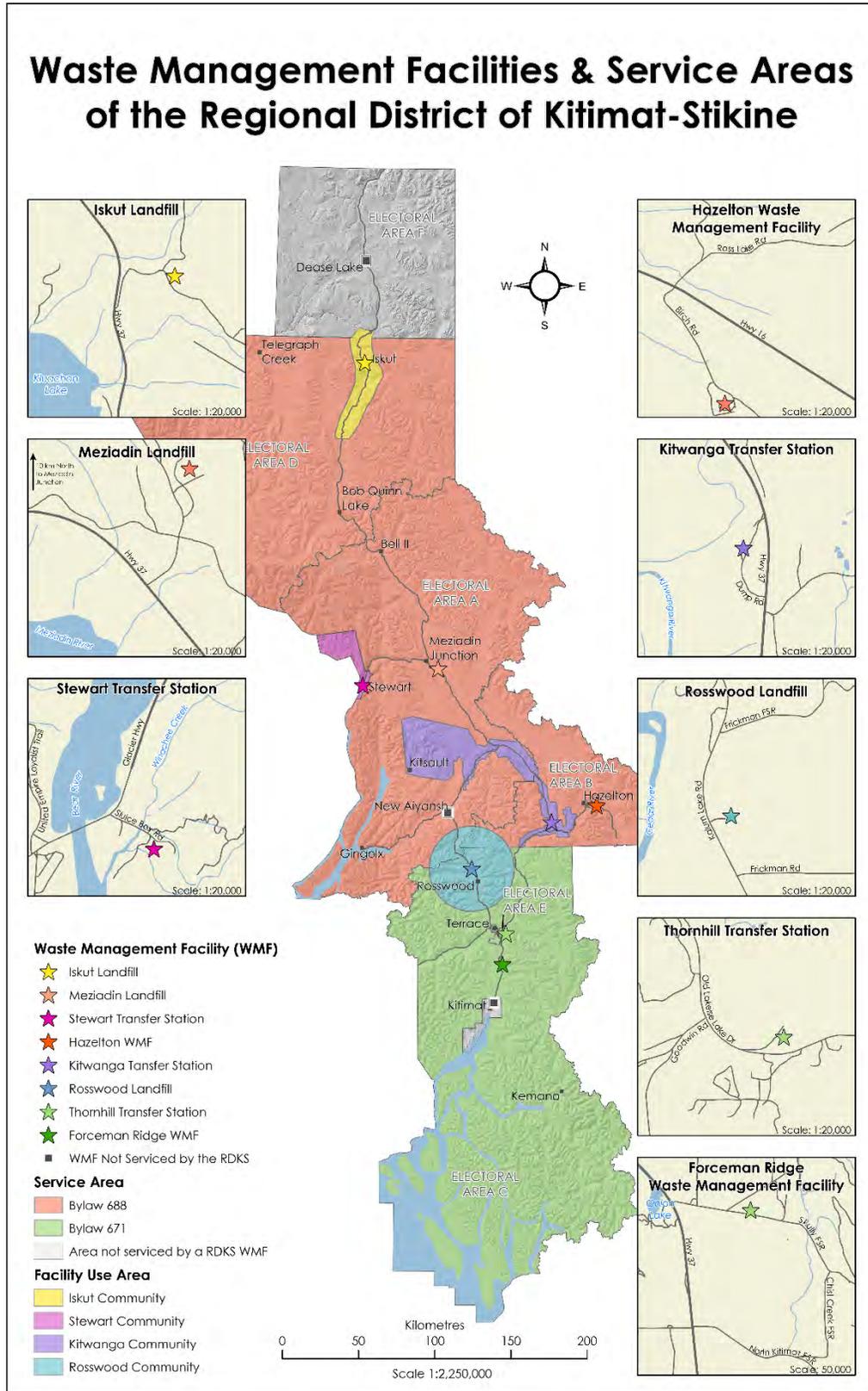


Figure 5: RDKS solid waste service areas.

2.3 Population and Growth Estimates

The total population of the RDKS was 37,367⁵ in 2016; only six more people compared to 2011. The overall population density was 0.4 persons per square kilometre. The population distribution is shown in Table 1.

Table 1: RDKS areas and corresponding 2016 population⁵.

Area	Area Type	Population (2016) ⁵	% of total RDKS population
Kitimat-Stikine	RD	37,367	100%
Hazelton	VL	313	1%
Kitimat	DM	8,131	22%
New Hazelton	DM	580	2%
Nisga'a	NL	1,880	5%
Stewart	DM	401	1%
Terrace	CY	11,643	31%
First Nations Villages	IR	5,635	15%
Kitimat-Stikine A	RDA	20	0%
Kitimat-Stikine B	RDA	1,473	4%
Kitimat-Stikine C (Part 1)	RDA	2,834	8%
Kitimat-Stikine C (Part 2)	RDA	5	0%
Kitimat-Stikine D	RDA	99	0%
Kitimat-Stikine E	RDA	3,993	11%
Kitimat-Stikine F	RDA	360	1%
<i>CY = City, DM = District Municipality, NL = Nisga'a Land, IR = Indian Reserve, RD = Regional District, RDA = Regional District Electoral Area, VL = Village</i>			

Based on recent internal estimates, the RDKS projects a 1.25% annual population increase until 2030, with a slowdown to 0.5% thereafter. The expected annual population increase is attributed to the LNG Canada project in Kitimat which was approved in the late fall of 2018. The BC Statistics population projections for the RDKS indicate that the population is expected to grow at a much slower annual rate of 0.7% which shows that there is uncertainty with respect to population growth in the region.

For the purposes of waste management planning, it is important to know where the population growth will happen. The Official Community Plan (OCP) for each municipality or village provides a population projection. The bulk of the growth projected for the RDKS will occur in the City of Terrace. The OCP for Stewart also indicates that some growth is expected. Growth in the District of Kitimat is highly dependent on external forces. No growth is projected for Hazelton or New

⁵ Statistics Canada. 2017. Kitimat-Stikine, RD [Census division], British Columbia and British Columbia [Province] (table). Census Profile. 2016 Census. Statistics Canada Catalogue no. 98-316-X2016001. Ottawa. Released November 29, 2017. <https://www12.statcan.gc.ca/census-recensement/2016/dp-pd/prof/index.cfm?Lang=E> (accessed May 26, 2020).

Hazelton. The RDKS projects that modest growth may occur in the Thornhill area (Electoral Area E) of the RDKS if major industrial development occurs in the region.

2.4 Main Economic Activities in the Region

The main economic activities within the RDKS include mining, forestry, energy, fishing, and transportation. The area is home to several mills and multiple hydro projects. The main economic activities within the RDKS include mining, forestry, energy, fishing, and transportation. The area is home to several mills and multiple hydro projects. The economic activities in the RDKS means there are a number of industrial work camps in the area. These camps consist of buildings used for residential accommodations and support for industrial construction workers. New mining, forestry, oil and gas and/or energy developments in the region may result in a significant increase in waste from industrial work camps and construction.

In the fall of 2018, LNG Canada, made the final investment decision to build their export facility in Kitimat, in the traditional territory of the Haisla Nation. The project represents one of the largest energy investments in the history of Canada. The RDKS estimates that up to 10,000 people (roughly 25% of the total RDKS population) will be employed during the peak construction period. Once in operation the plant will employ between 300 and 450 people during the first phase, and ultimately 450 to 800, should the full project be built based on LNG Canada's estimates. During construction, the waste generation is anticipated to increase both in terms of construction waste and municipal solid waste. The RDKS is already starting to see a significantly increased demand for waste disposal options from industry.

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3. CURRENT WASTE MANAGEMENT SYSTEM

3.1 System User Roles

During the first step in the SWMP and consultation strategy development process, the RDKS identified Plan stakeholders. “Stakeholders” is the term used to refer to organizations, agencies and individuals who have a higher level of interest in the process, whereas the “public” is the term used to refer to residents and business owners who will have opportunities to be involved in the planning process, but may not have the interest in being as deeply engaged.

Stakeholders were identified through preliminary work by RDKS administration and the Plan Monitoring Advisory Committee (PMAC). The stakeholders identified are organized into different categories, and tailored invitation letters were developed for each category with the invitation to join the PTAC.

The RDKS owns most waste management facilities within its boundaries, with the exceptions of the recycling processing facility in Terrace. The member municipalities and First Nations communities are generally responsible for waste collection, with the exception of the RDKS provided curbside collection in the Greater Terrace Area, while the RDKS is responsible for transfer, processing and/or disposal of the collected waste. Public education and outreach material and programs are provided by the RDKS and shared with different stakeholders. Some municipalities and First Nations have developed their own material and information, in particular as it relates to curbside collection.

Private industry plays an integral part in the solid waste management system in the region. Private industry provides contracted services to the RDKS, municipalities, First Nations, commercial businesses, and some residential customers. Local non-profit organizations support reuse and contribute to waste reduction by keeping usable goods and materials out of the disposal stream.

The RDKS is promoting collaboration between different levels of governments and is very conscious about supporting the local private waste and recycling industry. The solid waste management system in the region relies on collaboration between identified stakeholders and the RDKS is keen to nurture and strengthen existing and new stakeholder relationships.

The roles are summarized in Table 2 below.

Table 2: Stakeholder and user solid waste management roles.

Stakeholder / System User	Role Description
Federal Government	<ul style="list-style-type: none">Regulates waste management facilities under federal jurisdiction
Provincial Government	<ul style="list-style-type: none">Various ministries have regulatory authority related to waste management

Stakeholder / System User	Role Description
RDKS Administration	<ul style="list-style-type: none"> ▪ Develops solid waste management plan for the region ▪ Develops bylaws, policies and plans ▪ Implements plan to meet goals and set targets ▪ Provides solid waste services to residents and businesses, including collection, transfer and disposal ▪ Coordinates solid waste services and the collaboration between the RDKS and various stakeholders ▪ Supports the 5R principal through system design, operations, community outreach, and management ▪ Collaborates with product stewardship programs in the region, either directly or indirectly by promoting private depots and operations ▪ Chairs committees ▪ Collaborates with private solid waste management industry and supports non-profit organizations ▪ Provide cost effective solutions to residents and businesses
Member Municipalities	<ul style="list-style-type: none"> ▪ Provides or contracts curbside collection services ▪ Promotes waste diversion and the 5R principal ▪ Collaborates with and provides input to the RDKS ▪ Partakes in committees ▪ Develops specific solid waste management strategies and applicable bylaws
Electoral Areas	<ul style="list-style-type: none"> ▪ Collaborates with and provides input to the RDKS ▪ Partakes in committees
First Nations	<ul style="list-style-type: none"> ▪ Provides or contracts curbside collection services ▪ Owns and operates Telegraph Creek Landfill and Transfer Station
Product Stewardship Agencies	<ul style="list-style-type: none"> ▪ Provides reasonable and accessible collection services and facilities ▪ Provides and fund education and marketing ▪ Tracks and reports collection data ▪ Collects and processes some products
Private Sector	<ul style="list-style-type: none"> ▪ Provides solid waste management services ▪ Applies the 5R principal in its operations
Non-profit Organizations	<ul style="list-style-type: none"> ▪ Accepts reusable goods and materials and supports reuse in the region
Neighbouring Regional Districts	<ul style="list-style-type: none"> ▪ There is currently no or limited collaboration between the RDKS and neighbouring regional districts
Residents and Businesses	<ul style="list-style-type: none"> ▪ Applies the 5R principal, including waste reduction and reuse ▪ Responsibly uses provided solid waste management services and facilities

3.2 Existing Facilities and Services

Several facilities and services play an integral part in the success of the solid waste management system in the region. The components of the waste management system can be organized according to the “5R waste management hierarchy”, which emphasizes the importance of reduction, reuse and recycling before managing the remaining waste by recovering energy and disposing of the residuals.

The following sections describe solid waste management facilities and services in the RDKS and the region. A more detailed description is available in the report Background Information and Assessment of the Current Solid Waste System (January 2019)⁶ as well as in Section 5 below.

3.2.1 Reduction and Reuse

The RDKS uses outreach and education programs to encourage waste reduction. They maintain recycling directories including reuse options (e.g. second-hand stores) for all communities within the RDKS service areas. There are no directories for areas outside the service areas, such as Kitimat and Dease Lake.

The use of tipping fees, currently applicable in the Terrace Service Area, and the user-pay system also encourage waste reduction.

The RDKS supports reuse by allowing not-for-profit societies to apply for reimbursement of tipping fees paid at Thornhill Transfer Station. For example, tipping fees paid on unsuitable donations received by second-hand stores are eligible for reimbursement. Reimbursement can be applied for twice a year.

Some individual communities in the region are also promoting reduce and reuse initiatives through their own outreach, public education, and information material.

3.2.2 Recycling

Recycling facilities and services are provided to residents and businesses across the region.

Residential recycling services available in the RDKS include:

- Residential curbside collection programs provided by municipal governments, First Nations, and the RDKS.
- Residential recycling drop-off areas at the local landfill and recycling depots/transfer stations.
- Subscription-based recycling collection by private companies offered to both residential and commercial customers not serviced by local governments.

⁶ Background Information and Assessment of the Current Solid Waste System – 2018 Update, Rev 1., January 4, 2019, RDKS.

Recycling services are provided to the ICI sector by the RDKS, municipal governments and the private industry. Some businesses choose to backhaul recyclable materials to their central distribution centers located outside the RDKS, rather than recycling locally. This is typically done by large retailers.

There are two recycling processors in the region; one located in Terrace and one located in Kitimat. The facility in Terrace is processing all paper products and blue box type materials collected by the RDKS.

Lists of waste management facilities operated by the RDKS and other parties, such as member municipalities and the private sector can be found in Schedule A and B respectively.

Extended Producer Responsibility Programs

The RDKS is a member of the BC Product Stewardship Council, a body that advocates on behalf of local government for effective Extended Producer Responsibility (EPR) programs. RDKS staff also regularly engage in discussions with stewardship agencies to discuss how access to their programs can be improved in the RDKS.

EPR is an environmental policy approach in which producers are made responsible for managing their products throughout their entire whole life cycle. The Recycling Regulation, under BC's Environmental Management Act, sets out the requirements for EPR programs in BC.

The RDKS, municipalities and private industry collect materials or operate depots under contract with different stewardship agencies throughout the region. The RDKS is continuously assessing opportunities to increase collaboration with different stewards to improve waste management services and/or secure additional funding for existing programs and services.

3.2.3 Organic Waste Management

As a part of the solid waste management system overhaul between 2016 and 2018 organic waste was banned from disposal at the landfill at Forceman Ridge Waste Management Facility (WMF). Curbside collection of mixed organics is provided by the RDKS and the City of Terrace in the Terrace Service Area; private industry is collecting organics from multi-family residential and ICI customers. All collected material is marshalled at the Thornhill Transfer Station, where direct hauled organic material also is accepted.

Organic waste from residential customers in the City of Terrace and RDKS rural collection service area, the ICI sector in the Terrace Service Area, and some industrial work camps is composted at the composting facility at the Forceman Ridge WMF.

The City of Terrace is providing curbside collection of yard waste on a seasonal basis and the material is composted in their public works yard. Yard waste can be dropped off at the Kitimat Landfill where it is composted. The District of Kitimat plans to introduce three stream curbside collection in 2021.

Organics collection and composting is provided in many First Nations communities. The services are provided by the local Bands.

Currently there is no organics processing capacity in the Hazelton and Highway 37 North Service Area, however the RDKS is promoting backyard composting and selling composters at wholesale price to residents. Due to the mostly rural communities, the nature and quantity of organic waste generated in the Service Area is also different from that generated in the Terrace Service Area. The RDKS is promoting the reduction of food waste through Love Food Hate Waste Canada.

Clean wood waste, defined as organic material under RDKS bylaw, is collected at all RDKS solid waste management facilities. The material is burnt under controlled and regulated conditions in accordance with facility operating certificates.

3.2.4 Residual Waste Management

Residual waste management services available in the RDKS include:

- Residential curbside collection programs provided by municipal governments, First Nations, and the RDKS.
- Residential and commercial waste drop off at the local landfills and transfer stations.
- Subscription-based collection by private companies offered to both residential and commercial customers not serviced by local governments.
- Disposal of residential, commercial, and industrial waste at landfills owned by municipal governments, First Nations, Ministry of Transportation and Infrastructure, and the RDKS.

There are ten active landfills in the region and five are owned by the RDKS. The size and remaining landfill life varies widely between the facilities. There are four closed landfills in the region that are being monitored in their post-closure period.

For more detail on the different operational landfills owned by the RDKS and other parties refer to Schedule A and B respectively. Schedule C provides a list of closed landfills in the region.

Construction, Demolition, and Land Clearing Waste Management

Larger loads of construction and demolition (C&D) waste and land clearing waste are classified as controlled waste which means a special permit is required for disposal at all RDKS facilities. Segregation of scrap metal and clean wood waste is encouraged through bylaw material classification, existing tipping fee structure, and applicable fines.

Emergency Debris Management

The RDKS's 2013 Emergency Plan identifies a number of potential causes of emergency situations and the responses that should be taken. Solid waste management needs to be considered should an animal epidemic occur, in which case the Ministry of Agriculture and the BC Centre for Disease Control would need to coordinate disposal of infected animals with the RDKS. Other emergency situations, such as dam failures or earthquakes could result in the generation of large quantities of demolition waste, but clean up after the situation ends is not within the scope of the Emergency Plan.

The RDKS is updating the Emergency Plan on a regular basis and additional wording as it pertains to solid waste and emergency debris management will be incorporated as suitable. Future revisions of the Emergency Plan could expand on the disposal of debris generated by floods and fires (e.g. residential and commercial property demolition).

3.3 Education and Outreach

Education and outreach play a key role in waste reduction, diversion, and proper disposal of residual waste. The RDKS has made a wide range of waste management information available on its website, including information sheets on each solid waste facility, composting information, how-to guides for ICI recycling and organics collection, and links to various waste management planning initiatives. The RDKS also provides residents with recycling service information through the Recycle Coach desktop and smart phone apps of the “MyWaste™” platform.

In 2016, the RDKS undertook immense efforts to educate all stakeholder groups prior to the implementation of Bylaw No. 671, introduction of three stream waste segregation, and new and/or upgraded facilities in the Terrace Service Area.

The RDKS maintains a stakeholder registry which includes stakeholder information and the outreach and education provided. This allows the staff to track outreach efforts and identify needs for additional support.

The RDKS is responsible for most education and outreach in the region, however, individual municipalities and First Nations are also providing education and outreach, either using provided material or that developed specific to their system.

3.4 Guiding Regulations

3.4.1 Provincial Policies and Legislations

Solid waste management is regulated by the Province of British Columbia. Some legislation assigns responsibility for different aspects of waste management to other entities (e.g., regional districts and stewardship agencies). Regulations describe how waste management facilities are required to operate. Relevant legislation and regulations include:

- Environmental Management Act
- Recycling Regulation
- Open Burning Smoke Control Regulation
- Organic Matter Recycling Regulation
- Landfill Criteria for Municipal Solid Waste
- Landfill Gas Management Regulation

3.4.2 Bylaws

The solid waste management system is regulated by regional and municipal bylaws. Each local government has their own solid waste bylaws applicable to the services they provide and the facilities they own. All solid waste related bylaws are listed in Schedule D.

4. SYSTEM PERFORMANCE

Waste management services in the RDKS are separated into two areas; the Terrace Service Area and the Hazelton and Highway 37 North Service Area. The disposal and diversion services and infrastructure are different in the two Service Areas, guided by area specific bylaws. The Terrace Service Area facilities are equipped with weigh scales and more information about the system performance of this area is therefore available.

4.1 Waste Disposal, Composition, and Diversion

The RDKS installed two weigh scales in the Terrace Service Area in 2016, the landfill at Forceman Ridge WMF began to receive waste in November the same year. Prior to 2016 data waste tracked and based on estimated volume, which remains the case for Hazelton and Highway 37 North Service Area. There is no scale at the Kitimat Landfill owned and operated by the District of Kitimat.

It is estimated that 27,000 tonnes of waste were generated in the entire Regional District in 2017 and that 22% were diverted. A total of 21,000 tonnes were disposed in RDKS' and municipal landfills in 2017, not including private landfills (e.g. Rio Tinto Alcan Landfill). The rate of residential waste disposal has remained fairly constant over the past three years, since the beginning of the major system overhaul with new facilities and services. The annual disposal in the Terrace Service Area is presented in Figure 6 below. The disposed waste includes garbage collected at the curbside, self-hauled refuse, commercial refuse, and C&D waste. Materials such as septage, contaminated soil, wood waste, and concrete are not included as these are diverted from landfilling. The January – June 2020 disposal data has been extrapolated for the remaining 2020 period. The composition and source of the projected 2020 waste stream is unknown, which is identified through the diagonal green and grey stripes in the bar chart shown in the figure.

The amount of industrial waste generated in the region and accepted at RDKS facilities has increased over the past couple of years as shown in Figure 6. This trend is assumed to continue and is discussed further in Section 4.2. The industrial waste is considered out-of-service-area waste and charged a surcharge for disposal.

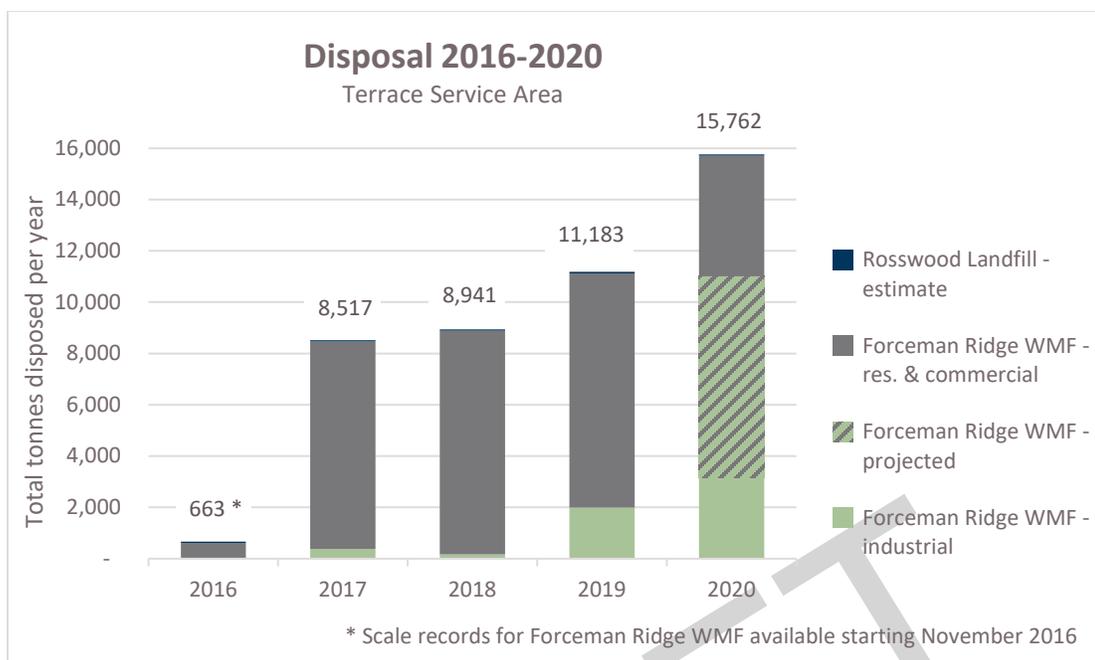


Figure 6: Disposal trend in Terrace Service Area 2016-2020⁷.

The Ministry has moved towards measuring waste reduction and diversion through disposal per capita, rather than a diversion rate, because of the widespread difficulty in measuring and accounting for all diversion. According to the Ministry, the average British Columbian disposed of 472 kg of waste in 2016. The provincial government has set a goal of lowering the annual municipal solid waste disposal rate to 350 kg per person by 2020/2021. The per capita disposal rate in the RDKS in 2017 was 562 kg, including waste from industrial camps. The disposal rate in the Terrace Service Area was 424 kg per capita the same year; this lower rate is attributed to lower waste generation rather than more diversion. The annual disposal rate per capita has increased since 2017 as shown in Figure 7. The increase is to a large extent attributed to the increased tonnages accepted from industrial sources.

⁷ The landfill at Forceman Ridge WMF began to receive waste in November 2016. Rosswood Landfill accepts about 50 tonnes per year (0.5% of the waste disposed in the Service Area).

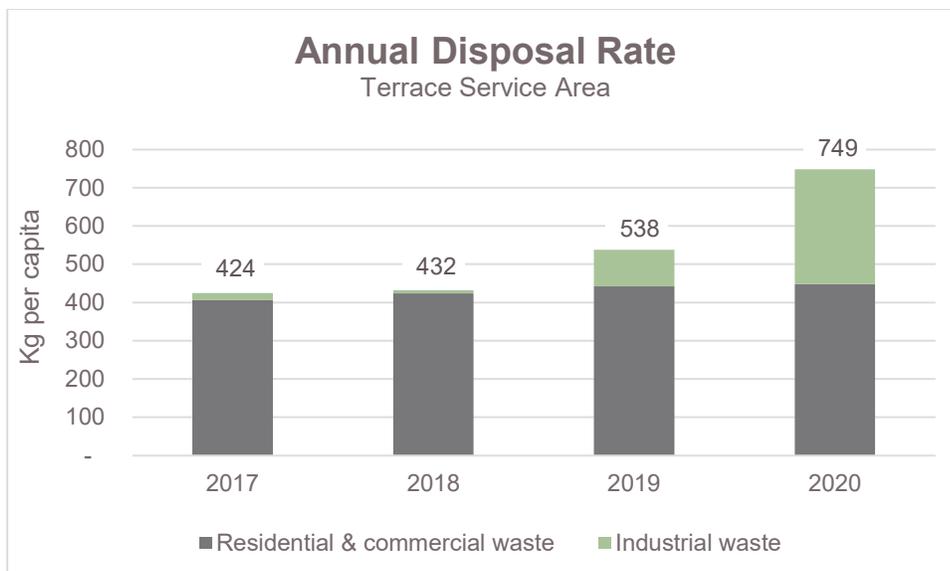


Figure 7: Annual waste disposal rate in the Terrace Service Area.

The RDKS conducted a large-scale waste composition study at the Thornhill Transfer Station in 2017. The study examined representative samples from three different waste streams:

- Single family residential waste collected through the curbside garbage collection programs.
- ICI waste collected by large commercial haulers and waste generated by small businesses that self-haul their waste.
- Self-hauled residential garbage and small loads of C&D waste.

Three waste categories made up 55% of the overall waste stream accepted at Thornhill Transfer Station: Paper (19.6%), compostable organics (19.5%), and plastic (15.3%). All three waste categories are restricted from disposal in the Terrace Service Area.

The composition of residential waste collected curbside from the City of Terrace and from the RDKS was similar, however the waste stream collected by the City of Terrace contained more organics than that collected by the RDKS in the Greater Terrace Area. The self-hauled residential garbage and small loads of C&D waste accepted at the Transfer Station were dominated by non-compostable organics (i.e. dimensional lumber), building materials, glass, and bulky objects (i.e. furniture, carpet); together making up 94.5% of the self-hauled waste stream. Figure 8 shows the waste composition of the three waste streams audited.

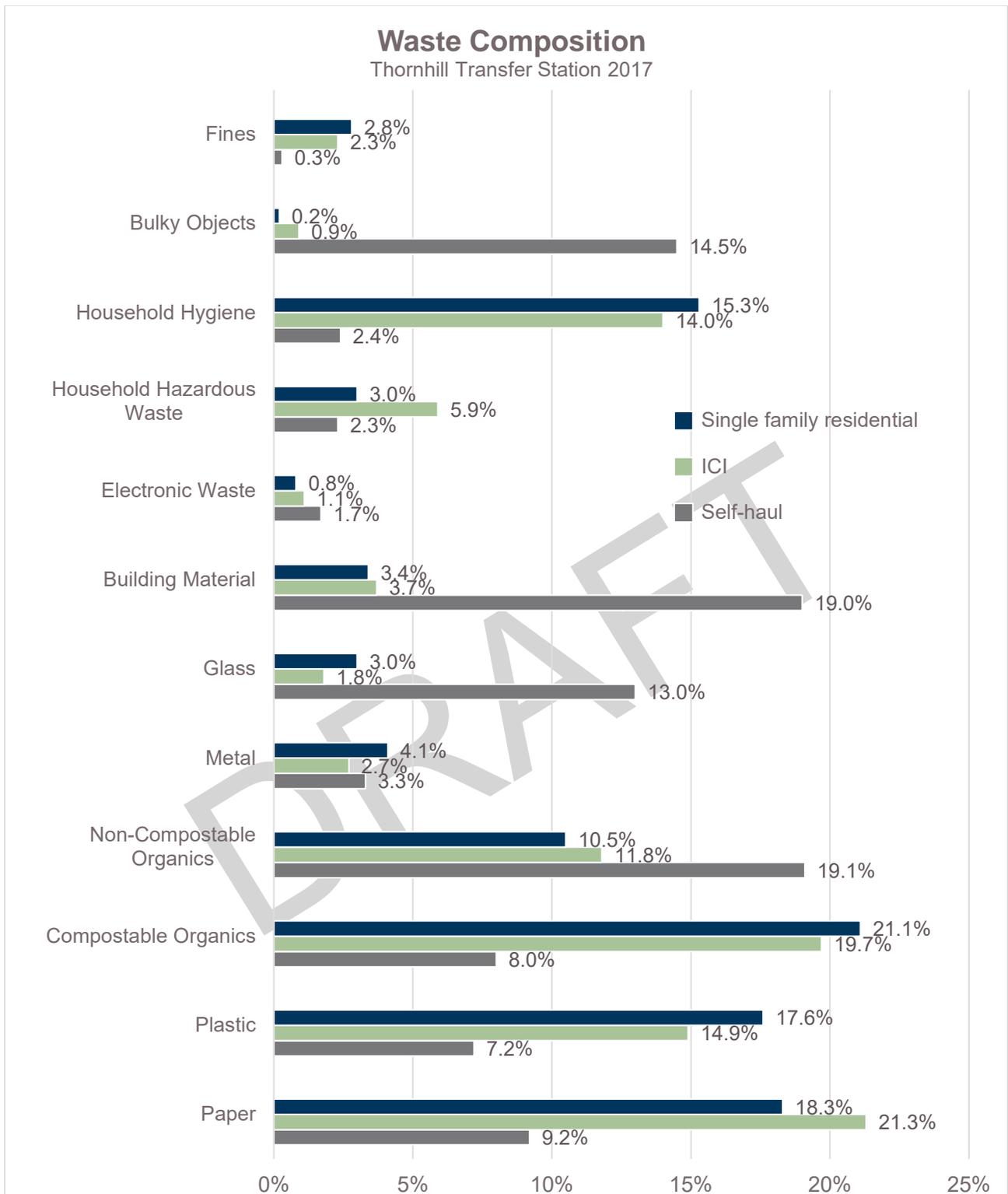


Figure 8: 2017 Waste composition at Thornhill Transfer Station.

The 2017 estimated diversion rate in the Terrace Service Area was 43% for the residential sector, 27% for the ICI sector, 21% for dropped off waste and 5% for the C&D sector.

The amount of waste generated and disposed in the Hazelton and Highway 37 North Service Area is tracked based on volume estimates and landfill airspace consumption as none of the facilities are equipped with weigh scales. Figure 9 shows the estimated disposal at the three RDKS landfills located in the Hazelton and Highway 37 North Service Area for 2017-2019⁸. Some of the waste generated by Electoral D residents is collected in Telegraph Creek and disposed in the Dease Lake Landfill owned by MOTI. In addition, some waste generated by Electoral Area A residents is disposed in the New Aiyansh Landfill. Neither of these two waste streams are accounted for in the tonnages presented in Figure 9 below.

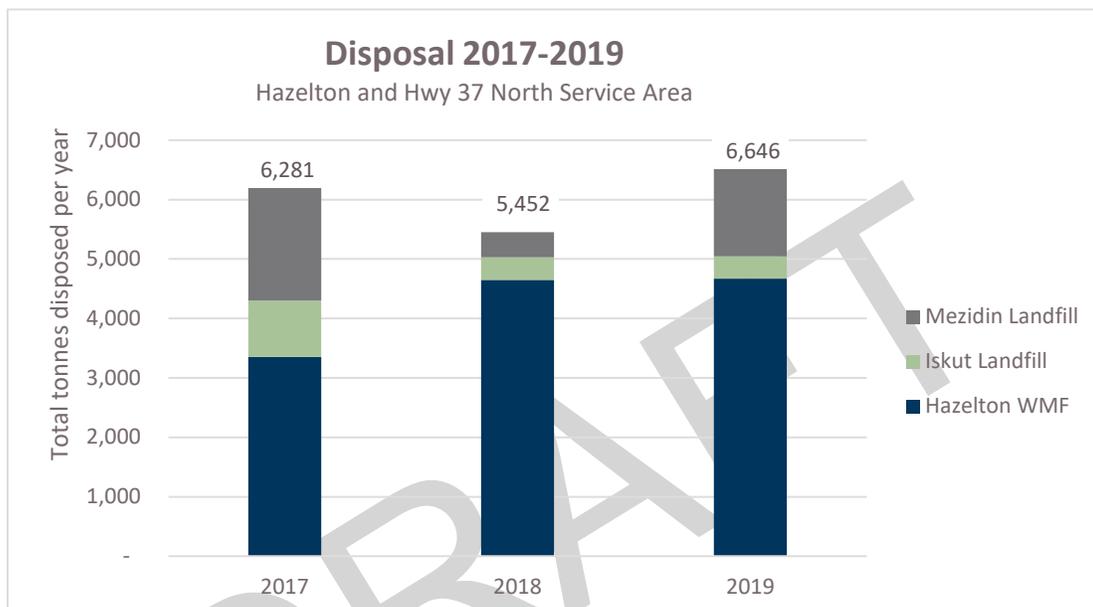


Figure 9 Waste tonnages disposed in Hazelton and Highway 37 North Service Area in 2017, 2018, and 2019.

The annual disposal rate per capita is significantly higher compared to the Terrace Service area. The annual disposal rate is estimated to around 1,000 kg per capita and no clear trend can be seen over the time period 2017-2019. The RDKS is tracking received waste based on waste source. Most waste received comes from residential sources since there is less ICI activity in the Hazelton and Highway 37 North Service Area compared to the Terrace Service Area. At this point, only small quantities of industrial waste are accepted in the Service Area.

A waste composition study has not been performed in the Service Area and there are currently no disposal restrictions on organic materials nor are there centralized composting facilities within the service area. Segregation of wood waste is, however, encouraged at all RDKS facilities. In comparison to the Terrace Service Area, fewer households receive curbside collection of recyclables, and there is little financial incentive for residents and businesses to divert in the Hazelton and Highway 37 North Service Area since tipping fees do not apply to most waste categories.

⁸ As reported in the 2017, 2018, and 2019 Annual Reports for the respective landfills.

The average disposal rate per capita in the RDKS is presented in Figure 10 below. The disposal rate has increased from 562 kg per capita in 2017 to 672 kg per capita in 2019. The disposal rate is expected to increase to over 800 kg in 2020, this based on the significant increase in industrial waste accepted at the landfill at Forceman Ridge WMF. When excluding the industrial waste accepted in the Terrace service area the annual disposal rate per capita has seen a small increase over the past four years.

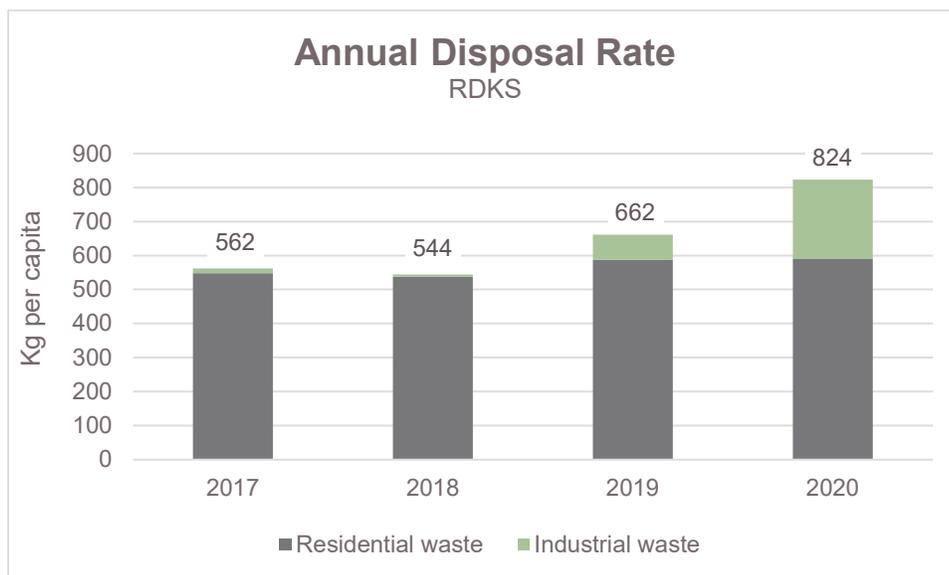


Figure 10 Average disposal rate per capita in the RDKS.

4.2 External Trends Affecting Solid Waste Management

The RDKS may be exploring an expansion of the RDKS solid waste service areas as a part of the short- and long-term solid waste management strategies included in this SWMP (see Section 5). Depending on the decisions made, adoption of one or more of the strategies may result in an increase of accepted and disposed waste between 100 and 7,000 tonnes annually, most of which would be landfilled at the landfill at Forceman Ridge WMF or Meziadin Landfill.

The RDKS has seen an increase in accepted industrial soil and waste over the past couple of years. The RDKS is anticipating an increase in C&D waste during the construction period of the LNG Canada project. Some of this material is likely to be accepted at the landfill at Forceman Ridge WMF.

The landfill at Forceman Ridge WMF is projected to accept 1,200 tonnes of non-C&D and non-soil waste in 2020, this is 800 tonnes more than the year prior. The RDKS is anticipating the amount of waste accepted will increase substantially as construction is ramping up and they are expecting over 4,000 tonnes annually to be accepted over the next 10 years.

5. PROPOSED NEW STRATEGIES – PREFERRED OPTIONS

The proposed strategies for the new SWMP were developed through a series of PTAC meetings, each presenting potential management options on key solid waste related topics. This section presents existing and proposed new strategies, which have been prioritized by PTAC members. The strategies follow the order of the pollution prevention hierarchy. The preferred options will be shown in the order of priority given by PTAC. Options/strategies that were given higher priority with a shorter implementation period (first five years of implementation) are presented before those with on-going implementation and lower priority strategies with an implementation beyond 5 years.

The key issues or opportunities behind each proposed strategy are summarized together with the proposed implementation time frame, role and responsibility for its implementation, and anticipated capital and annual costs (see Figure 11). Annual costs include staff operational time provided in staff hours, or if a specific action is likely to be outsourced, an estimated cost is presented.



Figure 11 Overview of infographic used to summarize important information around each proposed Strategy.

5.1 Reduction

The RDKS already promotes waste reduction and reuse of resources through outreach and education programs. The RDKS also has a tip fee reimbursement program at the Thornhill Transfer Station allowing not-for-profit societies (e.g. second-hand stores) to apply for reimbursement of tipping fees paid for disposal of unsuitable donations received through their operation.

This section provides a summary of the five proposed additional strategies and initiatives that aim to further reduce waste generation as shown below.

#	Strategy	Short-term Priority (Year 1-5)	Long-term Priority (Year 6-10+)
1	Lobby for reduction of single-use items and packaging	✓	
2	Encourage voluntary reduction of single-use items by businesses	✓	
3	Promote waste reduction ideas through targeted campaigns	✓	✓

#	Strategy	Short-term Priority (Year 1-5)	Long-term Priority (Year 6-10+)
4	Support member municipalities with implementation of bylaw(s) to eliminate the distribution of single-use items		✓
5	Adopt a preferential purchasing policy for green procurement that supports reduce, reuse and the use of recycled content		✓

STRATEGY 1. Lobby for Reduction of Single-Use Items and Packaging

Issue/Opportunity: In recent years, many local and regional governments across Canada and in BC have been investigating and implementing policies to limit the amount of single-use items being generated, which require management through curbside collection, litter management in public spaces, disposal, etc.

Although the waste composition study conducted in 2017 did not specifically identify single-use items, it showed the quantity of several categories of plastics in the landfilled waste. It is estimated that up to 13% of the total waste stream could be single-use plastic items for which use could have been avoided or that could have been directed to recycling facilities.

In June 2019, the Prime Minister announced that the Government of Canada is taking additional steps to reduce plastic waste coming from the use of single-use items through the Canada-wide Action Plan on Zero Plastic. In July 2019, the Ministry issued the Plastics Action Plan, a policy consultation paper on how the Province intends to address plastic waste. Although the Ministry has not announced any immediate plans for future EPR products, it has indicated that products such as single-use items are on the priority list for future inclusion.

Suitable organizations for the RDKS to lobby for a provincial EPR program include, for example, the Provincial Recycling Roundtable that governs recyclable materials and products in association with EPR programs, the Union of British Columbia Municipalities, and the North Central Local Government Association.

- 1A. Lobby for the implementation of a provincial EPR program for single-use items and packaging-like products via suitable organizations.
- 1B. Lobby the Federal government to enact regulations regarding the distribution of single-use items.



Year 1-5



CapEx: \$n/a
OpEx: \$n/a

RDKS staffing: 30 hrs

Responsibility: RDKS with support from member municipalities

STRATEGY 2. Encourage Voluntary Reduction of Single-use Items by Businesses

Issue/Opportunity: Although this is a priority area for the Ministry, it will take time to develop provincial measures to reduce the distribution and use of single-use items. Meanwhile the RDKS can encourage businesses to voluntarily change their distribution practices and find alternatives to using single-use items. Food safety needs to be carefully considered for dish share programs or bring your own container, or so called BYOC, programs. There is potential to learn from and adapt Metro Vancouver’s targeted reduction campaigns.

- 2A. Encourage businesses to voluntarily commit to a reduction of the use of single-use items by developing and implementing outreach campaigns.
- 2B. Support member municipalities to encourage events free of single-use items.
- 2C. Collaborate with Northern Health to develop a guidance document on how to set up a BYOC program.



Year 1-5



CapEx: \$n/a
OpEx: \$n/a

RDKS staffing: 100 hrs

Responsibility: RDKS and member municipalities

STRATEGY 3. Promote Waste Reduction Ideas through Targeted Campaigns

Issue/Opportunity: In Canada the annual waste generation per person from residential sources continues to increase. Although the disposal rate has plateaued, the amount of residential waste diverted through recycling and organics diversion initiatives has almost doubled. Continued efforts are needed to promote waste reduction ideas. The RDKS wants to make reduction of clothing waste a high priority since clothing makes up almost 9% of residential curbside garbage and outreach campaign materials are readily available from Metro Vancouver.

- 3A. Promote waste reduction ideas using some of the readily available campaigns.



Year 1-10



CapEx: \$n/a
OpEx: \$n/a

RDKS staffing: 100 hrs

Responsibility: RDKS with support from member municipalities and/or by non-profit groups

STRATEGY 4. Support Member Municipalities with Implementation of Bylaw(s) to Eliminate the Distribution of Single-use Items

Issue/Opportunity: Many Canadian municipalities including Victoria and Vancouver have begun implementing restrictions on the use, distribution, and sale of certain single-use items. However, in July 2019 the B.C. Court of Appeal struck down the City of Victoria’s proposed ban on single-use plastics on the basis that the bylaw was based on environmental grounds, which fall under provincial jurisdiction, and not a business regulation, which would fall under the purview of the city. Since then, the District of Saanich amended its single-use plastic bag ban and had it approved by the Ministry⁹.

If supported by the Ministry, the RDKS can support member municipalities with developing and implementing reduction strategies and bylaw(s) to eliminate the distribution of single-use items. The support could include providing educational information and outreach resources to implement bylaws.

4A. Support member municipalities with developing and implementing reduction strategies and bylaw(s) to eliminate the distribution of single-use items, provided it is supported at a provincial level.

Year 6-7

\$

CapEx: \$n/a
OpEx: \$n/a
RDKS staffing: 50 hrs

Responsibility: RDKS and member municipalities

STRATEGY 5. Adopt a Preferential Purchasing Policy for Green Procurement that Supports Reduce, Reuse and the Use of Recycled Content

Issue/Opportunity: The RDKS and its member municipalities purchase significant volumes of products. Recognizing the influence that government can have within the marketplace, the RDKS wants to commit to reducing products such as single-use plastic items in its operations. The RDKS believes it is important for the organization to ‘walk the talk’ and perform actions consistent with the guiding principles of the SWMP. The RDKS already has some green procurement practices in place informally. Formalizing through policy is lower priority, yet important to ensure a more consistent approach across all departments.

⁹ <https://vancouverisland.ctvnews.ca/saanich-bylaw-banning-plastic-bags-approved-by-b-c-government-1.4851224>



5A. Adopt a preferential purchasing policy for green procurement that supports the 3Rs (reduce, reuse and recycling) and encourage member municipalities to follow its example.



Year 6-7



CapEx: \$n/a
OpEx: \$n/a
RDKS staffing: 50 hrs

Responsibility: RDKS and member municipalities

DRAFT

5.2 Reuse

Reuse is the second preferred option in the 5R pollution prevention hierarchy. Reuse includes use of materials and products as originally intended without any modification (e.g. furniture, electronics) or repurposing of materials, such as used lumber and other building materials or reclaimed wood or textiles through so called up-cycling. Reuse in this context also includes repair or refurbishing of items to retain their value, usefulness, and function.

There is a strong interest for more reuse opportunities in the region. Almost half of all respondents in the April 2019 Public Solid Waste Survey expressed their support for more reuse opportunities in their communities.

The RDKS maintains recycling directories including reuse options (e.g. second-hand stores) for all communities within the RDKS service areas. There are no directories for areas outside the service areas, such as Kitimat and Dease Lake.

This section provides a summary of the four proposed additional strategies and initiatives for reuse in the region.

#	Strategy	Short-term Priority (Year 1-5)	Long-term Priority (Year 6-10+)
6	Develop a contractor's guide to reduction, reuse and recycling	✓	
7	Support reuse through share sheds and reuse stores	✓	✓
8	Support reuse and/or repair events	✓	✓
9	Reuse of construction and demolition materials through deconstruction		✓

STRATEGY 6. Develop a Contractor's Guide to Reduction, Reuse and Recycling

Issue/Opportunity: The RDKS published a brochure in 2017 that provides information on Construction Site Waste Management. The brochure focuses on recycling by listing which materials are prohibited and restricted from disposal at RDKS facilities, and alternatives to disposal for those materials. Reduction and reuse are not addressed in the brochure. The RDKS will encourage local reuse opportunities of construction and demolition materials by updating the contractor's guide.

- 6A. Update the current information brochure to include reduce and reuse options for renovation, construction and demolition contractors and home owners.



Year 1



CapEx: \$n/a
OpEx: \$n/a
RDKS staffing: 50 hrs

Responsibility: RDKS

STRATEGY 7. Support Reuse through Share Sheds and Reuse Stores

Issue/Opportunity: Landfill scavenging is prohibited at all RDKS solid waste facilities unless prior written approval from RDKS Administration is given. There are many examples of regional districts and municipalities establishing or supporting share sheds or reuse stores for residents to drop off usable items that they no longer need or want. These facilities require careful management to limit public dumping and abuse, and have relatively high staffing requirements compared to the waste diversion potential.

The RDKS will prioritize supporting and promoting existing reuse organizations. There are currently limited options in the RDKS for reuse and recycling of reusable goods, including renovation, construction, and demolition materials. The RDKS will assess the feasibility of partnering with the private sector, including non-profit agencies, to set-up reuse store(s) at suitable waste management facilities. In Hazelton, where there currently are no reuse opportunities, there may be an opportunity to partner with the Skeena Supported Employment Society (Skeena Bakery) to support reuse. If support for existing reuse organizations or partnering opportunities is not feasible, the RDKS may want to allow space at an RDKS facility for reusable materials to be stored for collection by a partner and sold elsewhere.

The RDKS may need to amend their Solid Waste Regulation Bylaw to allow for the separation and storage of reusable goods and materials within the landfill buffer zone.

- 7A. Support and promote existing reuse organizations by, for example, including organizations in Dease Lake and Kitimat not currently included in the RDKS directory of reuse options.
- 7B. Assess the feasibility to establish space at the waste management facilities for collection of reusable goods to be offered for sale or for free either by the RDKS or in partnership/support from private industry.
- 7C. If deemed necessary, amend the RDKS Solid Waste Regulation Bylaw to facilitate the reuse of waste materials at the current waste management facilities.



Year 1-10



CapEx: \$10K*
OpEx: \$n/a
RDKS staffing: 100 hrs

Responsibility: RDKS

** Estimated cost for sea can storage in Year 2.*

STRATEGY 8. Support Reuse and/or Repair Events

Issue/Opportunity: An alternative to a permanent, physical facility is to host, support or promote reuse and repair events throughout the Regional District. There is strong movement toward reuse, repair and community sharing of resources throughout BC. Of high priority is for the RDKS to seek federal or provincial funding to run a pilot for a regional reuse event. Annual or bi-annual reuse events could be organized by the RDKS with limited involvement or investment. The pilot can identify if items are best suited to be collected at the curb or at set locations such as waste management facilities.

- 8A. Apply for provincial or federal funding to run a pilot for a regional reuse event to assess community uptake and feasibility for a wider implementation.
- 8B. Organize, sponsor or promote reuse through local flea markets or trunk sales.
- 8C. Promote local repair cafés and similar events through sponsorship or marketing.



Year 1-10



CapEx: \$n/a
OpEx: \$n/a
RDKS staffing: 60 hrs

Responsibility: RDKS

STRATEGY 9. Reuse of Construction and Demolition Materials through Deconstruction

Issue/Opportunity: The RDKS Waste Regulation Bylaw prevents people from removing or salvaging any materials from a waste management facility except with the prior written approval of the Solid Waste Services Coordinator. This currently limits reuse of solid waste at the RDKS waste management facilities. The RDKS recognizes the strong public support for more reuse options and is proposing actions to increase the reuse of C&D materials. These are actions in addition to encouraging reuse of C&D materials via STRATEGY 6 and STRATEGY 7.

- 9A. Facilitate reuse through deconstruction by promoting markets for reusable building materials.
- 9B. Assess the feasibility of having member municipalities require building deconstruction through a cost benefit analysis and support implementation if deemed feasible.



Year 6-10



CapEx: \$n/a
OpEx: \$n/a
RDKS staffing: 60 hrs

Responsibility: RDKS and member municipalities

DRAFT

5.3 Recycling

Current recycling initiatives undertaken by the RDKS include:

- Drop-off options for select recyclables, select Extended Producer Responsibility (EPR) products¹⁰ and other divertible materials (e.g. organic waste, metal, clean wood) at landfills and transfer stations. Materials accepted vary by facility based on alternative services available within the private sector.
- Curbside collection of printed paper and packaging (PPP) recyclables for Electoral Area residents in the Terrace Solid Waste Service Area.
- Covering costs for transportation and processing of commercial cardboard collected at RDKS facilities in the Hazelton & Highway 37 North Service Area.
- Promotion and education of drop-off and collection options for recyclables and EPR products, for example via the RDKS website, an electronic directory and brochures for specific service areas (e.g. the Recycling Directory for the Terrace Area as shown in Figure 12), and how-to guides for ICI recycling and organics collection. The RDKS also provides residents with recycling service information through the Recycle Coach desktop and smart phone apps of the “MyWaste™” platform.



Figure 12 Example of information provided in RDKS recycling directory.

The RDKS is proposing six additional strategies and initiatives that aim to further improve recycling and reduce the associated costs in the region.

#	Strategy	Short-term Priority (Year 1-5)	Long-term Priority (Year 6-10+)
10	Lobby for improved accessibility to EPR programs	✓	
11	Increase diversion of C&D waste	✓	
12	Provide continuous diversion education and outreach programs coupled with enforcement	✓	✓
13	Support ICI to encourage waste diversion	✓	✓
14	Reduce recycling costs	✓	✓
15	Improve drop-off options for household hazardous waste where gaps exist	✓	✓

¹⁰ The Recycling Regulation requires producers of designated products to develop programs for their end-of-life collection and recovery of materials. Producers of designated products often appoint a stewardship agency to collect EPR products.



STRATEGY 10. Lobby for Improved Accessibility to EPR Programs

Issue/Opportunity: There are currently over 20 regulated provincial EPR programs covering a wide range of material categories, which are mainly focused on the residential sector and not the ICI sector. The RDKS will lobby for inclusion of new materials, regardless of the source (residential or ICI), under the Recycling Regulation. For small rural communities in the Region, recyclables management could be simplified and made more efficient and more economical if PPP from the ICI sector is managed together with residential sources, which are currently regulated. The RDKS is currently having to subsidize the recycling costs of some ICI PPP. The producers of these materials should be required to be part of the solution provided by stewardship agencies.

The RDKS provides drop-off options for a number of EPR and stewardship products and aims to offer drop-off options where there are gaps in private collection services. In 2018 the RDKS articulated concerns to the Stewardship Agencies of BC (SABC) with regards to the rural accessibility standard used by stewardship agencies.

The RDKS has identified a number of issues it plans to bring up with the Ministry, including infrequent collection service offered by stewards, need for increased access to more drop-off locations for some additional EPR products, flexibility to accept bulk-drop off of PPP from rural communities at Recycle BC depots, and need for more public education on how and where to return EPR products. For example, consumers of EPR products often drop off materials in unlabeled containers or outside opening hours, at depots accepting used lubricating oil, antifreeze, and oil filters.

Specific materials that the RDKS would like to see regulated include

- ICI PPP
- Hazardous wastes, such as mercury, diesel fuel, acid, household cleaners, garden products, and pesticides, which are currently not included as regulated materials.
- Tires on rims and oversize tires (large off-road tires and industrial tires)
- Bulky furniture and mattresses
- Drywall

- 10A. Lobby for inclusion of new materials, regardless of the source (residential or ICI), under the Recycling Regulation, in particular ICI packaging and printed paper.
- 10B. Lobby for better service levels for existing EPR materials in rural areas.



Year 1-5



CapEx: \$n/a
OpEx: \$n/a
RDKS staffing: 40 hrs

Responsibility: RDKS

STRATEGY 11. Increase Diversion of C&D Waste

Issue/Opportunity: The construction and demolition sector is responsible for 17% of the total amount of waste disposed and only limited quantities are being diverted from landfilling. Approximately 5% diversion is currently achieved through segregation of clean wood waste and beneficial use of contaminated soil at the Forceman Ridge Landfill. A waste composition study has not been performed for commercial C&D loads accepted at the landfill. However, the RDKS understands that loads often contain significant portions of compostable organics, such as clean wood (e.g. dimensional lumber and pallets) as well as asphalt roofing materials, identified through visual inspection. Bylaws are already in place requiring diversion of certain C&D materials, including organic materials such as yard waste, tree branches and compostable structural wood waste; or via variable tipping fees; however these bylaws can be updated and can be enforced better.

- 11A. Under existing bylaws specify identified divertible materials, such as clean wood waste and asphalt shingles, and classify these as restricted materials. Amendments to the tipping fee structure to encourage segregation of these materials may also be warranted.
- 11B. Create a C&D waste working group with parties from the C&D sector and if suitable from industry.
- 11C. Perform a waste composition study of commercial C&D waste to identify and quantify recyclable waste streams.
- 11D. On a regular basis conduct research to identify local diversion options for asphalt shingles, drywall and clean wood and implement pilot if deemed feasible.
- 11E. Explore the need for operational material at the landfills and the options to use shingles and/or concrete for beneficial use and implement if deemed feasible.



Year 1-5



CapEx: \$n/a
OpEx: \$20,000*
RDKS staffing: 200 hrs

Responsibility: RDKS

* Estimated consulting budget for waste composition study in Year 1.

STRATEGY 12. Provide Continuous Diversion Education and Outreach Programs Coupled with Enforcement

Issue/Opportunity: Do Your Part receives recyclables from RDKS facilities, private service providers of collection for ICI properties, and self-hauled recyclables from residential and ICI customers. Do Your Part Recycling reported an 8.5% contamination rate in the RDKS residential curbside recycling. Participants in the Recycle BC recycling program cannot exceed contamination rates of 3%, which increases the importance of continued outreach and education, especially to those stakeholders receiving Recycle BC funded services or wishing to become part of the Recycle BC program. The City of Terrace's curbside collection program is partly funded by Recycle BC, while the curbside collection offered by the RDKS is currently not Recycle BC funded. The RDKS is actively working to increase the level of financial support provided by Recycle BC for residential recycling.



There is a need for continued education and outreach to further reduce contamination of organic waste going to the Terrace compost facility (e.g. bags and other products marketed as biodegradable, plastic bags and vegetable wraps). The compost product is currently too contaminated to be sold to the public or used in public gardens.

More education is needed to clarify:

- who manages and pays for recycling
- where non-curb-side materials can be recycled
- where the recyclables go and how they are processed

Education and outreach play a key role in waste reduction, diversion, and proper disposal of residual waste. The RDKS plans to prioritize data collection, such as curbside or set-out audits, coupled with education and will collaborate with haulers over the long term to develop a strategy to pass down fines to offenders.

- 12A. Perform audits, such as set-out audits, to assess curbside participation rates or curbside audits to assess the waste composition of the different waste streams, coupled with in-person education and out-reach. Issuing fines may be considered for repeat offenders.
- 12B. Regularly update existing communication plan. Develop performance targets and monitor the performance of the implemented communication plan.
- 12C. Provide contractor education pertaining to bylaw requirements, contract requirements and the importance of reporting of non-compliance and contaminated waste loads. Implementing incentives through contract adjustments or other means might be warranted.
- 12D. In collaboration with waste haulers, develop a common approach allowing haulers to pass down fines for contaminated waste loads to the waste generator.



Year 1-10



CapEx: \$/n/a
OpEx: \$/n/a
RDKS staffing: 200 hrs

Responsibility: RDKS

STRATEGY 13. Support ICI and Encourage Waste Diversion

Issue/Opportunity: The main economic activities within the RDKS include mining, forestry, energy, fishing, and transportation. The area is home to several mills and multiple hydro projects and there are a number of industrial work camps in the area. New mining, forestry, oil and gas and/or energy developments in the region may result in a significant increase in waste from industrial work camps and construction.

Recognizing that 73% of the waste generated by the ICI sector in the region is landfilled and only 27% diverted, the RDKS needs to address the ICI sector with different approaches than the residential sector.

A recent waste composition study showed that the largest component of ICI waste was paper (21.3%), followed by compostable organics (19.7%), plastic (14.9%), and household hygiene (14.0%).

This strategy warrants an on-going focus. Clear communication is needed to ensure the ICI sector meets applicable bylaw requirements. The RDKS is wanting to establish an ICI waste diversion working group with a focus on helping the biggest waste generators with diverting more waste, reducing business costs, and identifying circular economy opportunities. For example, the RDKS may be able to facilitate the capture of surplus food from grocery stores or hotels to go to people in need via not-for profit organizations, or as animal feed.

- 13A. Support private collectors with an updated hauler information package to encourage better ICI recycling amongst its customers.
- 13B. Promote available waste diversion opportunities and provide or support diversion education for commercial generators.
- 13C. Establish an ICI waste diversion working group to focus on the largest waste generators and find waste diversion solutions that can benefit many parties. In collaboration with waste haulers, develop a common approach allowing haulers to pass down fines for contaminated waste loads to the waste generator.



Year 1-10



CapEx: \$n/a
OpEx: \$n/a

RDKS staffing: 50 hrs

Responsibility: RDKS and member municipalities

STRATEGY 14. Reduce Recycling Costs

Issue/Opportunity: The RDKS pays for the collection, transportation, and processing fees for all PPP recycling services it offers, with the exception of the Recycle BC-supported depot at the Stewart Transfer Station for residential streams. The RDKS wants to emphasize the importance of stewardship agencies taking more responsibility for recycling in rural communities (refer to concerns and options as outlined in STRATEGY 10). The RDKS is actively working to increase the level of financial support provided by Recycle BC for residential recycling at the Kitwanga Transfer Station and for curbside collection in the Greater Terrace Area. The District of New Hazelton has also expressed interest in support from the RDKS in maximizing partnerships with stewardship agencies.

Cardboard from the ICI sector is not eligible for Recycle BC funding. In the parts of the region that are not eligible for Recycle BC financial support, the cost to collect and transport PPP to a processing facility and ship it to market is extremely high.

As a last resort, the RDKS would like to have the ability to set an upper cost threshold for acceptable recycling costs. If the cost threshold is exceeded, the RDKS would consider alternative lower cost options. This could include composting or burning of cardboard and paper, or landfilling of recyclables. Once the recycling costs exceed the agreed threshold, alternatives to recycling are

implemented until recycling costs can be reduced below the agreed threshold. A cost threshold should be revisited every year. Landfilling or burning of any recyclables would only be undertaken during undue financial hardship.

This strategy warrants an on-going focus and further actions to reduce other system costs are included in STRATEGY 33 for cost recovery options. Initial focus to reduce recycling costs will be placed on collaboration with stewards and establishing local processors and markets to reduce transportation costs.

- 14A. Maximize the partnership opportunities with stewardship agencies, such as for residential recycling at the Kitwanga Transfer Station and for curbside collection in the Greater Terrace Area.
- 14B. Undertake an efficiency review of the management of recyclables within the region.
- 14C. Pursue composting of paper products at locations where deemed feasible.
- 14D. If deemed necessary, set cost threshold when alternative lower cost options (e.g. composting, burning or landfilling) are pursued until recycling is no longer cost prohibitive.



Year 1-10



CapEx: \$n/a
OpEx: \$n/a
RDKS staffing: 50 hrs

Responsibility: RDKS with support from member municipalities

STRATEGY 15. Improve Drop-off Options for Household Hazardous Waste where Gaps Exist

Issue/Opportunity: Although many household hazardous waste materials are regulated EPR materials, many of them still have limited drop-off options available in parts of the region, especially outside the Greater Terrace Area. The 2017 waste composition study showed that 4.7% of the overall garbage arriving at the Thornhill Transfer Station is made up of household hazardous waste¹¹.

Generally, no liquids (e.g. used oils/antifreeze, paints, pesticides, flammables, fertilizer) are collected at any RDKS facilities. The RDKS promotes drop-off options available at private facilities but does not have an agreement with stewardship agencies such as Product Care or the B.C. Used Oil Management Association (BCUOMA). With the exception of Do Your Part Recycling located in Terrace, which accepts pesticides, flammable liquids, fertilizers for Product Care, there are no drop-off options for these hazardous wastes in the entire region.

¹¹ Hazardous waste included batteries, light bulbs, oil & antifreeze, paint, pesticides, medications, biohazard, needles, solvents, other hazardous waste and other non-hazardous waste, such as containers with product remaining (cosmetics, nail polish, health and beauty aids, sunscreen, bug spray, Windex, other relatively benign household cleaners/products).

Continuous focus needs to be given to the management of household hazardous waste considering the potentially high environmental impact of improper disposal. The RDKS wants to prioritize areas with limited options for hazardous waste collection. The RDKS wants to implement periodic roundup events to collect hazardous waste materials in locations where permanent drop-off options are not available or feasible to establish.

- 15A. Offer recurring roundup collection events for hazardous waste in potential partnership with stewardship agencies.
- 15B. Offer permanent drop-off options for targeted EPR materials at suitable transfer stations through partnership with stewardship agencies.
- 15C. Develop a targeted campaign for hazardous household waste with the purpose of informing residents and businesses of proper material management aimed to capture more materials.



Year 1-10



CapEx: \$n/a
OpEx: \$10 - 70K*
RDKS staffing: 100 hrs

Responsibility: RDKS with support from member municipalities

** \$60,000 assumed for HHW events every two years. An annual cost of \$10,000 assumed for contractor to remove non-EPR materials from permanent drop-off sites. Although only regulated EPR materials would be accepted at permanent drop-off points, the RDKS anticipates that some non-EPR materials would be dropped off by residents. Assumed low capital costs as permanent drop-off infrastructure can be funded by stewards.*

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5.4 Organics Diversion & System Efficiency

Current organics¹² diversion initiatives undertaken by the RDKS include:

- Curbside organics collection to residents in the Terrace Service Area who live outside the City of Terrace.
- Operation of a composting facility at the Forceman Ridge WMF using an in-vessel Gore™ cover system capable of processing 4,000 tonnes of organic material per year (see Figure 13).
- Production of compost, which will initially be used in the closure process of the Thornhill Landfill and potentially the Kitwanga Landfill to reduce costs of bringing in external material. Eventually the composting process will generate Class A compost, which may also be made available to the community for use on community gardens or parks.



Figure 13: Composting facility at Forceman Ridge Waste Management Facility.

The RDKS is proposing four additional strategies and initiatives that aim to improve organics diversion through composting and overall system efficiency to increase waste diversion.

#	Strategy	Short-term Priority (Year 1-5)	Long-term Priority (Year 6-10+)
16	Establish organics processing capacity at suitable facilities	✓	✓
17	Amend solid waste bylaw to encourage waste diversion	✓	✓
18	Support communities to introduce curbside collection	✓	✓
19	Incentivize improved contractor and diversion performance	✓	✓

¹² Organic waste includes yard and garden waste, food scraps (including cooked foods, meat, dairy, grains, fruits and vegetables), and food-soiled paper/cardboard.

STRATEGY 16. Establish Organics Processing Capacity at Suitable Facilities

Issue/Opportunity: There is a need to establish additional organics processing capacity in targeted areas. Organic waste is costly to transport long distances and the RDKS has identified composting as a potential additional service at the Hazelton WMF. There is already space allocated for a future compost program at the Hazelton WMF. Based on feedback from local residents there is also a need for compost in local gardens.

The District of Stewart has looked at composting options for the Stewart area, but has not progressed due to concerns of wildlife protection and the lack of current suitable infrastructure. The RDKS wants to support the District of Stewart to identify feasible options for the community.

To make composting more affordable for small rural communities, the RDKS wants to lobby for the Organic Matter Recycling Regulation (OMRR¹³) to also include uncontaminated paper products (including cardboard) as approved feedstock, where these products are cost prohibitive to recycle. Provided a useful soil amendment can still be achieved and this option would allow rural communities to compost cardboard and paper if it is cost effective.

- 16A. Lobby for the regulation governing organics management to include uncontaminated paper products as approved feedstock where recycling is cost prohibitive.
- 16B. Issue a request for qualifications to assess suitable designs and costs to establish a composting facility at Hazelton WMF, and implement if deemed feasible.
- 16C. Support the District of Stewart to assess the feasibility of a small-scale compost facility and support implementation if deemed feasible.



Year 1-10



CapEx: \$200K*
OpEx: \$10 - 200K*
RDKS staffing: 60 hrs

Responsibility: RDKS with support from member municipalities

** \$200,000 consulting support in Year 2 & 3. \$200,000 in Year 5 for construction of compost facility at Hazelton the site. Some of the capital costs may be covered by external funding. \$10,000 as annual operating costs after Year 5.*

STRATEGY 17. Amend Solid Waste Bylaw to Encourage Waste Diversion

Issue/Opportunity: Within the Region there are a number of bylaws in place to encourage waste diversion and responsible management of waste materials. The RDKS has three different solid waste related bylaws and local municipalities have their own municipal bylaws. Controlled, restricted and prohibited materials are identified in the RDKS bylaws. However, the materials

¹³ The OMRR governs the construction and operation of compost facilities, and the production, distribution, storage, sale and use of biosolids and compost. It provides guidance for local governments and compost and biosolids producers, on how to use organic material while protecting soil quality and drinking water sources.

included in these categories vary between the two service areas. By eliminating differences between the two, the RDKS can create a more cohesive and fair waste management system.

The RDKS is able to issue fines between \$100 and \$1,000 for disposal offences. However, to date there has been limited follow up on reported non-compliances. A relatively common alternative approach to issuing fines for contaminated loads is to apply surcharges. Discounts could also be applied to materials that are of value or needed for operations, such as lower tipping fees for metal and organic materials in the Terrace Service Area.

The RDKS is committed to ensuring that recycling options exist and that sufficient resources are available to enforce bylaw amendments.

- 17A. Amend the definition of organic materials and develop a separate category for clean wood waste. Include this new category under restricted material under both Bylaw 671 and 688.
- 17B. Amend the list of prohibited materials to be as consistent as possible between the two service areas, granted diversion options exist and are developed.
- 17C. Adjust the current fee schedule to encourage increased diversion. Consider surcharges on contaminated loads.
- 17D. Adjust the current fee schedule to allow agreements with stewards (e.g. Major Appliance Recycling Roundtable).



Year 1-10



CapEx: \$n/a
OpEx: \$n/a
RDKS staffing: 50 hrs

Responsibility: RDKS with support from member municipalities

STRATEGY 18. Support Communities to Introduce Curbside Collection

Issue/Opportunity: Many communities offer curbside collection for recyclables, organics, and residual waste (garbage). The RDKS wants to take on a facilitating role to encourage communities to offer consistent services, where possible and financially justifiable. For example, this could involve facilitating the communication between member municipalities and Recycle BC to seek opportunities to form partnerships with the steward and obtain financial support to cover recycling costs. Support to communities can be provided granted recycling/organics processing facilities exist.

18A. Support the implementation of curbside collection of recyclables and/or organics in communities in the region.



Year 1-10



CapEx: \$n/a

OpEx: \$n/a

RDKS staffing: 40 hrs

Responsibility: RDKS with support from member municipalities

STRATEGY 19. Incentivize Improved Contractor and Diversion Performance

Issue/Opportunity: The RDKS facility contractors are currently bound to perform certain tasks under their contract's conditions. Additional incentives may be warranted to further improve the performance under these contracts, for example to increase diversion at RDKS facilities. The RDKS will regularly assess the need for more incentive based contracts.

19A. Explore the option of introducing an incentive based program to improve contractor and diversion performance through a combination of education, increased contractor involvement and potentially financial rewards.



Year 1-10



CapEx: \$n/a

OpEx: \$10K in Yr 3

RDKS staffing: 20 hrs

Responsibility: RDKS with support from member municipalities

5.5 Residual Waste Management at Existing Facilities

Current initiatives undertaken by the RDKS to manage residual waste at existing facilities include:

- Curbside collection of recyclables, organic waste, and residual waste in two service areas (Electoral Areas C and E).
- Acceptance of waste from curbside collection vehicles, residential self-hauled materials, and commercial customers at three transfer stations in Thornhill, Stewart and Kitwanga.
- Operation of five landfills owned by the RDKS.

Residents in other areas are serviced by member municipalities or by First Nation operations departments. Private companies offer subscription-based collection to both residential and commercial customers not serviced by local governments.

In addition to the landfills owned by the RDKS, there are five operational landfills owned by other parties located in Kitimat (municipal and private), Dease Lake, New Aiyansh, and Telegraph Creek.

The RDKS is proposing nine additional strategies and initiatives that aim to further improve residual waste management at existing facilities in the region.

#	Strategy	Short-term Priority (Year 1-5)	Long-term Priority (Year 6-10+)
20	Set limits for solid waste accepted from outside the service area	✓	
21	Reduce greenhouse gas emissions	✓	
22	Effectively use landfill airspace	✓	
23	Improve public accessibility to existing solid waste management facilities	✓	
24	Deliver operational services in-house	✓	
25	Close selected small landfills and replace with transfer stations or other suitable waste management services	✓	✓
26	Engage with and communicate to citizens on waste management	✓	✓
27	Set limits and reporting requirement for liquid waste		✓
28	Assist in the prevention of illegal dumping		✓

STRATEGY 20. Set Limits for Solid Waste Accepted from Outside the Service Area

Issue/Opportunity: The RDKS solid waste management facilities are partially funded through tax requisition collected from the two service areas. Out-of-service-area waste generators (e.g. industrial waste) are currently charged a 25% surcharge for disposal at RDKS facilities which is set with the intention of offsetting the tax funded portion of the landfill airspace used.

When the landfill at Forceman Ridge WMF, located in the Terrace Service Area, was designed, the volumes of potential incoming industrial waste were estimated as much lower than current situation. Landfill airspace is being consumed at a faster rate than initially projected, largely due to the current LNG Canada project, and the RDKS has no obligation to accept out-of-service-area waste.

With current funding models for the two service areas, the Terrace Service Area is experiencing greater tipping fee revenues as more waste is accepted from industrial sources in this service area. The Hazelton and Highway 37 North Service Area is not experiencing the same financial benefit as less industrial waste is accepted at the facilities in this service area.

With large industrial work camps in the region and the LNG construction project in Kitimat there is a potential opportunity to accept more industrial waste from industry over the next few years and increase additional revenue through collection of tipping fees. Preference will be given to industrial materials that do not unnecessarily take up landfill airspace, such as organics, clean wood, and contaminated soil that can be used on-site as cover material.

The RDKS will first focus on developing a policy for out-of-service-area waste and then on determining the value of airspace and setting surcharges for out-of-service-area waste based thereon.

- 20A. Develop a policy that specifies the type and maximum amount of out-of-service-area waste accepted.
- 20B. Reassess the value of landfill airspace and significantly increase the surcharge for out-of-service-area waste.
- 20C. Develop policy to allow disposal from neighbouring Regional Districts.

Responsibility: RDKS



Year 1-5



CapEx: \$n/a
OpEx: \$10K*
RDKS staffing: 20 hrs

* \$10,000 consulting support in Year 4 to reassess value of airspace.

STRATEGY 21. Reduce Greenhouse Gas Emissions

Issue/Opportunity: The RDKS reports annually on GHG emissions relating to solid waste management, including landfill gas (LFG) management and organic waste composting in an effort to reduce organizational GHG emissions. The collection system for LFG has not yet been established at the Forceman Ridge facility and will not be legally required until 2069 according to the 2017 Forceman Ridge Regional Landfill Design, Operating, and Close Plan (DOCP). Installation may be required prior to 2069, considering the current trend of increased volume of industrial waste accepted at the site. Early installation of an active LFG management system can be considered a voluntary GHG emission reduction initiative which can generate tradable carbon credits for the RDKS. The RDKS will focus on continuing current efforts to reduce both the generation and

emission of GHG's and investigate opportunities for carbon credits and revenue sources. Any revenue obtained from carbon credits will need to be allocated to the service area where the carbon credits were generated.

21A. Assess eligibility for carbon credits for GHG reduction efforts in solid waste operations, assess cost- benefit of pursuing.



Year 1-5



CapEx: \$n/a
OpEx: \$15K*
RDKS staffing: 30 hrs

Responsibility: RDKS

* \$15,000 consulting support to perform cost-benefit analysis in Year 5.

STRATEGY 22. Effectively Use Landfill Airspace

Issue/Opportunity: Remaining airspace at existing landfills, such as the Forceman Ridge WMF, should be considered invaluable as siting of a new facility or expansion of the current one may be challenging. For example, airspace should not be consumed by landfilling recyclable materials. The RDKS wants to review the current operations, such as procedures, waste placement, and compaction to identify areas of improvement, set goals, and work with the contractor in reaching these goals including potentially incentivize.

- 22A. Enforce existing bylaws to control the waste disposed and minimize unnecessary airspace consumption.
- 22B. Review the landfill operations including the use of operational soil and alternative daily covers and waste placement and compaction. Based on findings consider providing, recommending, or requiring additional contractor training to improve operations.
- 22C. Consider segregating materials, such as asphalt shingles, to be used for landfill operations thereby offsetting some need for operational soils while saving landfill airspace.



Year 1-5



CapEx: \$n/a
OpEx: \$n/a
RDKS staffing: 100 hrs

Responsibility: RDKS

STRATEGY 23. Improve Public Accessibility to Existing Solid Waste Management Facilities

Issue/Opportunity: One of the main comments received through the April 2019 Public Solid Waste Survey relates to facility accessibility. There is a strong interest in having increased access to waste management facilities. The primary focus of the RDKS will be to review current operating hours at selected facilities to enhance accessibility. The review should consider operating hours of private facilities that offer solid waste services, contractor agreements, and risk of increased illegal dumping.

- 23A. Adjust operating hours at transfer stations based on public feedback without raising operational costs significantly, by maintaining the total hours of operation.
- 23B. Develop seasonal operating hours at targeted RDKS facilities.



Year 1-3



CapEx: \$n/a
OpEx: \$n/a
RDKS staffing: 50 hrs

Responsibility: RDKS

STRATEGY 24. Deliver Operational Services In-house

Issue/Opportunity: The RDKS has made significant capital investments in its solid waste management infrastructure. Ensuring that operations are optimized to get maximum benefit from the infrastructure and services is a priority. The RDKS has spent significant resources managing operations contractors at some sites, in particular remote ones. Operations contracts are challenging to secure for remote facilities. There are very few proponents willing to bid on operational contracts for remote facilities, and as a result of limited competition the operational costs of these facilities become inflated.

In the short term, the RDKS will assess the cost-benefit of in-house vs. contracted staff for facility operations, taking into account current contracts and existing contractor relationships.

- 24A. Assess the cost-benefit of using contractor vs. in-house staff to operate RDKS facilities, and transition to in-house service if determined to be beneficial.
- 24B. For facilities operated by contractors, review contract incentives to better incentivize waste diversion and site cleanliness.



Year 1-5



CapEx: \$n/a
OpEx: \$15K*
RDKS staffing: 30 hrs

Responsibility: RDKS

* \$15,000 for cost-benefit assessment in Year 4.

STRATEGY 25. Close Selected Small Landfills and Replace with Transfer Stations or Other Suitable Waste Management Services

Issue/Opportunity: The RDKS operates some smaller landfills, which typically require significant costs to operate and maintain on a per tonne basis. Due to the limited amount of waste disposed and fixed costs associated with landfilling, the cost per tonne of waste landfilled is considerably higher than at a larger landfill. There are opportunities to reduce operating costs to the RDKS by closing some of the smaller landfills and establishing transfer stations at these sites. This approach was already taken by the RDKS at Kitwanga, where a transfer station was established in 2017 in conjunction with the closure of the existing landfill.

There are currently two smaller landfills that could benefit from being replaced by transfer stations or other waste management services, such as curbside collection. These two landfills are Rosswood Landfill and Iskut Landfill.

The Rosswood Landfill, which is approximately a 30-minute drive north of Terrace, is intended for residential MSW generated from the Rosswood community of 150 - 200 residents. There are no tipping fees at this landfill. The RDKS has observed that some Terrace Service Area residents drive out to this landfill to avoid paying tipping fees at the Thornhill Transfer Station. If the landfill were to close, and a transfer station built, waste from Rosswood would be sent to the Forceman Ridge WMF.

The Iskut Landfill is also relatively small, and services both the Iskut Band and residents of Electoral Area D. The RDKS has experienced on-going issues with maintaining compliance with the site's operational certificate. In collaboration with Iskut Band, the RDKS wants to investigate the cost/benefits of closing the current landfill and establishing a transfer station or exploring other suitable solid waste management service options, that can offer improved waste diversion opportunities for the area. There is a potential to collaborate with Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC) to offset some of the capital and operating costs. The RDKS will need to assess the feasibility of accepting waste at the Meziadin Landfill from a transfer station in Iskut.



The RDKS will focus on maintaining the level of service at these two landfills, while basing a decision for closure on the remaining life of the smaller landfills, and the related cost of expansion or closure (e.g. environmental controls, transfer station construction and operation, and hauling of waste).

25A. Assess cost/benefit of closing Rosswood and Iskut landfills by determining community need for transfer stations or other suitable solid waste management services and implement if deemed feasible.

25B. Consider options to continue to operate the Iskut Landfill for demolition and land clearing waste.



Year 1-10

\$

CapEx: \$1M*
OpEx: \$300K*
RDKS staffing: 100 hrs

Responsibility: RDKS

** \$30,000 cost-benefit analysis in Year 1, \$270,000 consulting support to plan and design a transfer station in Year 3-5, and \$1million for one transfer station in Year 6.*

STRATEGY 26. Engage with and Communicate to Citizens on Waste Management

Issue/Opportunity: The RDKS has identified the need to increase public education about the region’s landfills, landfill closures and gas capture programs, and the need for responsible residual waste management. The RDKS Board has set a strategic mandate for the organization as a whole to increase efforts to engage and communicate with residents. This strategy should be given on-going focus, while carefully considering staff requirements and the effectiveness of the strategy.

26A. Establish an education site at the Thornhill Closed Landfill to educate the public and schools in responsible management of residual waste.

26B. Offer tours at suitable waste management facilities.



Year 1-10

\$

CapEx: \$n/a
OpEx: \$n/a
RDKS staffing: 100 hrs

Responsibility: RDKS



STRATEGY 27. Set Limits and Reporting Requirement for Liquid Waste

Issue/Opportunity: Septage is accepted for treatment at Forceman Ridge and Hazelton Waste Management Facilities as well as Meziadin and Iskut Landfills. The types of liquid waste accepted are outlined in RDKS bylaws. There are currently only three liquid waste haulers with active disposal permits (two for the treatment facility at Forceman Ridge WMF and the one for the facility at Hazelton WMF). There are no records of active permits at the Meziadin or Iskut Landfills. The reporting requirement for the haulers is currently limited to specifying quantity and whether the waste originates from residential or commercial sources. Current reporting requirements provide the RDKS with limited control of the liquid waste accepted, its source and quality, which reduces the ability to enforce applicable bylaws.

The RDKS will develop policy to provide clear direction and unbiased decision making for acceptance of liquid waste and focus on improved record keeping at the landfills. RDKS will ensure that it has a Liquid Waste Management Plan that includes the liquid waste management facilities located at RDKS solid waste management facilities.

- 27A. Develop policy that requires liquid waste haulers to report additional details on the quantity, source and type of waste disposed at facility (as part of annual permit).
- 27B. Improve record keeping as it pertains to active permits and liquid waste accepted at the landfill at Hazelton WMF and Iskut and Meziadin Landfills.
- 27C. Develop education program aimed at generators of liquid waste.

Responsibility: RDKS



Year 6-10



CapEx: \$n/a
OpEx: \$n/a
RDKS staffing: 50 hrs

STRATEGY 28. Assist in the Prevention of Illegal Dumping

Issue/Opportunity: Illegal dumping¹⁴ is an ongoing issue for the RDKS. Materials found at illegal dump sites are often those that would have been collected in a residential curbside program or could have been dropped-off free of charge at the appropriate depots. Some of the main factors influencing illegal dumping include the perceived inconvenience to access disposal facilities, and a lack of education around available disposal options, and avoidance of anticipated disposal costs. Residents may be unaware of convenient disposal options in their area.

¹⁴ "Illegal dumping" refers to the intentional disposal of waste materials in unauthorized locations.

- 28A. Utilize the existing illegal dumping working group to develop an illegal dumping strategy aimed to improve tracking and reduce the number of illegal dumping incidents.
- 28B. Implement strategy including survey of illegally dumped materials, public outreach, and enforcement.



Year 6-10



CapEx: \$/n/a

OpEx: \$/n/a

RDKS staffing: 100 hrs

Responsibility: RDKS and member municipalities

DRAFT

5.6 Waste Management at New Facilities or in New Service Areas

The RDKS consists of two solid waste management Service Areas: Terrace Service Area and Hazelton and Highway 37 North Service Area. The two Service Areas were established in July 2015 under Bylaws 657¹⁵ and 658¹⁶. The entire region does not receive solid waste services from the RDKS; however, approximately 75% of the population is provided solid waste management services by the RDKS. The majority of the population not receiving solid waste management services by the RDKS reside in the District of Kitimat.

The RDKS is proposing three strategies for expanding the current service areas and for establishing new solid waste facilities within these areas.

#	Strategy	Short-term Priority (Year 1-5)	Long-term Priority (Year 6-10+)
29	Develop new agreement between the RDKS and the District of Kitimat, including provisions for use of the landfill at Forceman Ridge WMF	✓	
30	Include Dease Lake in the RDKS Service Area	✓	✓
31	Increase RDKS service area to include Telegraph Creek Landfill (and transfer station)		✓

STRATEGY 29. Develop New Agreement between the RDKS and the District of Kitimat, including Provisions for Use of the Landfill at Forceman Ridge WMF

Issue/Opportunity: The District of Kitimat (Kitimat) is currently not included in either of the two RDKS Service Areas. Waste originating from Kitimat is therefore considered out-of-service-area waste and is subject to a surcharge if received at an RDKS solid waste management facility.

In 2019, Kitimat developed a Solid Waste Management Strategy and Action Plan with the objective of developing and selecting options to improve Kitimat's waste diversion and disposal system. The Plan was approved in February 2020. Kitimat owns the Kitimat Landfill, which is operated by a private contractor under contract. All residential and commercial residual waste generated and collected in Kitimat is disposed at the site. Waste is also accepted from Kitimaat Village (Haisla Nation). Kitimat estimates there is approximately three years of remaining capacity in Phase 2 of the Kitimat Landfill and they are not able to expand into Phase 3 without significant capital investment in design and operational improvements.

Kitimat recently approved the introduction of three stream curbside collection starting in 2021. The RDKS and Kitimat may be able to align curbside collection contracts in the future, which should be a fairly smooth transition as the collection programs are similarly designed. Currently the same contractor is providing curbside collection services in both areas. Collaboration through Service

¹⁵ Kitimat-Stikine Hazeltons and Stewart Area Solid Waste and Recyclable Material Management Service Establishment Bylaw No. 657, 2015.

¹⁶ Kitimat-Stikine Terrace Service Area Solid Waste and Recyclable Management Service Establishment Bylaw No. 658, 2015.

Area expansion or a Forceman Ridge WMF user agreement would generate additional revenue through tipping fees and/or tax requisition for the RDKS. The additional revenue would offset some of the increased operating cost associated with the resulting increased service population and waste tonnages. The potential revenue and associated costs would need to be assessed in detail prior to a potential service area expansion or the development of user agreement.

- 29A. Assess the costs and benefits of including Kitimat in the RDKS Greater Terrace curbside collection program. Develop cost sharing between Kitimat and RDKS to create a system fair to all.
- 29B. Assess the costs and benefits of including Kitimat in the RDKS Terrace Service Area, building a transfer station in Kitimat, and hauling waste to Forceman Ridge WMF. Develop options for cost sharing and responsibilities related to the Kitimat Landfill and the new transfer station.
- 29C. Assess the costs and benefits of permitting Kitimat to access the landfill at Forceman Ridge WMF without joining the Terrace Service Area. If deemed the best option, develop an agreement between the two parties.



Year 1-5



CapEx: \$TBD*

OpEx: \$25K*

RDKS staffing: 150 hrs

Responsibility: RDKS and District of Kitimat

** \$25,000 for cost-benefit study in Year 1. The study will determine the associated capital cost.*

STRATEGY 30. Include Dease Lake in the RDKS Service Area

Issue/Opportunity: The Dease Lake Landfill is owned by Ministry of Transportation and Infrastructure (MOTI) and operated by a local road maintenance contractor. The landfill receives approximately 100 tonnes of waste a year (2017 estimate) from the surrounding community; however, there is no scale to confirm accurate quantities. Waste is also accepted from Telegraph Creek. MOTI has expressed an interest in handing landfill ownership and operation over to the RDKS. The RDKS is not interested in taking over the landfill ownership or liability. If the RDKS takes over operational responsibility of the Dease Lake Landfill, the landfill would become a facility under the Hazelton and Highway 37 North Service Area. The MOTI would be responsible for capital costs for the landfill, including future closure and post-closure costs.

There are existing environmental impact liability issues with this site. If the RDKS takes over operational responsibility of Dease Lake Landfill, two options would need to be considered: either continuing the landfill operations or assisting MOTI with the landfill closure and the establishment of a transfer station. The RDKS would operate the transfer station and be responsible for hauling of waste to a disposal site (most likely to Meziadin Landfill). The funding and ownership of a potential transfer station would need to be considered and assessed.

30A. Assess feasibility of developing an agreement with MOTI where RDKS is responsible for operations of the landfill and any future transfer station, while landfill liability remains with MOTI, and implement if deemed feasible.



Year 6-8



CapEx: \$n/a
OpEx: \$40K*

RDKS staffing: 50 hrs

Responsibility: RDKS, Tahltan/Telegraph Creek Band, and MOTI

* \$40,000 in consulting fees in Year 6.

STRATEGY 31. Increase RDKS Service Area to Include Telegraph Creek Landfill (and Transfer Station)

Issue/Opportunity: Telegraph Creek Landfill is owned by Telegraph Creek Band, which is part of the Tahltan Nation. Waste is no longer accepted for disposal at the Telegraph Creek Landfill and Telegraph Creek is currently hauling one 40 cubic yard bin of waste to Dease Lake Landfill on a weekly basis.

The RDKS contributes funding to the Telegraph Creek Band for facility use by Electoral Area D residents through a cost-sharing agreement. The RDKS has had limited input on long-term development of the site and are open to increasing the level of involvement in matters relating waste management.

The closure of the Telegraph Creek Landfill and the hauling of waste may impact the RDKS, especially if the Dease Lake Landfill is included in the RDKS service areas as discussed in STRATEGY 30. The RDKS would like to have a higher level of involvement in the planning and decision-making process for the Telegraph Creek Landfill and transfer station.

31A. Increase the RDKS's involvement in the planning and decision-making process for the Telegraph Creek Landfill and transfer station. Review the current agreement and propose an amendment, if warranted.



Year 6-7



CapEx: \$n/a
OpEx: \$n/a

RDKS staffing: 50 hrs

Responsibility: RDKS, Tahltan/Telegraph Creek Band

5.7 Cost Recovery and Financial Sustainability

The RDKS consists of two solid waste management Service Areas: Terrace Service Area and Hazelton and Highway 37 North Service Area. These were established in July 2015 under Bylaws 657¹⁷ and 658¹⁸. The two RDKS Service Areas have different cost recovery models tailored to each area. Each Service Area is financed separately, and the cost recovery is outlined in Section 4 of each bylaw. Cost and revenue sharing is currently not possible between the two service areas under current bylaws as per the Local Government Act (*Part 11, Division 2, Items 378-380*).

The RDKS' solid waste management system has undergone some major changes over the past few years, including the construction of a new landfill, the expansion of another with significant upgrades, and the construction of three new transfer stations; two with integrated recycling depots. Additional changes include the closure of four landfills—two RDKS-owned and two owned by member municipalities. These upgrades have required significant capital investments. The upgrades and added services have also resulted in increased and difficult-to-predict operational costs in both service areas.

The Terrace Service Area is currently operated with a surplus; however, the Hazelton and Hwy 37 North Service Area is experiencing higher than expected capital and operating costs and an annual deficit.

During the planning process a Financial Working Group (FWG) met twice to discuss the current cost recovery models, options to improve the cost recovery, and the member communities' ideas, concerns, and observations. The FWG is made up of financial representatives from member municipalities and First Nations within the RDKS.

The development of cost recovery options was directed by the five Guiding Financial Principals developed in collaboration with the RDKS and the FWG. These five principals are:

1. Strive for long-term financial sustainability
2. Take advantage of economies of scale, where possible
3. Provide good and equal level of service
4. Provide equitable service to all residents in the same service area
5. Improve operating efficiencies of current solid waste management services and facilities

The RDKS is proposing four additional strategies and initiatives that aim to further improve the current cost recovery and financial sustainability in the region.

¹⁷ Kitimat-Stikine Hazelton and Stewart Area Solid Waste and Recyclable Material Management Service Establishment Bylaw No, 657, 2015.

¹⁸ Kitimat-Stikine Terrace Service Area Solid Waste and Recyclable Management Service Establishment Bylaw No. 658, 2015.

#	Strategy	Short-term Priority (Year 1-5)	Long-term Priority (Year 6-10+)
32	Review cost recovery model within the service areas to provide fair cost sharing	✓	✓
33	Reduce costs by improving operational efficiencies	✓	✓
34	Increase revenue through tax requisition and tipping fees	✓	✓
35	Implement indirect cost sharing between service areas		✓

STRATEGY 32. Review Cost Recovery Model within the Service Areas to Provide Fair Cost Sharing

Issue/Opportunity: Over the past five years, facility operating costs in both service areas have increased substantially, as shown in Figure 14 below. The cost per capita to operate the solid waste facilities in the Hazelton and Highway 37 North Service Area is about three to four times higher than the cost of operating the facilities in the Terrace Service Area. The significantly higher per-capita facility operating cost is due to the substantially smaller population base, the greater number of solid waste facilities, and the greater distance between facilities in the Hazelton and Highway 37 North Service Area.

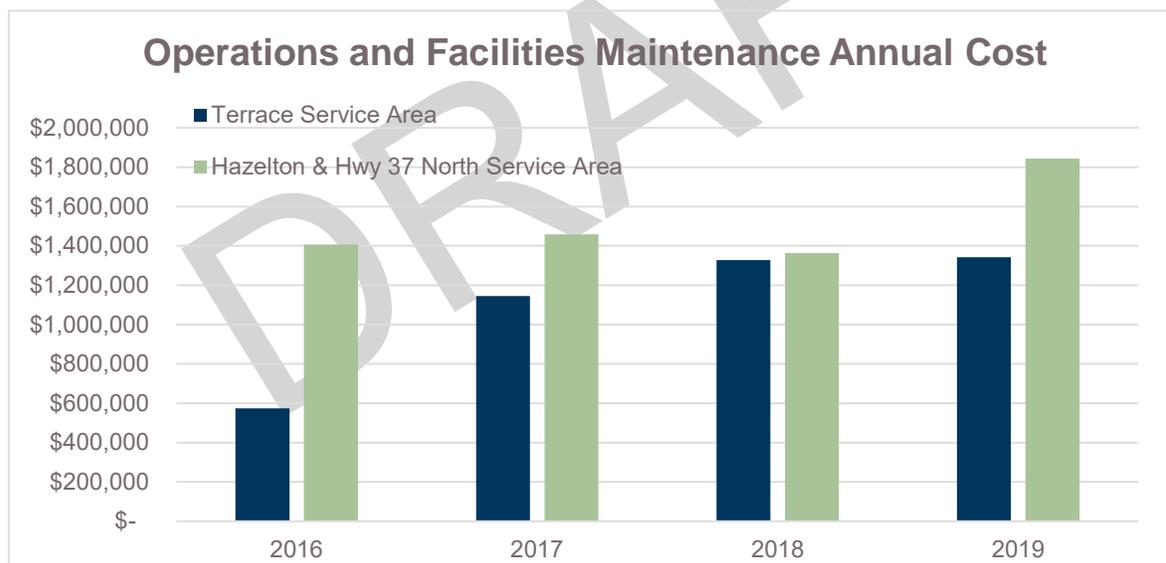


Figure 14: Annual facility operations and maintenance costs for service areas (2016-2019).

Based on estimated waste tonnages accepted in the Hazelton and Highway 37 North Service Area where no weigh scales exist, the per-tonne facility operating costs in the Hazelton and Highway 37 North Service Area are likely more than double the per-tonne costs in the Terrace Service Area. The per-tonne disposal cost in the Terrace Service Area has decreased over the past three years which is primarily due to the increase in landfilled waste from industrial and commercial sources. The Hazelton and Highway 37 North Service Area does not have the same access to revenue through disposal of industrial waste at this time. The per-tonne disposal cost increased for the

Hazelton and Highway 37 North Service Area between 2018 and 2019 which is mainly the result of operating costs related to the Stewart Transfer Station.

The two Service Areas were established in 2015 prior to the completion of the major capital investments and service changes in the regional district, and both have different funding models. The RDKS may want to review the long-term sustainability of the cost recovery models, considering it has been five years since the two Service Areas were formed and operating costs have increased substantially since that time.

The RDKS wants to develop a number of key performance indicators (KPIs) considering cost per capita, household or business, and cost per tonne of waste generated or disposed. The KPIs will assist with evaluating the current cost recovery models against the Guiding Financial Principals outlined in the section above. KPIs normalize costs to a common denominator (such as per capita or household), which allows for a standard comparison of costs between service areas. Using normalized KPIs is particularly important when comparing costs between two different service areas with significantly different populations.

There may not be a clear understanding of the high cost of waste management among residents and business owners and the RDKS wants to enhance messaging around waste management costs.

32A. Develop KPIs to assist in evaluation of the current cost recovery models between service areas. Adjust cost recovery models to facilitate a continued service delivery fair to all residents and businesses.

32B. Include messaging around waste management cost in RDKS's public education efforts.



Year 1-10

\$

CapEx: \$n/a
OpEx: \$20K*
RDKS staffing: 50 hrs

Responsibility: RDKS

* \$20,000 in consulting fees in Year 5.

STRATEGY 33. Reduce Costs by Improving Operational Efficiencies

Issue/Opportunity: Directing efforts to reduce cost is a natural way to balance the budgets. Cost reductions can sometimes be found through improved operating efficiencies. Cost saving efforts should be considered in conjunction with potential impacts to levels of service or quality provided. All cost saving efforts should aim to avoid compromising the existing service levels being provided to residents.

Many areas for improvement have been identified during the SWMP development process and are included as part of specific strategies that relate to the waste hierarchy of reduce, reuse, recycle and residual management. One important example is that the RDKS wants to increase the number



of service agreements with stewardship agencies such as Recycle BC and other stewards with the aim of offset some collection costs.

The service area that struggles with the highest operational costs is the Hazelton and Highway 37 North Service Area. It is currently operating with a deficit, mainly due to high transportation costs, higher than expected operating costs, hauling distances, and the limited market for recyclable materials.

The RDKS is committed to reducing costs by focusing on the following areas:

- Reviewing material management including compaction and co-hauling/back-hauling of waste material.
- Reassessing the operating hours of selected facilities, the use of RDKS equipment, and the allocation of staffing to specific tasks.
- Exploring the opportunity of performing tasks in-house using RDKS staff members, where currently contracted staff are used.
- Developing long-term goals and strategies, including potential investment aimed to increase diversion and bylaw adherence.
- Closing selected small landfills and establish transfer stations or explore other suitable solid waste management services (refer to STRATEGY 25).

The RDKS acknowledges that all major system changes come at a price and this must be taken into account before implementing changes aimed to achieve overall cost savings.

- 33A. Complete detailed hauling analysis to assess the feasibility of alternative co-hauling and back-hauling options.
- 33B. Perform a cost-benefit analysis of baling and/or compacting recyclable materials hauled from the Hazelton and Highway 37 North Service Area.
- 33C. Regularly revisit agreements and operating procedures to explore options to reduce cost while maintaining service level and quality.
- 33D. Develop long-term goals and strategies, including potential investment, with the purpose of reducing cost in the long term.
- 33E. Complete operational reviews for each facility, which would include a review of staffing, past operating performance, primary operating costs, and identification of areas for improvement.

Responsibility: RDKS



Year 1-10



CapEx: \$n/a
OpEx: \$100,000*
RDKS staffing: 100 hrs

* Fees for efficiency reviews over years 1 to 5.

STRATEGY 34. Increase Revenue Through Tax Requisition and Tipping Fees

Issue/Opportunity: The RDKS's main revenue sources include requisition through taxation, cost-sharing agreements with First Nation communities, tipping fees, and curbside collection fees. These revenue sources are aimed at covering the solid waste management operations, whereas loans and grants are used to pay for capital projects.

Since the Forceman Ridge WMF started accepting waste in 2017, the amount of industrial waste and soil accepted at the facility has increased substantially. Under the existing bylaw, soil that is suitable for cover is charged a reduced rate of \$55.00/tonne, whereas contaminated soil is charged \$65-\$78/tonne, depending on the level of contamination. General refuse is charged \$110/tonne. Industrial waste and any waste generated outside the Service Area is charged a 25% surcharge in addition to the posted tipping fees. Recent financial modelling and assessment of the surcharge indicate that the RDKS may want to increase the surcharge, from 25% to around 100%, for the industrial waste and waste generated outside the Service Area to ensure sufficient funds exist to expand into the next landfill phase once the current one has reached capacity.

The RDKS wants to further review the surcharge applied to industrial waste, out-of-service-area waste, as well as the tipping fee charged for soil material to ensure that sufficient funding is available to expand into the next landfill phase while paying for landfill operations. A revised surcharge for industrial waste and tipping fee for soil will be developed with consideration of the following:

- The full cost of the landfill, including planning, design, operations, closure, and post-closure costs. As a best practice, the tipping fee should be established to cover all landfill costs over its entire lifespan (including the post-closure period). By considering the full cost of the landfill, the value of the remaining available airspace can be quantified.
- The tipping point at which it is more economical for industry to dispose of waste at another facility or construct their own landfill.
- The benefits and costs of accepting contaminated soil at a discounted tipping fee (compared to general garbage).

The RDKS Board has voted to increase tax requisition in the Hazelton and Highway 37 North Service Area to recover the 2019 deficit (and future anticipated deficits) over the next 5 years. Additional efforts to increase revenue, particularly for the Hazelton and Highway 37 North Service Area, should be considered to reduce the cost burden on residents and businesses. Currently, there are no tipping fees charged at the Landfill at Hazelton WMF and the Meziadin Landfill (with the exception of select ICI loads). Assuming a tipping fee of \$110/tonne, up to \$650,000 could be collected annually to support funding of the increasing operating costs in the service area.

The introduction of user-pay tipping fees in the Hazelton and Highway 37 North Service Area is consistent with the Guiding Principles of the SWMP. A user-pay system incentivizes residents and businesses to divert more material and reduce the amount of waste disposed. The RDKS is considering introducing tipping fees for large waste loads only, originating from commercial sources.

Should tipping fees be considered for residential users, a model could be set up where each household in the Service Area is given a set waste volume or number of visits for free (or for an annual fee) each year and waste beyond that would be subject to tipping fees. The communities of the District of Stewart, Village of Hazelton, District of New Hazelton, Gitanyow, Gitwangak, Gitsegukla, Witset, Gitanmaax, Glen Vowell, Hagwilget, and Kispiox currently receive curbside pickup of garbage, and residents could be provided with a set number of self-haul visits for free.

It is recognized that tax requisition will likely need to be adjusted if tipping fees are introduced in the Hazelton and Highway 37 North Service Area. Communications related to the implementation of tipping fees should clearly indicate that the objective is to charge residents an amount that is more proportional to the amount of waste they are disposing (user-pay system). Communications should clearly explain the total cost to residents if revenues are collected through a combination of tipping fees and tax requisition and compare the proposed costs to the total costs that residents are paying under the current tax-based cost recovery model. It is understood that residents may feel like they are paying twice if tipping fees are introduced.

- 34A. Regularly review and update the current cost model for the landfill at Forceman Ridge WMF and adjust tipping fees for industrial and out-of-service-area waste as needed.
- 34B. Assess the costs and benefits of introducing a “user-pay” cost recovery model in the Hazelton and Highway 37 North Service Area by introducing tipping fees and adjust tax requisition based on new tipping fee structure. Implement a “user-pay” cost recovery model if deemed beneficial to residents, businesses and the RDKS while following the Guiding Financial Principals.



Year 1-10



**CapEx: \$n/a
OpEx: \$20K***

RDKS staffing: 100 hrs

Responsibility: RDKS

**\$20,000 for consulting fees over Year 4-5.*

STRATEGY 35. Implement Indirect Cost Sharing between Service Areas

Issue/Opportunity: The Terrace Service Area is currently operating in a surplus and the Hazelton and Highway 37 North Service area is operating in a deficit. Under the current bylaws and Local Government Act, cost and revenue sharing between the two service areas is not allowed.

Bylaws No. 657 and 658 were established in 2015 based on the current and projected facility operating costs and revenues at that time. As discussed above, operating costs in both service areas have increased significantly over the last five years. Tax requisition in the Hazelton and Highway 37 North Service Area has recently been increased substantially in order to cover the increasing facility operating costs.

The Forceman Ridge WMF receives a significant quantity of waste from industrial sources. The RDKS can consider the feasibility of redirecting waste to the Hazelton and Highway 37 North disposal facilities by providing incentives to industrial users to haul directly to the Meziadin Landfill

or Hazelton WMF. However, the round-trip hauling time from Terrace to the Hazelton WMF or Meziadin Landfill is a barrier to redirecting waste to these facilities. Even if industrial waste haulers are incentivized to dispose at these facilities (for example, through reduced tipping fees), the economics of hauling an additional four to six hours may be too much of a financial barrier. A feasibility assessment would need to consider the suitability to receive industrial waste, hauling distance, environmental impact and costs to producers and haulers. Consideration should be given to the remaining airspace at the receiving landfills as well as the nature of the potentially received waste, the existing landfill operating procedures, and in-place environmental controls (e.g. leachate collection and management).

The RDKS is not obligated to accept out-of-service-area waste at Forceman Ridge WMF or any other RDKS facility. The disposal alternatives for industry in the region include transfer to Oregon or Alberta, alternatives that should be compared to transfer to the Meziadin Landfill or Hazelton WMF and addressed in the feasibility assessment.

35A. Assess the feasibility of redirecting industrial waste to the Hazelton WMF and/or Meziadin Landfill to allow indirect cost sharing .



Year 6-10

\$

CapEx: \$n/a
OpEx: \$40K*
RDKS staffing: 50 hrs

Responsibility: RDKS and District of Kitimat

* \$40,000 in consulting fees in Year 6.

5.8 Key Considerations for Developing & Assessing Proposed Strategies

During the planning process, the RDKS has worked closely with the consultant, Morrison Hershfield, and the PTAC to ensure that a wide range of factors have been considered during the development of potential options, the selection of proposed strategies and determining associated actions.

Some of the key considerations used for developing and assessing proposed strategies during the planning process include:

General

- **Alignment with existing or proposed provincial strategies and initiatives** – the guiding principles proposed by the Ministry were adopted for the SWMP development.

- **The potential of a policy / waste management service solution to result in significant waste stream reduction** – the waste composition results helped to guide decisions on waste streams that the RDKS still needs to prioritize to reduce landfill disposal.
- **Potential challenges administrating policy once introduced** – in developing operational costs the RDKS has considered new staffing requirements.
- **Opportunity for public-private partnerships** – the RDKS has proposed strategies that encourage partnerships, and the PTAC was actively involved in identifying potential partnerships that may be important for specific strategies.
- **Flexibility to adapt policy to changing circumstances over time** – one of the main focus areas of the new SWMP is to improve system efficiency. The proposed strategies have been developed to allow the RDKS flexibility to adapt policy if necessary.
- **Risk of failure** – the RDKS has made it clear that the remaining landfill capacity should be considered invaluable as siting of a new facility or expansion of the current one may be challenging. The siting, design, and construction of a landfill such as the Forceman Ridge WMF would require major capital investment.

Environmental

- **Linkages to the pollution prevention hierarchy and prioritization of the first 3 Rs** – the planning process explored potential options in accordance with the pollution prevention hierarchy with focus on the 3 Rs (reduction, reuse, and recycling).
- **Facility discharges to the environment and level of associated environmental risk** – the RDKS has prioritized improved drop-off options for hazardous waste, which the RDKS wants to ensure are managed in an environmentally responsible manner.
- **Associated direct environmental benefits** – the RDKS will focus on continuing to reduce both the generation and emission of greenhouse gases associated with Forceman Ridge landfill, divert more organic waste and produce a high quality compost for local use.
- **Associated ancillary environmental benefits** – The proposed strategies include strategies to prevent waste and support the use reusable items, products with recycled content, etc.

Social

- **Associated social benefits** – the proposed strategies involve empowering residents through increased public awareness and education and increased accessibility to waste management services. Education on system costs and policy changes are important to gain community buy-in and influence behaviour changes.
- **Ability to create opportunities for new partnerships** – many partnership opportunities have been identified, many which have potential to create low-barrier workforce opportunities/training.
- **Opportunities for collaboration with neighbouring regional districts** – collaboration is likely to focus on sharing of educational and public outreach materials.
- **Opportunities for increased private sector involvement and benefit to the region** – the RDKS is proposing to establish an ICI working group to increase private sector involvement.

Many of proposed strategies involve feasibility and cost-benefit assessments for reviewing particular aspects of the waste management system prior to implementing changes. The RDKS is committed to considering environmental, social, and economic impacts as part of all assessments, in particular for studies involving the establishment of solid waste infrastructure. Only cost-benefit assessments that show a strong case are likely to lead to implementation. For cost-benefits assessments the RDKS can consider economic benefits (revenues, employment opportunities), available recycling infrastructure and end-markets for collected materials, transportation costs, RDKS staff implications, costs, potential savings and costs to taxpayers and consumers compared to alternatives, fairness and equity regarding the distribution of accrued costs and benefits, etc.

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6. SWMP FINANCING AND ADMINISTRATION

6.1 Staffing Implications

To implement the proposed strategies and achieve the diversion and disposal targets identified in this Plan, the RDKS will need to hire 1.2 of an additional full time equivalent (FTE) position dedicated to new strategies and actions over the first five year of Plan implementation. Beyond year 5, the RDKS may only require one FTE in addition to the current staff level. The RDKS currently has six FTEs dedicated to solid waste management.

6.2 Estimated Expenditures

The estimated cost of existing initiatives and proposed strategies are presented in Schedule E.

All new strategies involving municipal costs will need to be defined and approved by each municipality. Costs provided in this Plan are estimated in 2020 dollars and may not reflect actual costs at the time of implementation.

The Plan includes a number of feasibility assessments and reviews that will take place during the Plan implementation period. These reviews may result in new capital costs if the assessments deem a specific initiative as feasible. The capital costs will be identified as part of the assessments reviews and these can be included as part of the five-year effectiveness review or as part of the next SWMP update. Where suitable, the RDKS may decide to obtain approval for capital spending as part of the annual budgets process and proceed with the new initiative within the current five-year period.

6.3 Cost Recovery Mechanisms

The RDKS is divided into two service areas with two different cost recovery mechanisms. The Hazelton and Highway 37 North Service Area, which is more rural, is almost exclusively funded through tax requisition and cost-share agreements with First Nation communities. Tipping fees are only applied to waste generated by an industrial source, or waste originating from outside of the service area, to which a surcharge is applied.

The Terrace Service Area, the more urban service area, is funded through a combination of tax requisition and tipping fees with a goal of a 50/50 split. Tipping fees are charged on all waste, with a surcharge applied to industrial waste and that originating outside of the service area.

During Plan implementation, the RDKS will assess options to improve cost recovery (refer to Section 5.7). As a part of the planning process, the RDKS developed a financial model to help identify and develop a sustainable short- and long-term funding model for the Terrace Service Area. During the SWMP implementation, the RDKS anticipates some adjustments to the funding models will be made.

The RDKS will continue to use both tipping fees and taxation to fund the implementation of the SWMP. As indicated in the guiding principles, the RDKS is committed to supporting polluter and user-pay approaches, and focus on incentive-based tipping fees that encourage segregation of materials and waste diversion rather than landfill disposal.

The programs and policies outlined in this Plan will require the RDKS to commit financial resources in each year of Plan implementation. The standard five-year financial planning model will be applied to the development of financial projections and budgets for the implementation of the Plan, as part of the on-going budget process for the RDKS' solid waste management function.

6.4 Monitoring and Measurements

Implementation monitoring and governance will be supported by a Plan Monitoring and Advisory Committee (PMAC), made up of representation from various stakeholders, such as member municipalities, RDKS staff, RDKS waste management contractors or partners, public agencies such as the Ministry, First Nations representatives within the region, private and non-profit sectors, industry and institutional representatives and the general public.

To establish the PMAC, the RDKS will develop a Terms of Reference for the Committee, and recruit members through direct contact, as well as general open invitations. The selected members of the PMAC will be confirmed by the Board.

The PMAC will provide input to the RDKS staff and the Board as appropriate, monitor the implementation progress and effectiveness of the Plan, and identify concerns and issues that may arise in the implementation process.

Progress towards the targets presented in Section 1.2 will be assessed on an annual basis. The per capita disposal will be measured using the quantity (in tonnes) of solid waste sent for disposal at RDKS landfills. This quantity will be divided by the estimated or known population as defined either by BC Stats Census data and population projections or internal population projections. The RDKS will prepare information in annual reports for PMAC input and consideration by the Board. The reports will also be made available to the public through the RDKS website. Additionally, disposal data will be entered into the Province's waste disposal calculator.

6.5 Plan Flexibility, Review and Amendments

This SWMP represents the current understanding and approach to the solid waste management challenges being faced by the RDKS. The version of the Plan that is formally adopted will be considered a "living document" that may be amended to reflect new considerations, technologies, and issues.

Costs provided in this SWMP are estimates and may not reflect actual costs at the time of implementation. Significant programs and infrastructure projects may undergo further assessment, including an assessment of costs and continued community support, by the PMAC prior to implementation.

The Plan's implementation schedule included in Schedule F is intended to be flexible to allow for changes in priorities and available funding. The contents of this Plan are subject to legal requirements and, as a result, guidance and the direction from the Ministry will be sought in regard to the level of flexibility, as appropriate.

After five years of Plan implementation, the RDKS will undertake an effectiveness review. The review requirements are set by the Ministry's Guide to Solid Waste Management Planning

(September 2016). The RDKS will carry out a review and report on the plan's implementation status and effectiveness. The review process can identify if there is a need to amend any parts of the Plan. Amendments are needed if there are significant changes, for example there are plans to open a new waste management facility that manages wastes currently covered by the existing SWMP. The PMAC will make recommendations to the Board with the aim to increase the Plan effectiveness.

The RDKS will review the major actions identified in the SWMP as circumstances and priorities change over time. This review will occur either on an as needed basis or on an annual basis, whichever is most appropriate for the specific change.

The Plan amendment procedure applies to major changes to the solid waste management system that would include:

- The opening, or changes to the location or status, of a site or facility.
- The importation/exportation of waste which would significantly impact the regional district's or neighbouring solid waste systems, or not conform to provincial legislation, goals and/or targets.
- A change of disposal targets or reductions in reduce, reuse, and recycling programs.
- A change in the boundary of the plan, which would significantly change the amount of solid waste to be managed under the plan or significantly change the population of the plan area.
- The addition, deletion or revision of policies or strategies related to the conditions outlined in the Minister's approval letter.
- Major financial changes that warrant seeking elector assent.

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

A change to the information contained in any of the schedules of this Plan is not considered a major change. If any of the information in the schedules needs to be amended during the 10-year lifespan of the plan, approval from the Minister and engagement with the public may be required. The requirements depend on the type of change. Unless the change is considered major, in accordance with the guide, a change to a schedule should not require submission of the entire SWMP for review and approval.

6.6 Dispute Resolution

Given the number of stakeholders and the varying interests addressed in the Plan, the possibility exists that disputes may occur during implementation of the Plan, and through the process of Plan amendments that may arise in future. This section establishes a dispute resolution procedure for addressing such issues as disputes arising from administrative decisions made by the RDKS, interpretations of plan activities and services, economics, land tenure, jurisdictional responsibility, or other issues. The structure presented below is intended to resolve disputes in a timely and cost-effective manner.

The parties will make all reasonable efforts to attempt to resolve the dispute in an amicable manner without outside intervention. The Ministry does not become involved in resolving or making a decision in a dispute.

This dispute resolution procedure may apply to the following types of conflicts:

- Administrative decisions made by RDKS staff.
- Interpretation of a statement, bylaw, policy, or provision in the plan.
- The manner in which the Plan or an Operating Certificate is implemented.
- Any other matter not related to a proposed change to the wording of the plan or an OC.

Table 3: Collaborative decision making and dispute resolution procedure.

	Responsibility
Negotiation	<ul style="list-style-type: none"> ▪ Parties involved in the dispute make all efforts to resolve the dispute on their own. ▪ Parties may make use of a facilitator.
PMAC (if appropriate)	<ul style="list-style-type: none"> ▪ Parties involved in the dispute will have opportunity to speak to PMAC. ▪ The PMAC will review, consider, and provide recommendations to the Board.
Regional District Board of Directors	<ul style="list-style-type: none"> ▪ Parties involved in the dispute will have opportunity to speak to the Board. ▪ The Board will receive recommendations from the PMAC and settle the dispute; or, recommend mediation.
Mediation	<ul style="list-style-type: none"> ▪ Parties involved in the dispute agree on a mediator. If the parties cannot agree on a mediator, the matter shall be referred to the BC Mediation Roster Society or equivalent roster organization for selection of a mediator. ▪ All efforts will be made to reach an agreement through mediation. ▪ Costs for mediation are shared by the parties in dispute.
Independent Arbitrator	<ul style="list-style-type: none"> ▪ If the dispute cannot be resolved by a mediator, the matter will be referred to arbitration and the dispute will be arbitrated in accordance with the Local Government Act or BC Commercial Arbitration Act. ▪ The arbitrator shall make a final, binding decision. ▪ Costs for arbitration shall be apportioned at the discretion of the arbitrator.

7. PLAN APPROVAL

This Plan was approved by the Board of Directors by the following resolution on (add date and resolution #):

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SCHEDULE A: List of RDKS Facilities

LIST OF RDKS FACILITIES

Facility	Location
Organics Processing	
Forceman Ridge Waste Management Facility	3112 Highway 37, BC
Transfer Stations	
Thornhill Transfer Station	3016 Old Lakelse Lake Road, Terrace, BC
Stewart Transfer Station	1140 Sluice Box Road, Stewart, BC
Kitwanga Transfer Station	898 Hwy 37, BC
Landfills	
Forceman Ridge Waste Management Facility	3112 Highway 37, BC
Rosswood Landfill	4648 Kalum Lake Road, Rosswood, BC
Hazelton Waste Management Facility	82 Birch Rd, New Hazelton, BC
Iskut Landfill	2 km north of Iskut, B.C. off Hwy. 37, BC
Meziadin Landfill	14512 Hwy 37, BC

SCHEDULE B: List of Other Waste Management Facilities

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LIST OF OTHER WASTE MANAGEMENT FACILITIES IN THE REGION

Recycling Facilities¹

Facility	Ownership	Location
Do Your Part Recycling Co	Private	3467 BC-16, Terrace, BC
Kitimat Understanding the Environment	Private	316 Railway Ave, Kitimat, BC
Hazelton Bottle Depot	Private	3324 Fielding St., New Hazelton, BC
Kitimat Bottle Depot	Private	428 Enterprise Avenue, Kitimat, BC
Terrace Bottle Depot	Private	3110 Kalum Street, Unit 101, Terrace, BC

Compost Processing Facilities

Facility	Ownership	Location
Terrace Public Works Yard	City of Terrace	5003 Graham Avenue, Terrace, BC
District of Kitimat Landfill	District of Kitimat	5 min northeast of Kitimat, along Highway BC-37

Waste Management and Disposal Facilities

Facility	Ownership	Location
District of Kitimat Landfill	District of Kitimat	5 min northeast of Kitimat, along Highway BC-37
Dease Lake Landfill	Ministry of Transportation and Infrastructure	49070 Highway 37, Dease Lake, BC
New Aiyansh Landfill	Village of Gitlaxt'aamiks	447 Nass Road, New Aiyansh, BC
Telegraph Creek Landfill	Telegraph Creek Band	Approximately 2 km east of Telegraph IR 6, BC
Rio Tinto Alcan Landfill (Kitimat)	Rio Tinto Alcan	1 Smeltersite Road, Kitimat, BC (Office)

¹ EPR products are also collected at producer-led return-to-retailer programs (i.e. Shaw, Telus, Bell, London Drugs), which are not included in the list of recycling facilities.

SCHEDULE C: List of Closed Disposal Sites

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LIST OF CLOSED WASTE DISPOSAL SITES

The following closed waste disposal sites are known to the RDKS:

Disposal Site	Ownership	Location
Thornhill Landfill	RDKS	3016 Old Lakelse Lake Road, Terrace, BC
Stewart Landfill	District of Stewart	1140 Sluice Box Road, Stewart, BC
Kitwanga Landfill	RDKS	898 Hwy 37, BC
Terrace Landfill	City of Terrace	555 Kalum Lake Road, Terrace, BC

SCHEDULE D: List of Existing Solid Waste Bylaws

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SOLID WASTE BYLAWS IN THE REGION

Jurisdiction	Bylaw	Bylaw No.
RDKS	Kitimat-Stikine Terrace Area Waste Management Facility Regulation Bylaw No. 671, 2018	671
RDKS	Kitimat-Stikine Hazelton and Highway 37 North Area Waste Management Facility Regulation Bylaw No. 688, 2018	688
RDKS	Kitimat-Stikine Terrace Area Solid Waste and Recycling Collection Service Rates and Regulations Bylaw No. 674, 2016	674
RDKS	Kitimat-Stikine Terrace Area Solid Waste and Recycling Collection Service Rates and Regulations Bylaw No. 674, 2016	674
RDKS	Kitimat-Stikine Terrace Area Waste Management Facility Regulation Amendment Bylaw No. 682, 2016	682
RDKS	Hazeltons and Stewart Area Solid Waste and Recyclable Material Management Service Establishing Bylaw No. 657, 2015	657
RDKS	Kitimat-Stikine Terrace Area Solid Waste and Recyclable Material Management Service Establishment Bylaw No. 658, 2015	658
RDKS	Kitimat-Stikine Terrace Area Solid Waste and Recyclable Material Management Service Capital Projects Bylaw No. 659, 2015	659
City of Terrace	City of Terrace Solid Waste Operations Bylaw No. 2130 – 2017	2130
District of Kitimat	Kitimat Municipal Code Part 7 Division 2: Refuse Control	Part 7, Div. 2
Village of Hazelton	Garbage Collection Regulations and Rates Bylaw No. 504, 2019	504
Village of Hazelton	Garbage Collection Regulations and Rates Amendment Bylaw No. 511, 2020	511
District of New Hazelton	Curbside Collection Bylaw No. 329, 2016	329
District of Stewart	District of Stewart Solid Waste Bylaw No. 875, 2015	875
District of Stewart	The District of Stewart Amending Bylaw No. 898, 2016	898
District of Stewart	The District of Stewart Amending Bylaw No. 941, 2019	941

SCHEDULE E: Expenditures for Plan Implementation

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EXPENDITURES FOR PLAN IMPLEMENTATION

Existing Revenues and Costs (Current Plan)	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Terrace Service Area										
<i>REVENUE</i>										
Other revenue	(\$15,000)	(\$15,000)	(\$15,000)	(\$15,000)	(\$15,000)	(\$15,000)	(\$15,000)	(\$15,000)	(\$15,000)	(\$15,000)
Curbside collection fees	(\$642,000)	(\$654,840)	(\$667,937)	(\$681,296)	(\$694,921)	(\$708,820)	(\$722,996)	(\$737,456)	(\$752,205)	(\$767,249)
Tax requisition	(\$1,421,853)	(\$1,450,290)	(\$1,479,296)	(\$1,508,882)	(\$1,539,060)	(\$1,569,841)	(\$1,601,238)	(\$1,633,263)	(\$1,665,928)	(\$1,699,246)
Grants	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Surplus/Deficit	(\$875,000)	(\$1,750,000)	(\$2,625,000)	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Transfer of other funds	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Tipping fees/cost share	(\$2,266,517)	(\$2,276,466)	(\$2,286,615)	(\$1,421,966)	(\$1,432,525)	(\$1,443,294)	(\$1,454,280)	(\$1,465,484)	(\$1,476,913)	(\$1,488,571)
Total Revenue	(\$5,220,370)	(\$6,146,596)	(\$7,073,848)	(\$3,627,144)	(\$3,681,506)	(\$3,736,955)	(\$3,793,514)	(\$3,851,203)	(\$3,910,046)	(\$3,970,067)
<i>OPERATING COSTS</i>										
Administration	\$30,000	\$30,600	\$31,212	\$31,836	\$32,473	\$33,122	\$33,785	\$34,461	\$35,150	\$35,853
Operations	\$511,500	\$521,730	\$532,165	\$542,808	\$553,664	\$564,737	\$576,032	\$587,553	\$599,304	\$611,290
Transfer of funds	\$60,750	\$61,965	\$63,204	\$64,468	\$65,758	\$67,073	\$68,414	\$69,783	\$71,178	\$72,602
Zero Waste Program	\$5,000	\$5,100	\$5,202	\$5,306	\$5,412	\$5,520	\$5,631	\$5,743	\$5,858	\$5,975
Curbside collection service	\$642,000	\$654,840	\$667,937	\$681,296	\$694,921	\$708,820	\$722,996	\$737,456	\$752,205	\$767,249
Facilities - maintenance	\$1,312,080	\$1,338,322	\$1,365,088	\$1,392,390	\$1,420,238	\$1,448,642	\$1,477,615	\$1,507,167	\$1,537,311	\$1,568,057
Solid Waste Management Planning	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Fiscal services	\$909,040	\$909,040	\$909,040	\$909,040	\$909,040	\$909,040	\$909,040	\$909,040	\$909,040	\$909,040
Total Operating Costs	\$3,470,370	\$3,521,597	\$3,573,848	\$3,627,144	\$3,681,506	\$3,736,955	\$3,793,514	\$3,851,203	\$3,910,046	\$3,970,066
<i>CAPITAL COSTS</i>										
Capital projects	\$0	\$0	\$3,500,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Capital Costs	\$0	\$0	\$3,500,000	\$0						
Hazelton and Highway 37 North Service Area										
<i>REVENUE</i>										
Other revenue	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Tax requisition	(\$2,022,851)	(\$2,022,851)	(\$2,022,851)	(\$1,911,198)	(\$1,917,546)	(\$1,964,706)	(\$2,012,809)	(\$2,061,874)	(\$2,111,921)	(\$2,162,968)
Grants	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Surplus/Deficit	\$762,942	\$478,065	\$236,756	\$39,887	\$0	\$0	\$0	\$0	\$0	\$0
Transfer of other funds	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Tipping fees/cost share	(\$704,000)	(\$704,000)	(\$704,000)	(\$704,000)	(\$704,000)	(\$704,000)	(\$704,000)	(\$704,000)	(\$704,000)	(\$704,000)
Total Revenue	(\$1,963,909)	(\$2,248,786)	(\$2,490,095)	(\$2,575,311)	(\$2,621,546)	(\$2,668,706)	(\$2,716,809)	(\$2,765,874)	(\$2,815,921)	(\$2,866,968)
<i>OPERATING COSTS</i>										
Administration	\$22,700	\$23,154	\$23,617	\$24,089	\$24,571	\$25,063	\$25,564	\$26,075	\$26,597	\$27,129
Operations	\$290,000	\$295,800	\$301,716	\$307,750	\$313,905	\$320,183	\$326,587	\$333,119	\$339,781	\$346,577
Transfer of funds	\$17,000	\$17,340	\$17,687	\$18,041	\$18,401	\$18,769	\$19,145	\$19,528	\$19,918	\$20,317
Zero Waste Program	\$5,000	\$5,100	\$5,202	\$5,306	\$5,412	\$5,520	\$5,631	\$5,743	\$5,858	\$5,975
Facilities - maintenance	\$1,843,723	\$1,880,597	\$1,918,209	\$1,956,574	\$1,995,705	\$2,035,619	\$2,076,332	\$2,117,858	\$2,160,215	\$2,203,420

	Existing Revenues and Costs (Current Plan)	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
	Solid Waste Management Planning		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Fiscal services	\$263,551	\$263,551	\$263,551	\$263,551	\$263,551	\$263,551	\$263,551	\$263,551	\$263,551	\$263,551
	Total Operating Costs	\$2,441,974	\$2,485,542	\$2,529,982	\$2,575,311	\$2,621,546	\$2,668,706	\$2,716,809	\$2,765,874	\$2,815,921	\$2,866,968
	<i>CAPITAL COSTS</i>										
	Capital projects	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Total Capital Costs	\$0									
	Total Expenditure (Current)	\$5,912,344	\$6,007,139	\$9,603,830	\$6,202,455	\$6,303,052	\$6,405,661	\$6,510,323	\$6,617,077	\$6,725,967	\$6,837,035

#	Costs of Proposed New Strategies	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
1	Lobby for reduction of single-use items and packaging										
2	Encourage voluntary reduction of single-use items by businesses										
3	Promote waste reduction ideas through targeted campaigns										
4	Support member municipalities with implementation of bylaw(s) to eliminate the distribution of single-use items										
5	Adopt a preferential purchasing policy for green procurement that supports reduce, reuse and the use of recycled content										
6	Develop a contractor's guide to reduction, reuse and recycling										
7	Support reuse through share sheds and reuse stores		\$10,000								
8	Support reuse and/or repair events										
9	Reuse of construction and demolition materials through deconstruction										
10	Lobby for improved accessibility to EPR programs										
11	Increase diversion of C&D waste	\$20,000									
12	Provide continuous diversion education and outreach programs coupled with enforcement										
13	Support ICI and encourage waste diversion										
14	Reduce recycling costs										
15	Improve drop-off options for household hazardous waste where gaps exist	\$70,000	\$10,000	\$70,000	\$10,000	\$70,000	\$10,000	\$70,000	\$10,000	\$70,000	\$10,000
16	Establish organics processing capacity at suitable facilities		\$200,000	\$200,000		\$200,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000
17	Amend solid waste bylaw to encourage waste diversion										
18	Support communities to introduce curbside collection										
19	Incentivize improved contractor and diversion performance			\$10,000							
20	Set limits for solid waste accepted from outside the service area				\$10,000						
21	Reduce greenhouse gas emissions					\$15,000					
22	Effectively use landfill airspace										
23	Improve public accessibility to existing solid waste management facilities										
24	Deliver operational services in-house				\$15,000						
25	Close selected small landfills and replace with transfer stations	\$30,000		\$70,000	\$100,000	\$100,000	\$1,000,000				
26	Engage with and communicate to citizens on waste management										
27	Set limits and reporting requirement for liquid waste										
28	Assist in the prevention of illegal dumping										



#	Costs of Proposed New Strategies	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
29	Develop new agreement between the RDKS and the District of Kitimat, including provisions for use of the landfill at Forceman Ridge WMF.	\$25,000									
30	Include Dease Lake in the RDKS Service Area						\$40,000				
31	Increase RDKS service area to include Telegraph Creek Landfill (and transfer station)										
32	Review cost recovery model within the service areas to provide fair cost sharing					\$20,000					
33	Reduce costs by improving operational efficiencies		\$30,000	\$30,000	\$40,000						
34	Increase revenue through tax requisition and tipping fees				\$20,000	\$20,000					
35	Implement indirect cost sharing between service areas						\$40,000				
	Total Expenditure (New Strategies)	\$145,000	\$250,000	\$380,000	\$195,000	\$425,000	\$1,100,000	\$80,000	\$20,000	\$80,000	\$20,000
	Total Expenditure (Current and New)	\$6,057,344	\$6,257,139	\$9,983,830	\$6,397,455	\$6,728,052	\$7,505,661	\$6,590,323	\$6,637,077	\$6,805,967	\$6,857,035
	Monthly Cost to Homeowners (existing and new strategies)	\$29	\$30	\$48	\$31	\$32	\$36	\$32	\$32	\$33	\$33

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SCHEDULE F: Implementation Schedule

IMPLEMENTATION SCHEDULE

#	Proposed Additional Strategies	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
1	Lobby for reduction of single-use items and packaging										
2	Encourage voluntary reduction of single-use items by businesses										
3	Promote waste reduction ideas through targeted campaigns										
4	Support member municipalities with implementation of bylaw(s) to eliminate the distribution of single-use items										
5	Adopt a preferential purchasing policy for green procurement that supports reduce, reuse and the use of recycled content										
6	Develop a contractor's guide to reduction, reuse and recycling										
7	Support reuse through share sheds and reuse stores										
8	Support reuse and/or repair events										
9	Reuse of construction and demolition materials through deconstruction										
10	Lobby for improved accessibility to EPR programs										
11	Increase diversion of C&D waste										
12	Provide continuous diversion education and outreach programs coupled with enforcement										
13	Support ICI and encourage waste diversion										
14	Reduce recycling costs										
15	Improve drop-off options for household hazardous waste where gaps exist										
16	Establish organics processing capacity at suitable facilities										
17	Amend solid waste bylaw to encourage waste diversion										
18	Support communities to introduce curbside collection										
19	Incentivize improved contractor and diversion performance										
20	Set limits for solid waste accepted from outside the service area										
21	Reduce greenhouse gas emissions										
22	Effectively use landfill airspace										
23	Improve public accessibility to existing solid waste management facilities										
24	Deliver operational services in-house										
25	Close selected small landfills and replace with transfer stations										
26	Engage with and communicate to citizens on waste management										
27	Set limits and reporting requirement for liquid waste										
28	Assist in the prevention of illegal dumping										
29	Develop new agreement between the RDKS and the District of Kitimat, including provisions for use of the landfill at Forceman Ridge WMF.										
30	Include Dease Lake in the RDKS Service Area										
31	Increase RDKS service area to include Telegraph Creek Landfill (and transfer station)										
32	Review cost recovery model within the service areas to provide fair cost sharing										
33	Reduce costs by improving operational efficiencies										
34	Increase revenue through tax requisition and tipping fees										
35	Implement indirect cost sharing between service areas										

Appendix 36 – October 23, 2020, Draft SWMP Presentation to RDKS Board



MORRISON HERSHFIELD

The Draft Solid Waste Management Plan Final Review of Preferred Options & Strategies

October 23, 2020



Regional District of
Kitimat-Stikine

Outline

- Background & planning process summary
- Meeting purpose
- Ministry requirements
 - Guiding Principles
- Plan targets and how to monitor success
- Proposed strategies
 - Overview
 - Costs
- Staffing impacts
- Next steps

Why a SWMP?

- Regional districts are required to have a solid waste management plan (SWMP) as per the Environmental Management Act
- Provide long-term visions for how the regional district plan on managing solid wastes
- The Plan will cover the entire RDKS geographic region
 - Two solid waste service areas:
 - The Hazelton and Highway 37 North Service Area
 - The Terrace Service Area

Recap Planning Process to Date

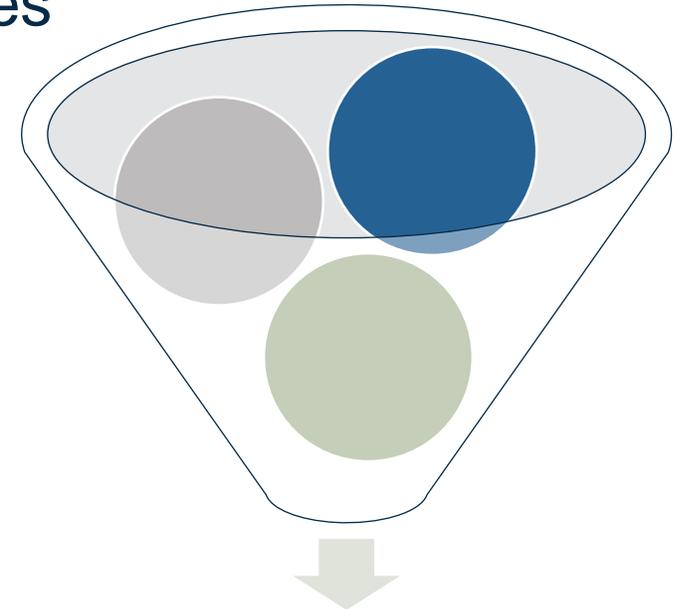
- Planning process was initiated in 2017
- Formation of the Public and Technical Advisory Committee (PTAC)
- Assessment of the current system
- Development of a Consultation Plan
- Public survey



Love this place.
Reduce your waste.

Recap Planning Process to Date (cont.)

- Major discussion topics at PTAC meetings 2020:
 - Priorities - Reduce and Reuse
 - Recycling and Composting
 - Residual Waste Management at Existing Facilities
 - New Facilities & Service Areas for RDKS
 - Cost Recovery & Financial Sustainability



Preferred Options to be included in the Draft SWMP for Public Consultation

Meeting Purpose

Strategies & Options

Memos - potential strategies and options; PTAC provided feedback
MH provided recommendation letters
PTAC voted on strategies to further evaluate as part of Preferred Options

Preferred Options

- June 2020: MH presented Preferred Options report to PTAC for evaluation
- PTAC voted on Preferred Options

Draft SWMP

- MH developed Draft SWMP for PTAC consideration
- Aug 2020: PTAC provided feedback
- MH revised Draft SWMP
- **Oct 2020: MH presents content of Draft SWMP for Board discussion and approval**
- Draft SWMP is issued for public consultation

Ministry Requirements

- The Ministry's guidance highlights the importance to include:
 - The pollution prevention (5 R) hierarchy
 - Guiding principles
 - Locally relevant targets



Guiding Principles for the SWMP

1. Promote zero waste approaches and support a circular economy

2. Promote the first 3 Rs (Reduce, Reuse and Recycle)

3. Maximize beneficial use of waste materials and manage residuals appropriately

4. Support polluter and user-pay approaches and manage incentives to maximize behaviour outcomes

5. Prevent organics and recyclables from going into the garbage wherever practical

6. Collaborate with other regional districts wherever practical

7. Develop collaborative partnerships with interested parties to achieve regional targets set in plans

8. Level the playing field within regions for private and public solid waste management facilities

9. Improve operational efficiency of the current solid waste system

Targets for the SWMP & How to Monitor Success

- 2020 Provincial solid waste targets
 - Reduce the annual municipal solid waste disposal rate to 350 kg per capita ✗
 - Include 75% of BC's population under organic waste disposal restrictions ✓
- RDKS Draft SWMP targets
 - 2019 disposal: 662 kg per capita
 - 2025 goal: 663 kg per capita (including industrial waste)
 - 2030 goal: 556 kg per capita (including industrial waste)
 - Long-term goal: 350 kg per capita
- The RDKS will continue tracking waste by source, type, and management (recycled, composted, disposed) to monitor success



Plan Content

- Follows the 5 R hierarchy
- For each aspect of the solid waste management system
 - Context, key issues/opportunities
 - Proposed strategies and actions to meet targets
 - Costs
- Overall staff impacts on RDKS

Plan Content

- The Plan covers these aspects:
 - Reduce
 - Reuse
 - Recycling
 - Organics diversion and system efficiency
 - Residual Waste Management at existing facilities
 - Waste management at new facilities or in new service areas
 - Cost recovery and financial sustainability
- There will be time for comments and questions for each aspect.

Reduce

- Per-person waste generation is increasing
- Less waste = reduced need for handling, transportation, processing, and disposal
- Some products and materials problematic
- Federal and Provincial bans/restrictions and EPR programs coming
- The RDKS promotes waste reduction and reuse via outreach and education programs



Proposed Reduction Strategies

#	Strategy	Priority	
		Short Term (1-5 yrs)	Long Term (6-10+ yrs)
1	Lobby for reduction of single-use items and packaging	✓	
2	Encourage voluntary reduction of single-use items by businesses	✓	
3	Promote waste reduction ideas through targeted campaigns	✓	✓
4	Support member municipalities with implementation of bylaw(s) to eliminate the distribution of single-use items		✓
5	Adopt a preferential purchasing policy for green procurement that supports reduce, reuse and the use of recycled content		✓

- Implementation costs:
 - No other costs (capital or consulting support)

Proposed Reduction Strategies - Single Use Plastics

- Lobby for a Provincial EPR program and Federal regulations
- Encourage voluntary reduction by businesses
 - Outreach
 - Support member municipalities
 - Bring your own cup
- If supported by the Ministry, support member municipalities to implement bylaws to eliminate the distribution of single-use items



Reuse

- Strong interest for more reuse opportunities in the region
- Possibility to support local industry while extending the life of material and products
- Reuse limited at RDKS facilities under current bylaws
- Non-profits can apply for reimbursement of tipping fees



Proposed Reuse Strategies

#	Strategy	Priority	
		Short Term (1-5 yrs)	Long Term (6-10+ yrs)
6	Develop a contractor's guide to reduction, reuse and recycling	✓	
7	Support reuse through share sheds and reuse stores	✓	✓
8	Support reuse and/or repair events	✓	✓
9	Reuse of construction and demolition materials through deconstruction		✓

- Implementation costs:
 - A small capital cost assumed to enable reuse at a RDKS facility

Proposed Reuse Strategies

- The RDKS proposes to facilitate and encourage more reuse and repair

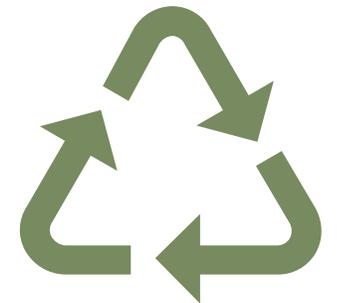


Photos by the Regional District of Central Okanagan



Recycling

- The RDKS offers:
 - drop-off options for select recyclables (incl. some Extended Producer Responsibility (EPR) products at landfills and transfer stations)
 - curbside collection of printed paper and packaging (PPP) recyclables in the Terrace Solid Waste Service Area
- Incurred cost for managing of commercial cardboard
 - High transportation and processing cost
 - Low/no-value product
- Opportunity to increase collaboration with Stewards for EPR materials



Proposed Recycling Strategies

#	Strategy	Priority	
		Short Term (1-5 yrs)	Long Term (6-10+ yrs)
10	Lobby for improved accessibility to EPR programs	✓	
11	Increase diversion of C&D waste	✓	
12	Provide continuous diversion education and outreach programs coupled with enforcement	✓	✓
13	Support ICI to encourage waste diversion	✓	✓
14	Reduce recycling costs	✓	✓
15	Improve drop-off options for household hazardous waste where gaps exist	✓	✓

- Implementation costs:

- Additional costs associated with C&D waste diversion and household hazardous waste collection

Proposed Recycling Strategies – C&D Waste

- The construction and demolition (C&D) sector generates 17% of the landfilled waste
- A small portion is diverted (5%)
- Examples of proposed strategies:
 - Amend tipping fee structure to encourage segregation of divertible materials
 - Create a C&D waste working group
 - Perform a C&D waste composition study
 - Regularly review local diversion options

Proposed Recycling Strategies – ICI Waste

- Currently 27% diverted
- Significant amount of divertible waste being landfilled
- The RDKS proposes to support ICI and encourage waste diversion by for example:
 - Support private collectors to encourage better recycling amongst the its customers
 - Promote diversion opportunities/support education
 - Establish an ICI waste working group

Time for a 10 min Break

Organics Diversion & System Efficiency

- Relatively new composting facility at Forceman Ridge WMF
- Initial issues with contamination
 - Biodegradable bags, plastic bags, and plastic wrap
 - ICI sector waste
- Compost product currently used in-house
- No rural composting capacity in the region
- Opportunity to optimize operations to get maximum benefit from the infrastructure and services



Composting Facility at Forceman Ridge WMF

Proposed Strategies for Organics Diversion & System Efficiency

#	Strategy	Priority	
		Short Term (1-5 yrs)	Long Term (6-10+ yrs)
16	Establish organics processing capacity at suitable facilities	✓	✓
17	Amend solid waste bylaw to encourage waste diversion	✓	✓
18	Support communities to introduce curbside collection	✓	✓
19	Incentivize improved contractor and diversion performance	✓	✓

- Implementation costs:

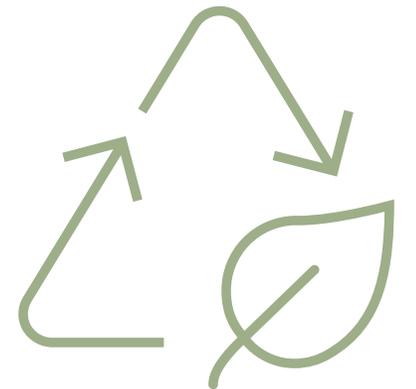
- Additional costs mainly related to:

- Establishing organics processing capacity (consulting support, construction and operations)

Proposed Strategies for Organics Diversion

To establish organics processing capacity at suitable facilities, the RDKS proposes to:

- Lobby to include uncontaminated paper in OMRR (Organic Matter Recycling Regulation) to allow composting when recycling is cost prohibitive
- Consider allocated space at Hazelton Waste Management Facility and assess suitable designs/costs
- Support the District of Stewart to secure capacity



Waste Management at Existing Facilities

- RDKS' solid waste management system has undergone major changes over the past few years
- Industrial waste pose an opportunity; balance revenue and responsible use of RDKS facilities and disposal capacity
- Opportunity to review operations to optimize the use of investment and systems in place
- Optimize resources while maintaining service levels



RIG plates at Forceman Ridge WMF

Proposed Strategies for Waste Management at Existing Facilities

#	Strategy	Priority	
		Short Term (1-5 yrs)	Long Term (6-10+ yrs)
20	Set limits for solid waste accepted from outside the service area	✓	
21	Reduce greenhouse gas emissions	✓	
22	Effectively use landfill airspace	✓	
23	Improve public accessibility to existing solid waste management facilities	✓	
24	Deliver operational services in-house	✓	

Proposed Strategies for Waste Management at Existing Facilities (cont.)

#	Strategy	Priority	
		Short Term (1-5 yrs)	Long Term (6-10+ yrs)
25	Close selected small landfills and replace with transfer stations or other suitable waste management services	✓	✓
26	Engage with and communicate to citizens on waste management	✓	✓
27	Set limits and reporting requirement for liquid waste		✓
28	Assist in the prevention of illegal dumping		✓

- Implementation costs:
 - Additional costs associated with a potential landfill closure and transfer station establishment, and consulting fees.

Proposed Strategies for Waste Management at Existing Facilities

RDKS proposes to:

- set limits to the waste accepted from outside the Terrace Service Area and improve the use of existing airspace
- review current operating hours to increase access to waste management facilities



Proposed Strategies for Waste Management at Existing Facilities (cont.)

The RDKS proposes to:

- optimize operations by assessing the options to move some of the currently contracted operating in-house
- assess options to close small landfills and replace with transfer station or other suitable solid waste service



Time for a 10 min Break

Waste Management at New Facilities & Service Areas

- RDKS – two service areas
- Opportunity to include new facilities and areas:
 - District of Kitimat (DoK) – currently no formal collaboration/ agreement with the RDKS
 - Telegraph Creek landfill/transfer station – cost-sharing for Electoral Area D users
 - Dease Lake Landfill – owned and operated by MOTI



Proposed Waste Management at New Facilities & Service Areas

#	Strategy	Priority	
		Short Term (1-5 yrs)	Long Term (6-10+ yrs)
29	Develop new agreement between the RDKS and the DoK, including provisions for use of the landfill at Forceman Ridge WMF	✓	
30	Include Dease Lake in the RDKS Service Area	✓	✓
31	Increase RDKS service area to include Telegraph Creek Landfill (and transfer station)		✓

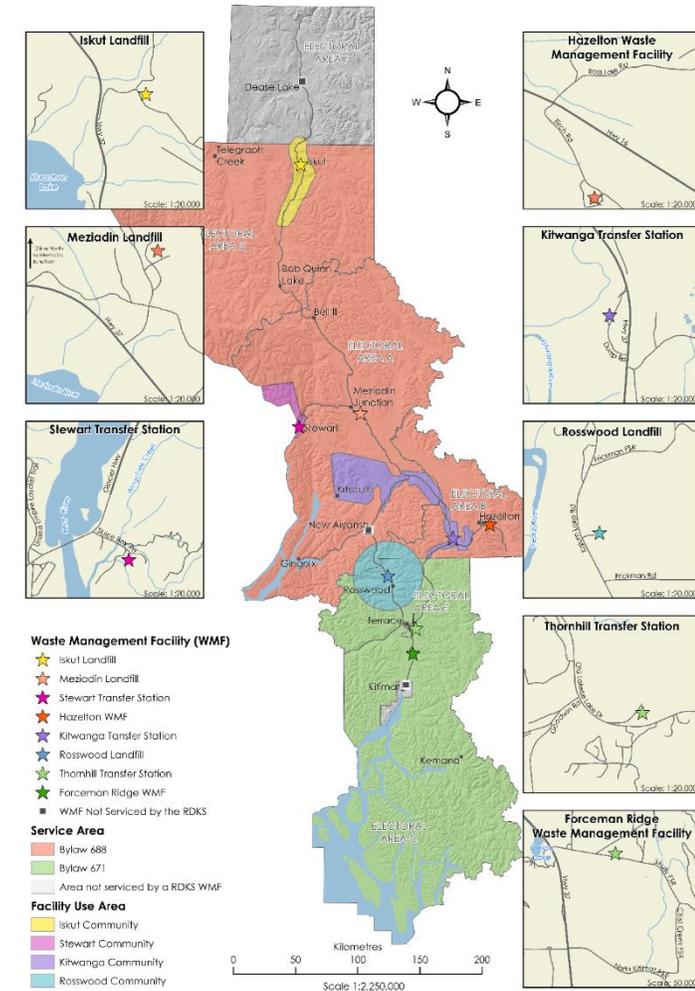
- Implementation costs:
 - Additional costs associated with developing agreement with Kitimat and MOTI

Proposed Waste Management at New Facilities & Service Areas

- RDKS proposes to :
 - assess collaboration opportunities between Kitimat and RDKS. Kitimat Landfill is reaching capacity and Kitimat is assessing their future disposal options
 - assess the option for RDKS to take over operations (not ownership or liability) Dease Lake Landfill or assist in closure and transfer station design & construction
 - increase involvement in the development of Telegraph Creek transfer station, to support and ensure residents' solid waste needs are met

Cost Recovery & Financial Sustainability

- Terrace Service Area
 - Funded by tipping fees, user fees, & tax requisition
 - Operating on a surplus
 - 3 facilities
- Hazelton & Highway 37 North Service Area
 - Mainly funded by tax requisition
 - Operating on a deficit
 - 5 facilities + cost-sharing
- Opportunity to review current funding models & optimize cost recovery



Guiding Financial Principles

Long-term financial sustainability

Take advantage of economies of scale, where possible

Provide good and equal level of service

Provide equitable service to all residents in the same service area

Improve operating efficiencies of current solid waste management services and facilities

Strategies for Cost Recovery & Financial Sustainability

#	Strategy	Priority	
		Short Term (1-5 yrs)	Long Term (6-10+ yrs)
32	Review cost recovery model within the service areas to provide fair cost sharing	✓	✓
33	Reduce costs by improving operational efficiencies	✓	✓
34	Increase revenue through tax requisition and tipping fees	✓	✓
35	Implement indirect cost sharing between service areas		✓

- Implementation costs:
 - Additional costs associated with studies and consulting fees

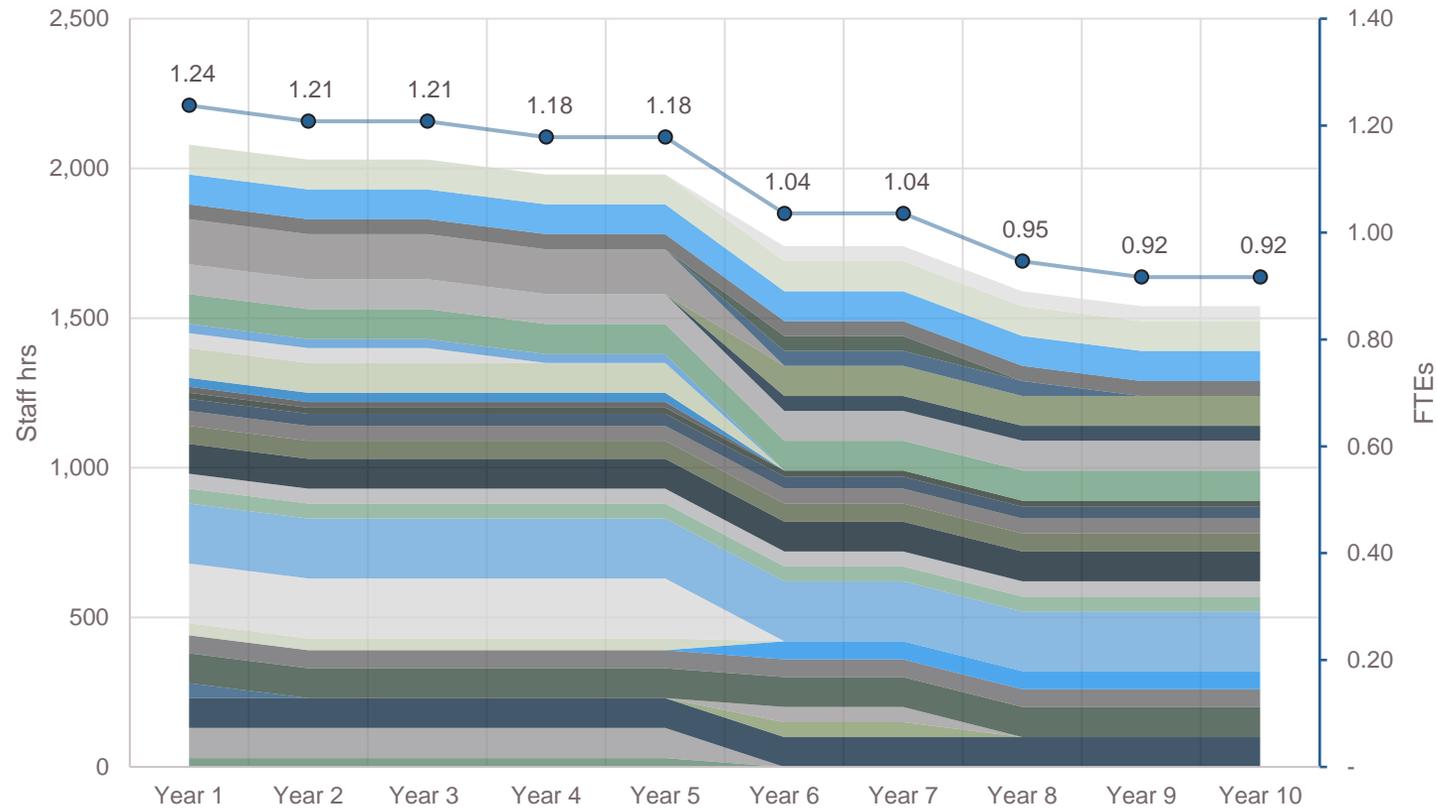


Proposed Strategies for Cost Recovery & Financial Sustainability

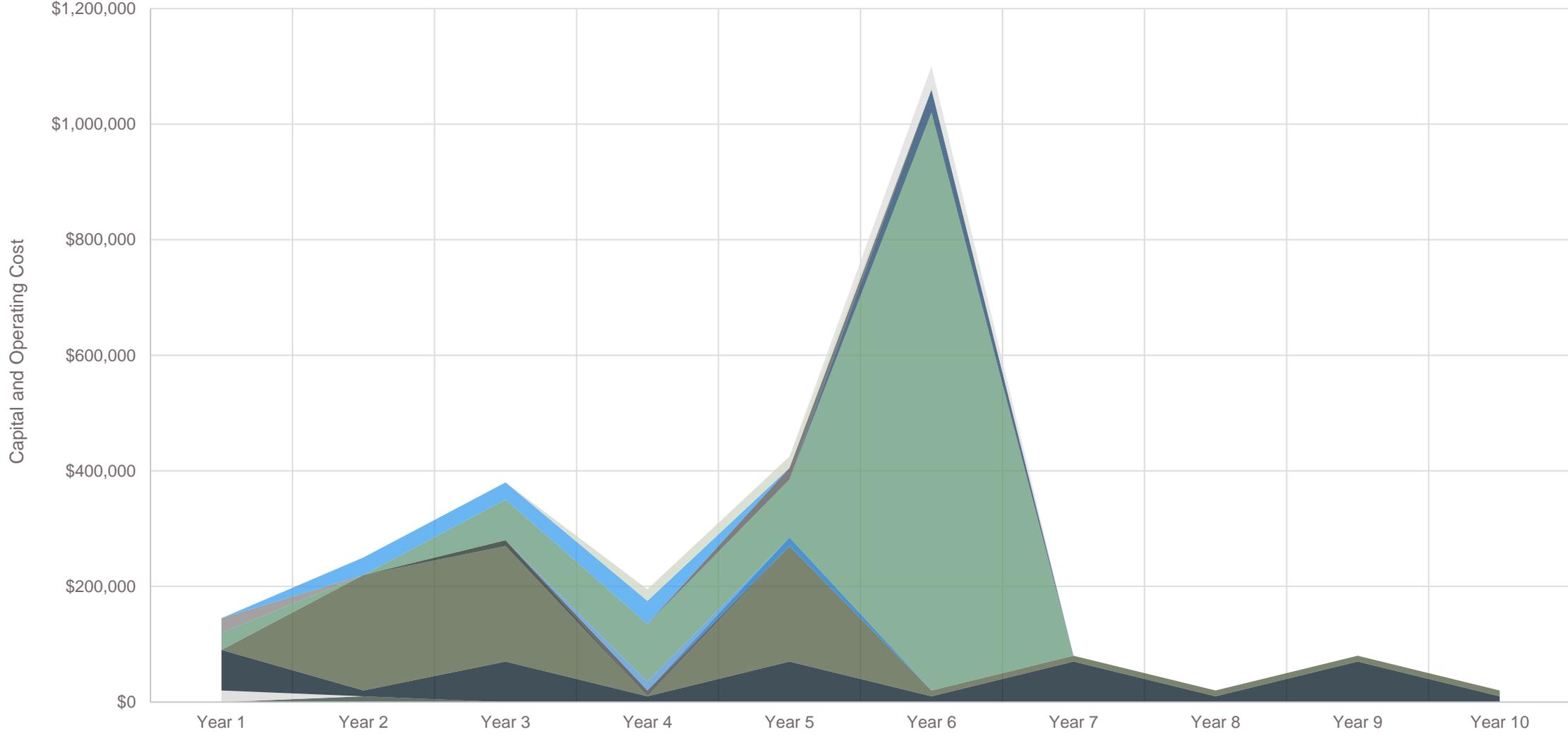
- The RDKS proposes to:
 - reduce costs (focus on Hazelton and Hwy 37 North SA) by:
 - reviewing different waste transportation options
 - reviewing operating hours
 - reviewing task distribution between contracted vs in-house staff
 - assessing closure of small landfills and replacement with TS or other suitable service
 - increase revenue by:
 - considering the polluter pay principle vs increased tax requisition
 - balancing available airspace, timing of capital projects, and value of airspace
 - assess indirect cost-sharing through rerouting of industrial waste

RDKS Staffing Needed to Implement Proposed Strategies

Average 1.1 FTEs per year in addition to current staffing need for regular operations



Estimated Budget Needed to Implement Proposed Strategies



Next Steps

- **January 2021:** Present Public Consultation engagement techniques to PTAC and final Board for approval
- **Early 2021:** Undertake Public Consultation on the Draft SWMP (exact engagement techniques and timing to be confirmed)
- **Late Spring 2021:** Finalize SWMP based on feedback from the public and submit to Ministry for review and approval



Conclusion

- Do you have any further comments or questions?
- Thank you for your input in finalizing the Draft SWMP



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Reduce your waste.

Thank you!

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***Appendix 37 – Addendum to the RDKS Consultation Strategy for the
Development of a Solid Waste Management Plan – Engagement
Techniques to Consider for Public Consultation (Dec 2020)***

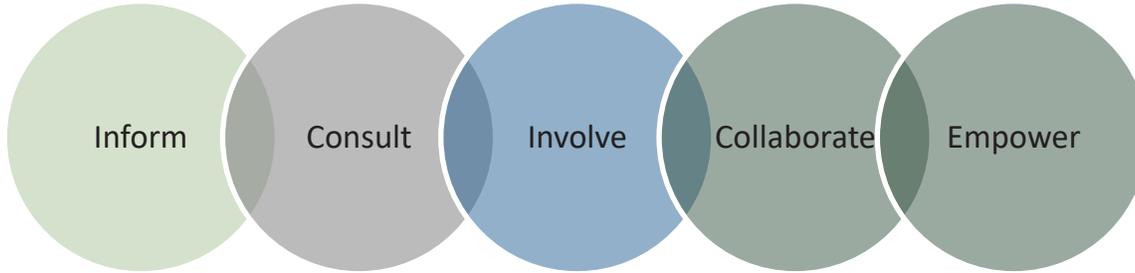


Figure 1 The IAP2 spectrum of public participation

The Consultation Strategy confirms a commitment for the RDKS to engage with the public at the **inform** and **consult** levels of participation, and to engage a select group of stakeholders at the **collaborate** level of participation. The RDKS is also committed to engaging stakeholders at the **involve** level of participation on request. All elements apart from **empower** are incorporated into this planning process.

These commitments will help the RDKS achieve the following goals:

- Provide information to stakeholders and the public to enable them to determine how their interests may be affected and decide on their desired level of involvement.
- Use a variety of methods to notify the public and stakeholders of each consultation opportunity.
- Provide time for stakeholders and the public to respond to draft documents.
- Document the proceedings and outcomes from the consultation process and make them available for public review, to demonstrate how the SWMP addresses input received.
- Collaborate with member municipalities, First Nations representatives, and community associations to deliver consultation.

SUMMARY OF PUBLIC ENGAGEMENT TO DATE

This section provides a summary of the SWMP public engagement and consultation completed to date.

At the start of the SWMP planning process in October 2018, RDKS citizens were informed of the Plan development and invited to join a Public and Technical Advisory Committee. In January 2019, the RDKS established the Public and Technical Advisory Committee (PTAC) to collaborate in the planning process. The role of PTAC has been to advise the Regional District Board and Administration on the design and implementation of the SWMP consultation process, to help identify issues and opportunities with the current solid waste management system, to collaborate to discuss, develop and evaluate new strategies to improve the system, and ultimately advise on the new SWMP. PTAC members were appointed by the Board at the December 14, 2018, and January 23, 2019, meetings.

During the first consultation phase in early 2019, the RDKS established an Involved Working Group (IWG) comprised of individuals who identified that they wanted to be involved in the Plan development. The IWG received monthly or bi-monthly email communication with Plan updates, including PTAC agendas, minutes, presentations, etc. These individuals have had the opportunity to reach out directly to the RDKS to become involved in certain elements of the Plan.

The RDKS published a public solid waste survey in March 2019 to consult citizens on proposed waste management strategies and establish the Plan's priorities. The survey presented multiple choice questions and allowed respondents to provide feedback and suggestions on improving the region's waste management system. The survey results were used to identify emerging issues and community priorities that later were considered in the development of the new SWMP.

The RDKS, with support from consultants, worked closely with PTAC to identify key issues with the existing solid waste management system, review potential options for addressing the region's future needs, and develop / select preferred options for future waste management.

Several technical memoranda (memos) were prepared by consultants to support the PTAC in the discussion and evaluation of options. These documents are available on the RDKS' website and include:

- Efficiency for RDKS Solid Waste Programs and Facilities (February 2019)
- Reduction and reuse options (April 2019)
- Strategies to reduce single use items (April 2019)
- Food waste reduction strategy (April 2019)
- Waste management space in new commercial construction (April 2019)
- Deconstruction versus demolition (April 2019)
- Summary of Reduce and Reuse Options (MH, January 2020)
- Recycling and Composting (MH, February 2020)
- Residual Waste Management at Existing Facilities (MH, March 2020)
- New Facilities and Service Areas for RDKS (MH, May 2020)
- Cost Recovery (MH, May 2020)

During a meeting in June 2020, the PTAC evaluated and selected the preferred options, which informed development of the Draft SWMP. The Draft SWMP was approved by the Board on October 23, 2020, for use in public consultation. The final SWMP will incorporate feedback from the second phase of public consultation.

Options for Public Consultation on the Draft SWMP

As per the approved 2019 Consultation Strategy, the RDKS with support from MH, intended to consult and seek public feedback on the Draft SWMP through a series of in-person open houses. The intention was to use open houses to consult residents, businesses, communities, and interested parties on the Draft SWMP and proposed strategies to gather feedback and finalize the SWMP for Ministry approval. At open houses the visitors are typically provided information via information boards and one-on-one conversations.

As a result of the COVID-19 pandemic, it is not recommended to launch the in-person engagement as initially planned. Anticipated restrictions on gathering sizes and public hesitation to attend in-person events due to COVID-19 is now forcing the RDKS to look for alternative non-contact engagement techniques. Approximately \$25,000 was budgeted for MH to prepare for and attend a total of 16 events (public open-houses and meetings with councils, First Nations, and community associations / local groups), and to analyze the feedback received. This budget will be reallocated to cover the cost of other engagement techniques as presented in this memo.

Table 1 presents and compares different engagement techniques that may be suitable for the public consultation under current and anticipated future COVID-19 restrictions and limitations. The most suitable methods will depend on community needs and the RDKS’ resources available. As the Draft SWMP is unlikely to present options with a high level of controversy, MH considers all of these engagement techniques as suitable. Notwithstanding, MH understands all communities are different and that customized approaches may be required to offer appropriate opportunities for consultation and to meet the unique needs of each community.

Table 1 Comparison of Engagement Techniques available for Public Consultation on the Draft SWMP

Evaluation Criteria	Online Survey	Mail Survey (in combination with online survey)	Virtual Open Houses with Q&A	Targeted phone interviews
Engagement Spectrum	Consult	Consult	Consult/Involve	Involve
What is this technique useful for?	<p>Providing a survey online that can be supported with suitable information and links to specific sections of the Draft SWMP.</p> <p>The survey will mirror the hard-copy mail survey and be available in paper format.</p>	<p>Providing a survey to all residents, via mail, that is clearly laid out and provides brief information about particular topics that help to frame the questions. Additional information can be referred to on the RDKS website. The survey would mirror the online version and to which residents would be provided a web address.</p>	<p>Providing information online as a presentation with opportunities for questions and answers during the meeting. The event can be recorded and accessed at any time.</p>	<p>Providing a structured conversation to gather input on the proposed strategies with a small number of key stakeholders.</p> <p>The interview topics and background information will be communicated with the interviewees in advance of the meeting.</p>
What are the limitations with the technique?	<p>The online version would be limited to people with adequate internet connectivity. However, a paper copy can address this limitation.</p>	<p>The response rate is typically higher (approximately 15%) when a survey is sent out with return postage. However, it is also very costly (up to \$1 per mail-out).</p> <p>The 2019 solid waste survey was mailed out to 14,200 homes without return postage. Instead, RDKS staff provided drop-boxes at municipal buildings, band offices, etc. The combined hard-copy and online survey response rate was 6%.</p>	<p>Limited to people with good internet connectivity.</p> <p>The question and answer chat may not be available in the recorded sessions and only participants of the live event can be actively “involved” in the discussion.</p>	<p>Is time consuming and is only suitable for a limited number of stakeholders with specific interest in the SWMP, including stakeholders listed in Appendix G of the SWMP Draft Consultation Report, February 2019.</p> <p>Key stakeholders would include, but may not be limited to, First Nations, member municipalities, haulers, recyclers, large waste generators, and other members of the Involved Working Group.</p>

For both surveys, participation rates are likely to be higher if participants can enter a prize draw, e.g. 2 prizes of different gift cards for local shops/experiences. \$400 can be assumed as an additional cost to the chosen technique.

DISCUSSION

Approval of the new SWMP by the Minister of Environment requires the Draft SWMP to have undergone adequate consultation with the public and affected stakeholders.

We recommend that the RDKS undertakes consultation using a combination of non-contact techniques that cover different parts of the public participation spectrum. The table below presents the suggested approach and timeline for public engagement.

Table 2 Proposed Approach to Public Consultation on the Draft SWMP

Timeline	Engagement Technique	Duration
Feb – March 2021	Online and mail survey	The survey can be open for a 6-week duration.
April 2021	Virtual open houses	Events can be held over a 2-week period.
	Targeted interviews with key stakeholders	Interviews can be held for one month concurrent to the virtual events.

The distribution of a survey in early 2021 can help to raise awareness of the coming virtual events and ask respondents to indicate their interest in attending an event.

The survey will be self-selected and the geographic reach of the survey cannot be controlled. It is important to note that the use of this type of survey will not produce statistically valid results. However, it can still be regarded as a useful tool to gauge the support or opposition to specific parts of the Draft SWMP.

RDKS staff have already demonstrated that surveying using online and mailed paper copies of the survey is feasible and not too costly. Based on the 2019 solid waste survey experience, the internal costs are estimated to be approximately \$12,000 (printing, graphic design, online survey platform, newspaper ads, hard-copy survey input, etc.). In addition, staffing time is required for the survey distribution and survey result analysis. These costs are already captured under wages. Estimated external costs are \$10,000 for MH support in the survey development, data entry, and analysis in 2021.

The RDKS may want to offer virtual open houses to interested stakeholders, including but not limited to member municipalities, First Nations, waste haulers, recycling depots, large waste generators and other members of the Involved Working Group.

The estimated external cost of these events is approximately \$15,000, including preparation, meetings, and feedback reporting assuming staff from MH and the RDKS will co-present at the virtual events open houses. The estimate is based on the assumption that the 16 in-person events initially planned would be replaced by six virtual events approximately 1.5 hours each.

Lastly, the RDKS will reach out to key stakeholders through targeted phone interviews. The RDKS Administration already has existing relationships with many of the stakeholders and therefore the interviews are best done by internal staff. Phone meetings will be led by a member of the RDKS Solid Waste Team and the meeting minutes will be recorded by RDKS administrative staff. Internal costs can be absorbed by current wages and external costs are anticipated to be low (up to \$2,000 for potential MH support may be needed to develop interview questions or to support data analysis).



During the PTAC meeting on December 9, 2020, committee members were presented a summary of the recommended engagement techniques and proposed engagement schedule, as highlighted in this Memo. PTAC members had the opportunity to provide feedback on the recommended techniques to ensure that the chosen engagement techniques are best suited to the RDKS and its citizens.

PTAC members provided feedback on potential survey questions to be used as the Draft SWMP Survey 2021. The 2021 survey was developed with the following considerations:

- The survey follows a similar format to the first Solid Waste Survey, undertaken in 2019.
- The survey includes questions which identify the profile of the respondent.
- The survey contains approximately 18 questions that are the same for all service areas.
- Each question or group of questions are introduced by a short preamble summarizing the issue/opportunity.

A detailed description of how the RDKS will undertake the three engagement techniques are included as appendices to this memo.

NEXT STEPS

Valuable survey feedback received from PTAC members at the Dec. 9, 2020, meeting was used to revise and finalize the survey questions. PTAC approved the survey format and content, as well as the selected engagement techniques and timing. These are put forward to the Board for consideration and approval on January 22, 2021. Public consultation will commence immediately following Board approval.

According to Ministry requirements, a new SWMP must be supported by a Consultation Summary Report which demonstrates that adequate consultation has occurred during the plan development. The report should include information on the consultation process and the SWMP development process. If there were challenges in gathering public comments (e.g. a lack of feedback), the report should document how due diligence was used to try to engage the public. In February 2019, the RDKS issued a summary of consultation activities undertaken to date (refer to the Consultation Summary Report DRAFT - V. 1.0, February 2019, accessible via the RDKS website). This report will be updated to reflect all of the engagement initiatives undertaken during the SWMP planning process.

APPENDIX 1 Virtual Open Houses



Appendix 1: Virtual Open Houses

Objective - What do we want to communicate, with whom, and why?

The RDKS will provide information on key strategies and initiatives of the Draft SWMP in an online presentation. Attendees will have the opportunity to ask RDKS representatives (RDKS staff and the consultant from MH) questions about the proposed Plan content. Participants will be asked during an anonymous live poll to identify themselves (rural / urban resident, businesses, other) to give the RDKS a sense of who is attending.

The information will help to inform the RDKS if the Draft SWMP is supported or require further changes to address public feedback.

How can attendance be maximized?

All respondents of the Draft SWMP Survey 2021, which will be undertaken in February and March 2021, will be asked to provide their email address if they are interested to attend a virtual event. The virtual events will also be promoted via the RDKS website, social media, radio and newspaper ads, and via member municipalities and First Nations communities.

A dial-in option will be available for people with poor internet connectivity.

A total of six generic virtual open houses will be offered during April 2021. Virtual open houses have been scheduled to accommodate a variety of audiences. The following schedule is planned:

- Wednesday April 7, 1:00 pm and 7: 30 pm
- Saturday April 10, 9:00 am
- Tuesday April 13, 10:00 am and 7:30pm
- Thursday April 15, 3:00 pm

Additional virtual open houses can be offered to various stakeholder groups (e.g., community groups, First Nations, other) if the RDKS identifies this need during the consultation process.

What can participants expect?

The online invitation will present a brief event description and agenda to participants, so they know what to expect.

Open houses are anticipated to be approximately 1.5 -hour events. Short presentations (10-15 min) will be provided on key topics, including the 3Rs (reduce, reuse and recycle), residual management, and cost recovery.

Each presentation will be followed by a brief question and answer period (5-10 min) with some additional time for open questions at the end. The questions will be gathered through an engagement platform (i.e., Microsoft Forms integration with Slido) which will enable participants to promote (vote for) a posted question they want to see answered.

Who will be facilitating/ presenting the event?

An RDKS staff will be facilitating the event and the majority of the presentation will be undertaken by MH staff. One additional staff member (RDKS/ MH) can be available to field online questions.

How will the feedback be recorded?

Using Microsoft Teams, the event will be recorded and accessed at any time. A polling software that integrates with MS Teams, such as Microsoft Forms or Slido, will be used to conduct polls and survey questions during the meeting. Virtual "chat", poll results and questions can be recorded and accessed following the event.

What happens post-engagement?

Immediately following each virtual event, the RDKS will send emails thanking participants for their contribution to the engagement process. The email may include chat records from Q and A, results from any polls completed during the event, responses to any outstanding questions are sent and an explanation of the next steps in the planning process, next steps in the SWMP process, and a "thumbs up or down" question to confirm if the virtual event was useful.

Following all of the virtual events, a meetings summary will be compiled. The summary will include chat records, poll results, outstanding questions and answers. The meeting summary will be emailed to participants within 3 weeks following the events, as well as posted to the website.

APPENDIX 2 Targeted Phone Interviews

Appendix 2: Targeted Phone Interviews

Objective - What do we want to communicate, with whom, and why?

The RDKS will provide information on key strategies and initiatives in the Draft SWMP that are of relevance to targeted stakeholders and, through targeted phone interviews, collect and record feedback.

Key stakeholders, who will be offered a scheduled interview will include, but may not be limited to, First Nations, member municipalities, haulers, recyclers, large waste generators, and other members of the Involved Working Group.

This technique will provide an intimate setting to encourage affected stakeholders to comment on the Draft SWMP to assess support and concerns with particular aspects of the Draft SWMP.

The feedback received from the interviews will help to inform the RDKS if the Draft SWMP is supported or if revision to the Draft Plan is required to address stakeholder feedback.

How can attendance be maximized?

The RDKS administration will reach out to stakeholders with specific interest in solid waste management and/or are anticipated to be impacted by strategies proposed in the Draft SWMP. Targeted stakeholders will be emailed to invite their participation. This stakeholder group will include all parties that were directly solicited to be part of PTAC in 2018, as listed in Appendix G of the SWMP Draft Consultation Report (February 2019).

Scheduled interviews will be offered to interested stakeholders via an email invitation. The interviews will be scheduled during April 2021.

What can participants expect?

Ahead of the scheduled interview, background information and interview questions will be communicated. The interviews will be designed to take between 30 to 60 minutes, depending on the level of interest in the Draft SWMP.

The RDKS will communicate with the interested stakeholder in advance how the interview will be used and documented.

Who will be facilitating/presenting the event?

The meetings will be led by a member of the RDKS Solid Waste Team, who is likely to have existing relationships with interested stakeholders.

How will the feedback be recorded?

Meeting minutes will be recorded by RDKS administrative staff. The meeting minutes will capture the interviewer's structured outline as well as a summary of the feedback received. To ensure the accuracy of the meeting minutes, RDKS staff will follow up with each interviewee and present the interview summary. Where feasible, Microsoft Teams may be used to host the call, in order to record the dialogue.

What happens post-engagement?

The RDKS will send out an email to thank all interviewees for their input and share the meeting minutes to affirm their validity.

Participants will be asked if the information can be shared in a consultation summary report.

A 1-2 question survey can be included to confirm if the phone interview was useful and if the meeting minutes accurately captured the interview conversation.

***Appendix 38 – December 9, 2020, Presentation to PTAC re: Engagement
Techniques for Public Consultation on the Draft SWMP***



MORRISON HERSHFIELD

Engagement Techniques for Public Consultation on the Draft Solid Waste Management Plan

December 9, 2020



Regional District of
Kitimat-Stikine

Outline

- Meeting purpose
- Planning process summary
- Requirements and commitments
- Proposed engagement techniques
 - Overview
 - Costs
- Potential survey questions
- Next steps



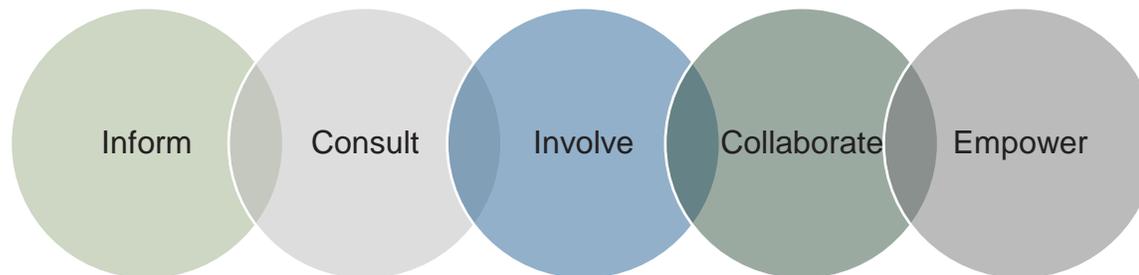
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Meeting Purpose

- Discuss and agree on preferred engagement techniques and timing for public consultation on the Draft SWMP
- Discuss and agree on format of potential survey questions

Recap Planning Process to Date

- Regional districts are required to have a solid waste management plan (SWMP) as per the Environmental Management Act
- Planning process was initiated in 2017
- Development of a Consultation Strategy
 - Assumed in-person meetings/ open houses



Recap Planning Process to Date

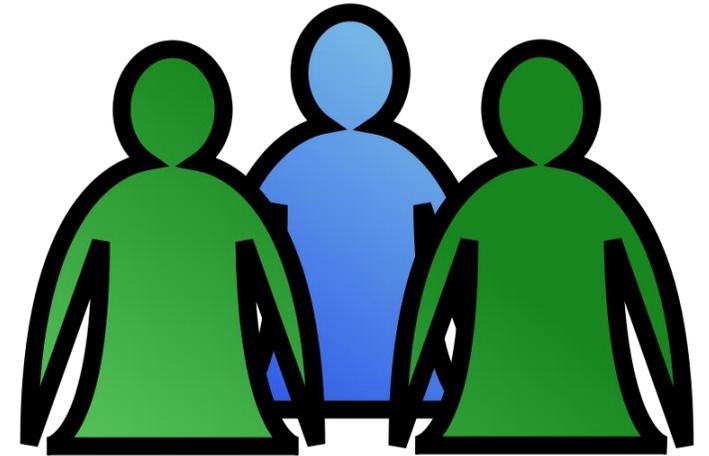
- Public solid waste survey in March, 2019
- PTAC meetings in 2019 and 2020 to discuss and agree on preferred options/ strategies
- The Board approved the Draft SWMP in October 2020 for public consultation



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Ministry Requirements

- The Ministry requires the Draft SWMP to have undergone adequate consultation with the public and affected stakeholders



RDKS Commitments

- Provide information to enable stakeholders and the public to determine how their interests may be affected and decide on their desired level of involvement.
- Use a variety of methods to notify the public and stakeholders of each consultation opportunity.
- Provide time for stakeholders and the public to respond to draft documents.
- Document the proceedings and outcomes from the consultation process and make them available for public review, to demonstrate how the SWMP addresses input received.
- Collaborate with member municipalities, First Nations representatives, and community associations to deliver consultation.

Options for Public Consultation

- The RDKS can reallocate the budget from in-person events to:
 - Online survey
 - Mail survey (in combination with online survey)
 - Virtual open houses (Webinar) with Q&A
 - Targeted phone interviews



Proposed Options and Timeline for Public Consultation

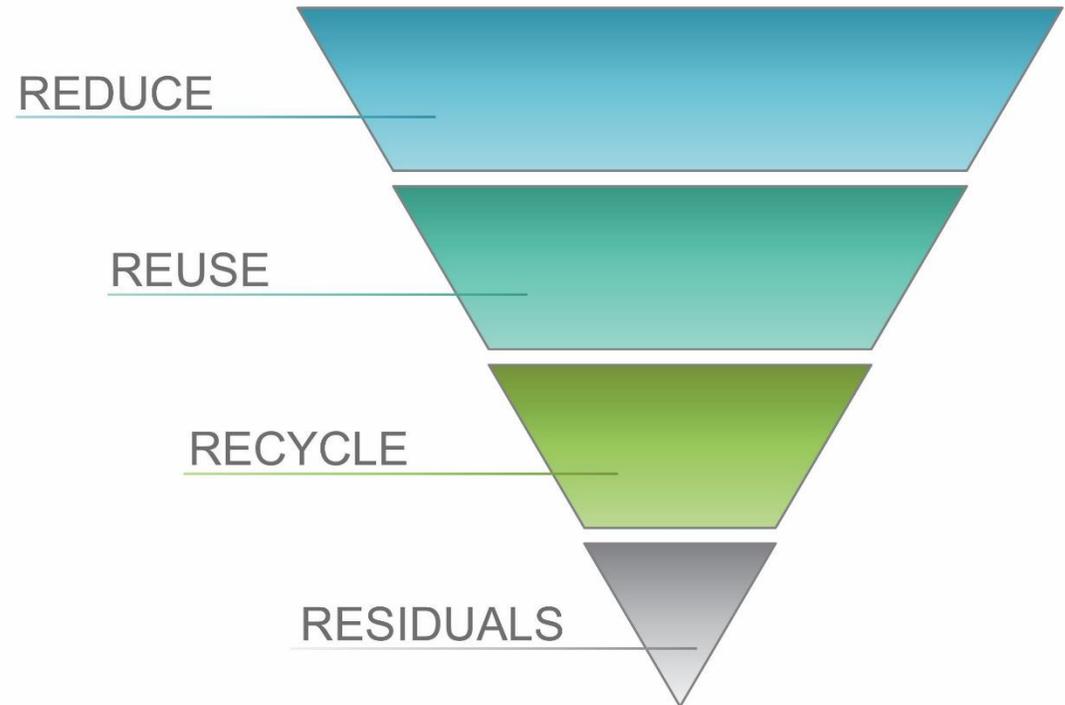
Timeline (2021)	Engagement Technique	Costs	Duration
Feb – March	Online and mail survey	External \$10,000 Internal \$12,000	The survey can be open for a 6-week duration.
March – April	Virtual events (open houses and meetings)	External \$15,000 Internal \$ -	Events can be held over a 2-month period.
	Targeted interviews with key stakeholders	External \$2,000 Internal \$ -	Interviews can be held for one month concurrent to the virtual events.

Options for Public Consultation

- Are these techniques suitable for Public Consultation:
 - Online survey
 - Mail survey (in combination with online survey)
 - Virtual open houses (Webinar) with Q&A
 - Targeted phone interviews?
- Do you have any specific concerns we need to consider?

Potential Survey Questions

- The SWMP Survey (#2) to cover these aspects:
 - Reduce and reuse
 - Recycling
 - Composting and system efficiency
 - Residual Waste Management
 - New service areas/ cost recovery



Potential Survey Questions

- The SWMP Survey (#2) to cover these aspects:
 - Profiling questions
 - Approximately 18 questions
 - A short summary of the issue/opportunity will introduce each question/ group of questions
 - If necessary, specific questions will be developed for each service area

Potential Survey Questions

- Do you have any feedback on the potential generic survey questions?
 - Are there any important topics missing?
 - Can any questions be excluded if the survey becomes too long?

Next Steps

- Early 2021: Present recommended engagement techniques and SWMP survey question to the Board for approval
- Public Consultation will commence immediately following Board approval



Conclusion

- Do you have any further comments or questions?
- Thank you for your input!



Love this place.
Reduce your waste.

Thank you!

Veronica Bartlett
Solid Waste Planner
Morrison Hershfield
vbartlett@morrisonhershfield.com

Nicki Veikle
Environmental Coordinator
Regional District of Kitimat-Stikine
nveikle@rdks.bc.ca



MORRISON HERSHFIELD



**Love this place.
Reduce your waste.**

Appendix 39 – 2021 Solid Waste Survey

1. I am a... (pick all that apply)

- Resident
- Seasonal resident
- Business owner

2. I live in... (pick one)

The Terrace Solid Waste Service Area:

- Terrace
- Thornhill
- The Greater Terrace area
- Lakelse Lake
- Rosswood and surrounding areas

The Hazelton and Highway 37 North Solid Waste Service Area:

- The Hazeltons
- Kispiox Valley
- Moricetown
- Kitwanga
- Cedarvale
- Stewart
- Meziadin
- Iskut and surrounding rural areas

Outside of a current Solid Waste Service Area:

- Kitimat
- Nass Valley
- Telegraph Creek
- Dease Lake
- Klemtu
- Outside of the RDKS

3. Waste reduction and waste diversion (reusing, recycling and composting) are important to me.

- Strongly agree
- Agree
- Neutral
- Disagree
- Strongly disagree

4. I make an effort to separate and properly dispose of my garbage, recycling and (where applicable) organics.

- Strongly agree
- Agree
- Neutral
- Disagree
- Strongly disagree

The District of Kitimat is not part of the RDKS service areas. Kitimat's landfill is nearing capacity and the District is looking into their options for the future. The RDKS plans to assess the costs and benefits of Kitimat possibly using the Forceman Ridge Waste Management Facility. Kitimat would pay their fair share, help cover costs, and supplement the Terrace service area tax base.

17. I support the District of Kitimat using the Forceman Ridge Waste Management Facility.

- Strongly agree
- Agree
- Neutral
- Disagree
- Strongly disagree

Almost half of all respondents in our previous survey wanted more opportunities to reuse items.

18. Which of the following reuse and repair initiatives do you think the RDKS should prioritize? [pick your top three]

- Support and promote existing reuse organizations.
- Look into collecting reusable goods at landfills and transfer stations, and offering them for sale or free, either by the RDKS or industry partners.
- Run a pilot reuse event such as a "junk-in-the-trunk" and assess community interest.
- Organize, sponsor, and promote reuse through local flea markets or trunk sales.
- Promote local repair cafés and similar events through sponsorship or marketing.
- None of these options.

19. Did we miss anything? Do you have other ideas for how to improve waste management services in your local area or in the region?

When loads of landfilled garbage contain contamination, like recyclable materials, the RDKS can issue fines between \$100 to \$1,000. Fines are currently a fixed rate depending on material type, so the fine for a small load containing contaminated material is currently the same as for a large load containing the same material. Instead of issuing fixed rate fines, the RDKS proposes to apply a tipping fee surcharge (a percentage rate applied to the total load), so that the payment penalty would be proportional to the contaminated load size.

14. The RDKS should encourage increased waste diversion by setting surcharges on contaminated loads.

- Strongly agree Agree Neutral Disagree Strongly disagree

Currently the RDKS accepts solid waste from non-taxpaying, out-of-service-area users (i.e., project-based industry such as LNG projects and mining work camps). They pay tipping fee surcharges to compensate for not paying taxes (currently a 50% surcharge in the Terrace Service Area and 25% in the Hazelton and Highway 37 North Service Area). Accepting waste from out-of-service-area users fills up the landfill more quickly, shortening the lifespan of our landfills. However, it keeps locally made waste in the region. Revenue generated from surcharges on their large volumes of waste supplements the current tax base and could help pay to expand the landfill in the future.

15. The RDKS should continue to accept out-of-service-area waste.

- Strongly agree Agree Neutral Disagree Strongly disagree

The two solid waste services areas in the RDKS are funded separately. The Terrace Service Area has a partial user-pay model (50% tipping fees and 50% taxes) and has been sufficiently funded in recent years. The Hazelton and Highway 37 North Service Area is tax-funded model (100% taxes) that is currently operating at a loss (high operating expenses from several facilities spread over a large area). Taxes have recently been increased to help cover costs. Commercial and residential taxpayers do not pay any tipping fees, even if they dispose of large volumes of waste, such as reno or demolition waste. The RDKS may look at charging tipping fees on large volumes of certain waste types so that large waste generators pay for their own waste disposal, rather than taxpayers footing the entire bill.

16. The RDKS should look into possibly charging tip fees for large volumes of certain types of waste in the Hazelton and Highway 37 North service area.

- Strongly agree Agree Neutral Disagree Strongly disagree

As part of the Canada-wide action plan on zero plastic, the Government of Canada proposes to ban and/or restrict some single-use items such as grocery bags, straws, and disposable cutlery, but it takes time to develop and implement large-scale federal measures.

5. In the meantime, the RDKS should encourage businesses to voluntarily find alternatives to single-use items.

- Strongly agree Agree Neutral Disagree Strongly disagree

6. Which of the following initiatives do you think the RDKS should prioritize to reduce single-use items? [pick your top three]

Note that these initiatives would likely be post-pandemic as many single-use items are currently being used for health and safety reasons.

- Lobby the BC government for the creation of a recycling program for single-use items and packaging-like products.
- Lobby the Canadian government to regulate the distribution of single-use items.
- Encourage businesses to voluntarily reduce their use of single-use items.
- Encourage alternatives to single-use items at public events.
- Look into the possibility of 'bring your own container' programs provided health regulations for food safety are being followed.
- Help member municipalities reduce single-use items by supporting the development of relevant strategies and bylaw(s).
- Adopt a green procurement policy for the RDKS and encourage member municipalities to do the same. (A green procurement policy is when goods and services are assessed by their environmental impact as well as their cost.)
- None of the above.

Some hazardous household waste - such as pesticides, used oil, etc. - are recyclable through provincially regulated Extended Producer Responsibility programs (EPRs). Through EPRs, producers are responsible for the recycling of materials they produce. EPR regulated waste, however, is only accepted at limited drop-off locations. The RDKS proposes to expand the collection of these items through collection events, which would take place in communities approximately every two years. If feasible, we may also look at offering permanent drop-off options for certain materials at suitable transfer stations (e.g. in communities with limited collection options).

7. The RDKS should improve drop-off options for hazardous household waste.

- Strongly agree Agree Neutral Disagree Strongly disagree

Recycling costs in the region are high. If the RDKS can reduce recycling contamination rates from over 8% (the current rate) to less than 3%, the Thornhill and greater Terrace area curbside collection program can be subsidized by Recycle BC (City of Terrace already has Recycle BC support), thereby potentially reducing taxes. Recycling contamination increases the program costs by complicating material sorting and reducing the quality of recoverable material. Contamination occurs when unrecyclable material, food soiled materials, or the wrong types of materials end up in the recycling - like glass, Styrofoam and plastic bags in your curbside recycling bin (these items must be returned at the recycling depot).

8. To reduce recycling contamination, the RDKS should use enforcement (fine repeat offenders), alongside more public education.

- Strongly agree Agree Neutral Disagree Strongly disagree

The RDKS operates some smaller landfills, such as those in Iskut and Rosswood, which are often expensive to operate and maintain. We can save money on operating costs by closing some of these landfills and replacing them with transfer stations. This happened in Kitwanga, where the RDKS set up a transfer station after closing the landfill there in 2017.

9. The RDKS should close smaller landfills if it makes sense financially and community needs for waste management can still be met.

- Strongly agree Agree Neutral Disagree Strongly disagree

Organic waste, such as food waste, in landfills generates methane, a potent greenhouse gas. The best way to deal with organic waste is by composting it. The Terrace Service Area currently has a compost program, in which organics collected curbside are composted at the local landfill. Compost facilities may be developed in other areas in the region, for example, the Hazelton area and the Stewart or Meziadin area, if feasible.

10. Please check all that apply

- I already divert my organics; I compost in my backyard or feed my livestock.
- I already divert my organics; I use the curbside organics collection program offered in my region or a private waste hauler contractor.
- I already divert my organics; I take my organics to a drop-off location in my community.
- I would use a compost facility, if available.
- I would use curbside organics collection, if available.
- I'm not interested in segregating my organics or composting.
- Other; please specify_____

Illegal dumping is an ongoing issue for the RDKS. Illegal dump sites often contain materials that can be recycled for free. The RDKS participates in a working group with local and provincial governments and First Nations, committed to addressing illegal public dumping. The RDKS proposes to develop an illegal dumping strategy with the working group. The strategy would aim to improve tracking and reducing illegal dumping through public outreach, education and enforcement.

11. To reduce illegal dumping, the RDKS should use enforcement, alongside more public outreach and education.

- Strongly agree Agree Neutral Disagree Strongly disagree

The Construction and Demolition sector is responsible for 17% of total waste in the RDKS. Only 5% of construction and demolition waste is separated at worksites and diverted from the landfill.

12. The RDKS should focus on promoting the reuse and recycling of construction and demolition waste.

- Strongly agree Agree Neutral Disagree Strongly disagree

13. Which of these initiatives do you think the RDKS should prioritize? [pick your top three]

- Study the waste coming into the landfill to figure out the types and amounts of construction and demo waste from homeowners, contractors and industry.
- Educate building contractors and homeowners about options to reduce and reuse renovation, construction and demo materials.
- Identify and promote reuse options for used building materials, such as Reuse-It-Centres.
- Identify local options for certain construction and demo wastes (e.g., asphalt shingles, drywall and clean wood) and test as pilot projects.
- Create a working group with people in the construction and demo sector and industry to figure out solutions for reusing and recycling used building materials.
- Look into requiring the deconstruction of buildings (as opposed to demolition) and segregation of materials as part of building permitting.
- Restrict reusable and/or recyclable building materials from the landfill.
- Charge more for the disposal of reusable or recyclable building materials to encourage segregation and reuse/recycling.
- None of the above.

Appendix 40 – Advertising for the 2021 Solid Waste Survey



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Regional District of
Kitimat-Stikine

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Complete the survey for your chance to
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We've developed a new Solid Waste Management Plan aimed to reduce waste, recycle more, and better manage our garbage.

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<https://link.rdks.bc.ca/solidwastesurvey2021>

Or complete the survey sent to you by mail. Thanks!

Submit the survey by **March 14**



For more info, visit www.rdks.bc.ca/solidwasteplan or email solidwasteplan@rdks.bc.ca.
Thank-you for taking 15 minutes to share your thoughts on waste management in our region.



RESIDENTS



BUSINESS



VISITORS



FLOOD RECOVERY INFORMATION! - CLICK HERE FOR INFO AND UPDATES



2021 SWMP Survey



Government / News / 2021 SWMP Survey



2021 Solid Waste Management Plan Survey

Posted on 02/01/2021



We have developed a new Draft Solid Waste Management Plan (SWMP) to provide direction for how we will reduce, reuse, recycle and dispose of our waste for the next decade.

Consultation on the Draft SWMP has now begun with the launch of our **2021 Solid Waste Survey**. This survey is now live (see the link below) and printed copies will begin arriving in mailboxes throughout the Regional District early in February.

This survey will close on March 14th.

Have your say today: **TAKE THE 2021 SOLID WASTE SURVEY!**



Regional District of Kitimat-Stikine

23h

Consultation on our new Draft Solid Waste Management Plan (SWMP) has now begun with the launch of our 2021 Solid Waste Survey.

Have your say today and take the 2021 Solid Waste Survey: link.rdks.bc.ca/solidwastesurvey2021

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23h



Liked by  hannahshinton and 3 others

23 HOURS AGO



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23h



Liked by hannahshinton and 3 others

23 HOURS AGO

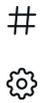


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@KitimatStikine



Consultation on our new Draft Solid Waste Management Plan (SWMP) has now begun with the launch of our 2021 Solid Waste Survey. Have your say today and take the 2021 Solid Waste Survey: link.rdks.bc.ca/solidwastesurv...



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1 Retweet



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The Regional District of Kitimat-Stikine is home to five municipalities and six electoral areas, delivering a wide range of services to a vast geographic area.

What's happening

World news · Yesterday

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Trending with [#IStandWithFarmers](#)

Trending in Canada

#FarmersProtest

Trending with [Bollywood](#)

Trending in Canada

#ripchrispratt

14.6K Tweets

Awards season 2021 · LIVE

Golden Globes: The 2021 nominees are here

Trending with [#GoldenGlobes](#), [Paris](#)

US news · Yesterday

Jeff Bezos to step down as Amazon CEO

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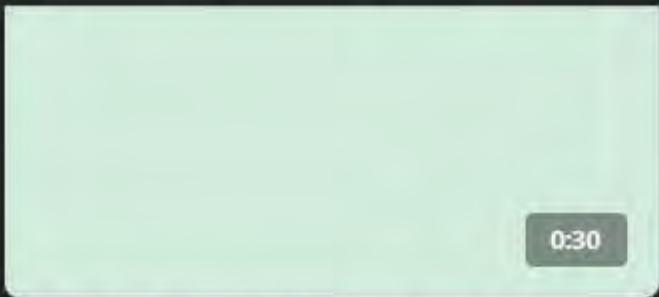
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Page created - May 27, 2020

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our businesses would be eligible for this!

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Regional District of Kitimat-Stikine

February 2 · 🌐



Consultation on our new Draft Solid Waste Management Plan (SWMP) has now begun with the launch of our 2021 Solid Waste Survey. Have your say today and take the 2021 Solid Waste Survey: link.rdks.bc.ca/solidwastesurvey2021



53

18 Comments 51 Shares

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Most Relevant



Write a comment...



Roslyn F Madrid
As is so often the case, I'd bet dollars to donuts that they haven't even considered the needs of a community like

59 new COVID-19 cases in Terrace area

By Jake Wray

There were 59 new COVID-19 cases in the Terrace area between Jan. 17 and Jan. 23, according to the latest data published

by the BC Centre for Disease Control (BCCDC).

The Terrace area, which includes Kit-selas, Thornhill, and Kitsumkalum, continues to have one of the

highest average daily rates per 100,000 people out of any jurisdiction in B.C.

The Nass Valley also has a high rate per 100,000 people, with 9 new cases be-

tween Jan. 17 and Jan. 23. Those BCCDC figures for the Nass Valley may not match numbers self-reported by the Nisga'a Valley Health Authority (NVHA), due to dif-

ferences in how the two organizations track cases.

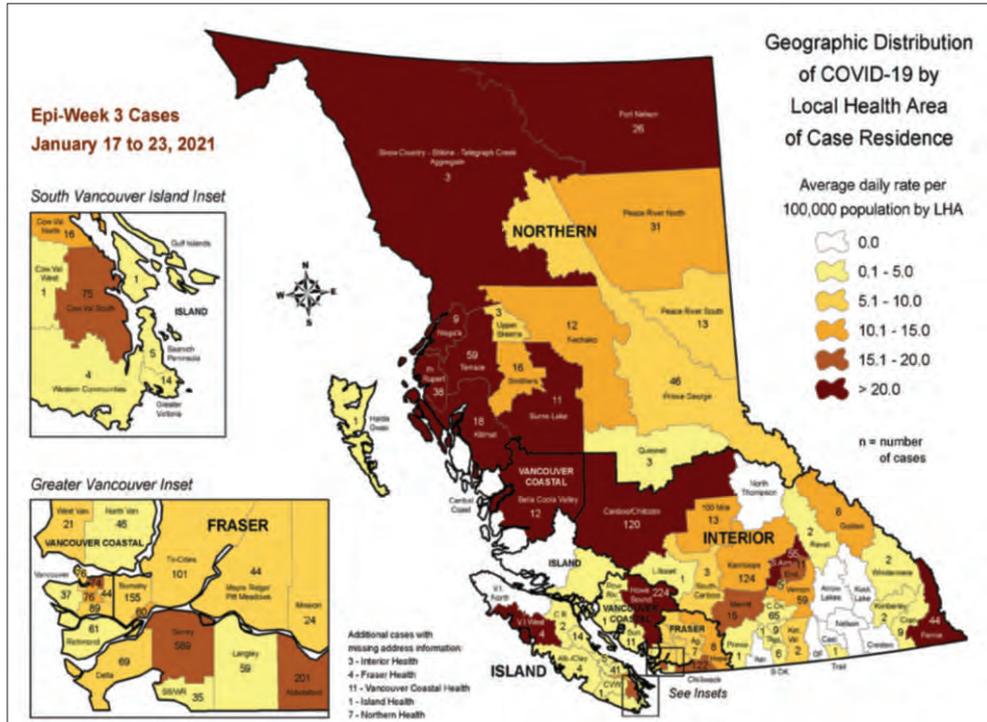
There were two more exposure notices posted for Terrace schools recently.

An exposure at Uplands Elementary

School occurred Jan. 19 to Jan. 21, and an exposure at Centennial Christian School took place on Jan. 20 and Jan. 21, according to Northern Health's list of public exposures and outbreaks.

There have been numerous COVID-19 exposure notices for Terrace schools issued by Northern Health since Nov. 2020, and nearly all Terrace schools have had at least one exposure notice.

There was also an exposure notice issued for a flight from Terrace to Vancouver on Jan. 22. Rows 8 - 14 of Air Canada flight number 8245, according to the BCCDC's list of flight exposures.



Terrace continues to have a high rate of COVID-19 infections per 100,000 people, according to this map which shows data from Jan. 17 to Jan. 23. (BC Centre for Disease Control)

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We've developed a new Solid Waste Management Plan aimed to reduce waste, recycle more, and better manage our garbage.

WE WANT TO KNOW WHAT YOU THINK. Complete the Survey at:

<https://link.rdks.bc.ca/solidwastesurvey2021>

Or complete the survey sent to you by mail. Thanks!

Submit the survey by **March 14**

For more info, visit www.rdks.bc.ca/solidwasteplan or email solidwasteplan@rdks.bc.ca. Thank-you for taking 15 minutes to share your thoughts on waste management in our region.



A message from our team, if anyone is feeling alone, remember to reach out for support, and although distancing is in place, there are now, more than ever, online and call centres available 24/7. Along with online Doctor's there are therapists who can support many kinds of mental health issues. Anyone can be connected with someone who will listen, its ok to reach out for help. If you wish to have local support, please call the hospital, or any Health Station for various resources.

See a list of crisis numbers below:

- Kids Help Line: 310-1234
- Mental Health Info Line: 310- 6789
- 1-800-Suicide: 1-800-784-2433
- Youth Crisis Line: 1-800-784-2433
- IRS Crisis Line: 1-866-925-4419
- Kuu-us Crisis Line: 1-800-588-8717
- FAST: 778-202-1428



**VILLAGE OF HAZELTON
2021-2025 Five Year Financial Plan**

The Village of Hazelton Council invites written public comment on Five Year Financial Plan Bylaw No. 516, 2021 which covers the 2021-2025 Operating and Capital Budgets.

Council will review comments on the Plan at the Regular Meeting of March 9, 2021 at 6:30 pm. The public can join the meeting via the online portal and can submit input in writing prior to March 5th.

Copies of the Bylaw are available at www.hazelton.ca and at the Village Office

Questions on the Financial Plan and the budget process may be directed to:

Lina Gasser, Chief Administrative Officer
Village of Hazelton

Email: lgasser@hazelton.ca
Box 40 Hazelton, BC V0J 1Y0
Ph: (250) 842-5991

February 12, 2021 Page 6

BOB'S GUITARS

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Submit the survey by **March 14**

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Thank-you for taking 15 minutes to share your thoughts on waste management in our region.

A space this size could be yours for \$17.50 + GST per issue.

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For details

February 15



February Birthstone

Amethyst



It has long been said that the **Amethyst** can guard against drunkenness and has a sobering effect for those excited by passion and love. It symbolizes peace, protection, tranquility, and sincerity.

The Bulkley Browser

Phone 250-842-4143 or email: browser2019@telus.net

February 19, 2021

Box 222 New Hazelton, BC V0J 2J0
View us online: www.bulkleybrowser.ca



THE DEADLINE for free classified ads is every Tuesday

COMMUNITY EVENTS

& ANNOUNCEMENTS

THE HAZELTONS

Join the Community Get Together on Zoom Monday February 22, 3pm. Call Charlotte for the Zoom link or instructions on how to phone in 250-842-5887.

Free virtual podcast recording workshop for seniors offered by the Wrinch Memorial Foundation, the New Horizons Foundation The Learning Shop & CICK radio. Info: Call or text 250-842-5887 or you email linfordcharlotte@gmail.com

Seniors, if you have a completed heart from the **Seniors HeArt project** & want to add it to the show call or text 250-842-5887

Hazelton Free Range Writers' Group meet twice monthly on Monday evenings. For information re: time & place, please call 250-842-8413.

Welcome Back. Are you ready to feel your wholesome self? **Yoga Shack BC** is re-opening the doors...again! We welcome newbies and seasoned yogis. Book online via website www.yogashackbc.com. Call us 250-643-4727.

The **Roche View Lodge Society Annual General Meeting**, Tuesday February 23 @ 2pm @ the Roche View Lodge activity room. Due to Covid-19 restrictions, the public won't be able to attend the meeting, however minutes will be available on March 1.

Misty Rivers Arts Centre presents: 2021 Members' Show, until March 6. Arts Centre Hours: Thursday - Saturday, 12-4pm.

The Salvation Army Food Bank is here to help, but please note that due to construction, we have moved a block over, to the Hazel Branch on Field Street, right beside the Post Office in Old Hazelton. Due to COVID-19, we will offer pre-packed bags @ the door. Hours: Wed from 2-4:30pm. Info: 250-842-5551

Hazelton District Public Library is now open Saturdays 1-4pm & continue to be open Tuesday, Wednesday, Thursday & Friday 11am-4pm. There is a computer available for public use, by appointment only, at the library. Only one person @ a time will be allowed the computer station, for a maximum of 45 minutes per session. Please bring your own headphones if you want to use them. Contact the library 250-842-5961 or hazlib@citywest.ca; or Facebook messenger to make your appointment.

CICK 93.9fm Smithers Community Radio is partnering with Hazelton's **The Learning Shop** to create accessible space for podcast recording studios. For info: Meghan Brady cickmeghan@gmail.com or 250-847-8769 or Lorraine Ihnidankendall@gmail.com or 250-842-6524. We provide training, by staff or a volunteer, to those wanting to become a radio programmer & a Member of Smithers Community Radio Society

Chair Yoga with Erly Combs is now on Zoom! Tues @ 2:45pm. Free. Contact Charlotte for the zoom link, phone in information or technical support: email linfordcharlotte@gmail.com or 250 842-5887

The Alzheimer Society of B.C. toll-free helpline is available Monday to Friday, 9am & 8pm for anyone who would like info & support on dementia, memory loss or general brain health, by calling 1-800-936-6033

Free mental health support & counselling for individuals in the Upper Skeena Region who self-identify as needing this service during the COVID pandemic and who are not eligible for funding under existing services. Phone 778-202-1670 to arrange an appointment. This opportunity is made possible by the Government of Canada Emergency Community Support Fund, Community Foundations of Canada & the Wrinch Memorial Foundation in Hazelton.

The **Hazelton Pioneer Museum & Archives** thanks everyone for their patience & continued support. We remain closed, however you may buy books & other



Accounting on Broadway
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Brigita 250-643-2346
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Richard 250-842-8246



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Birch Flooring - Lumber - Firewood

Bulkley Browser, February 19, 2021

gift items at the library's circulation desk during their open hours. Etransfers hazeltonmuseum@citywest.ca

Art Kits for Elders the New Horizons Foundation & the Wrinch Memorial Foundation have been distributing monthly art kits to seniors in the Upper Skeena Region each month as a COVID relief project. If you are a senior & would like a monthly art kit please contact Charlotte 250-842-5887.

Overeaters Anonymous is currently meeting on free telephone conference call Mondays @ 7pm. Barb 250-842-5325, voicemail after 4 rings, for info on joining the tele-meeting or to obtain OA 12-Step literature

Support for Seniors and Elders in the Upper Skeena Region during the COVID Crisis. If you are 65 or over & feel you could benefit from professional counselling services, please call 778-202-1670 to connect with Beth or Mark Larsen. This is a free service. Friendly Visits. If you are over 65 and staying home, congratulations! You are doing the right thing. When you start to feel cooped in at home, consider joining the Friendly Visit Program. This program will organize phone visits between people so that everyone has someone friendly to talk to. Contact 250-842-5887 to have a friendly visit or to provide a friendly visit to someone else. We can do this together!

Smart Recovery Addiction recovery support group participants learn self-empowering techniques to aid recovery through mutual-help, face-to-face & online meeting & services. No matter what your addiction, SMART Recovery tools & techniques can help you overcome the behavior. Wed, 3-4pm tele-video, Hazelton Mental Health & Addictions 2506 Hwy 62. 250-842-5144

To book the St. Peter's Church Army Hall phone church @ 842-5222 to leave a msg or Janet 250-842-6323/ Grace 842-7133 /Gwen 842-6875

Helping Hands of New Hazelton raises money by recycling cans, bottles & scrap metal; items donated by individuals & business establishments our area. Funds are raised to help seniors, cancer patients & children in our community that require medications or assistance they cannot access or afford. We work in cooperation with our local pharmacy & doctors. If you/ your business would like to be involved call 250-842-6494 or cash donations made @ the BVCU.

CHURCH SERVICES

Mountainview United is presently not holding in-church Sunday services due to COVID, but you are invited to visit our website @ mountainviewunit-edchurch.ca where you will find reflections, readings stories, recipes, pictures

As of Dec. 8, **St. Mary's Catholic Church** in New Hazelton suspends all services due to Covid-19, closure in effect until BC's Medical Health Officer permits public gatherings. Those wishing to follow Sunday and Weekday Mass may stream on-line or view TV programming.

South Hazelton's **Mount Rocher Church** suspends church services until further notice due to COVID-19 health & safety concerns.

St. Peter's Anglican Church is now open. Sunday services begin @ 11am following Covid -19 health guidelines with distancing & use of masks. On-line services are also available @ caledoniadiocese.com; on Vimeo, Facebook or Youtube. All welcome.

The Baptist Mission is temporarily cancelling public services due to COVID-19 concerns. Check for further updates. Meantime find us online for our recorded services on YouTube. Search for **Hazelton Baptist Mission**. Be sure to subscribe for notifications. Weekly new videos. 778-202-0165

Hazelton Pentecostal Church services Sunday @ 11am. Pastor Keith Gaetz. All welcome. Children's church during service. Prayer meeting 7pm every Thursday @ church. 778-645-4567



Quote of the Week

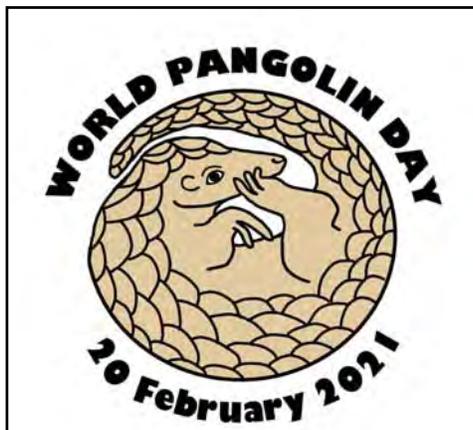
The more I see of (Canada), the less I feel I know about it. There is a saying that after five years in the north, everyone is an expert; after ten years, a novice.

-Pierre Berton

February 19, 2021 Page 2



Two thumbs up to the Language & Culture Program at GWES. Wonderful tools to learn @ home during this pandemic.



Fun Facts

T-shirts weren't popular as outer wear until the 1950s when Hollywood icons like Marlon Brando and James Dean wore them in movies. In February 2019 Ted Hastings broke the Guinness World Record by wearing 260 t-shirts from size medium to 20X at once. Two billion t-shirts are sold around the globe every year.



Thumbs down. There have been numerous dogs roaming around Old Hazelton the past few weeks, with no owners in sight. This is paws-ively annoying.



Two thumbs up to Ms. Murrell, a positive, helpful, compassionate teacher at HSS. Thank you for being so good to the students. From a happy mom.

Need help drafting your Will or Power of Attorney?
Contact: Mark J. Bridgeman Barrister and Solicitor
 778-640-4769
 or markbridgemanlawyer@gmail.com

Love this place. Reduce your waste.

Regional District of Kitimat-Stikine

Don't WASTE this opportunity!

Complete the survey for your chance to WIN A \$100 VISA GIFT CARD!

We've developed a new Solid Waste Management Plan aimed to reduce waste, recycle more, and better manage our garbage.

WE WANT TO KNOW WHAT YOU THINK. Complete the Survey at:

<https://link.rdks.bc.ca/solidwastesurvey2021>

Or complete the survey sent to you by mail. Thanks! Submit the survey by **March 14**

For more info, visit www.rdks.bc.ca/solidwasteplan or email solidwasteplan@rdks.bc.ca. Thank-you for taking 15 minutes to share your thoughts on waste management in our region.



Are you an independent, locally-owned business?
 We'd love to have you join.

lovethehazeltons.com

Love Northern BC is a movement connecting people with the independent shops and services that are the heart and soul of their communities.

The program is designed to deliver unique marketing campaigns in communities throughout central and northern BC that celebrate locally-owned independent businesses with an aim to strengthen their competitiveness and keep more dollars in the local economy.

For more information or to sign-up, please call the Village of Hazelton at 250-842-5991 or the District of New Hazelton at 250-842-6571



Hospice Highlights

Advance Care Planning is about talking with your family, friends and health care team so they know how you wish to be cared for if you ever become ill or badly hurt. It's thinking about what matters – your values, goals, traditional practices and preferences. It's also about deciding who will speak for you if you can't.

Advance Care Planning is one way to be prepared for the unexpected.

Let's face it. We all hope to die peacefully, able to communicate until the very end. But that's not always the case. An advance Care Plan allows you to make decisions today to prepare for the unexpected. Some people feel strongly about things like resuscitation, intubation, breathing tubes, feeding tubes, blood transfusions, etc. An ACP will give you the opportunity to make your decisions ahead of time so that if the time comes that you cannot make decisions for yourself, others will know what is important to you and be able to carry out your wishes.

The Terrace Hospice Society offers workshops that will show you how to appoint a Substitute Decision Maker, what an Advance Directive is, what Representation Agreements are used for, what is the difference between a Rep 7 and a Rep 9, and so much more. At the end you will be able to have a completed Advance Care Plan which will bring peace of mind to you and your loved ones. These workshops are a free service of the Terrace Hospice Society.

But don't let the price of these workshops fool you..... they may be FREE but they are priceless in terms of value and the peace of mind that it brings to you and your loved ones. For you it can relieve the uncertainty of not being heard and for your family it gives them clear direction to make decisions on your behalf at an already stressful time.

And for those who are having a hard time bringing up the topic of death and dying to family members, we would be happy to deliver a private workshop for you and your loved ones

in the comfortable setting of your own home. Sometimes it's easier for a non-family member to bring up this delicate topic. And I promise you that once everyone has heard the presentation, they will agree that everyone should have an Advance Care Plan.

Many of you are now homebound because of covid 19 which makes this the perfect time to get your plan in place. We are now offering a 4 hour course via video conferencing so that you can all stay home with your feet up and still get your plan completed. It will be spread over 2 weeks to allow time to think about the care that is right for you. In week 1 you will learn all of the components of an Advance Care Plan and in week 2 we will assemble them and complete your plan.

Call Terrace Hospice at 250-638-4811 for the next ACP Workshop dates.

We acknowledge the financial support of the Province of British Columbia and Northern Health.



Terrace Hospice Society <http://terracehospice.org>
 207 - 4650 Lazelle Ave Terrace, BC V8G 1S6 Phone: (250) 635-4811

YOUR COMMUNITY CALENDAR City Scene YOUR TIME GREATER TERRACE AREA

CALENDAR EVENTS

Mar. 15-18: Terrace Church's food bank opening from 9:30 a.m. to 11:30 a.m. The food bank is located below the Dairy Queen, 4643 Park Avenue

THIS IS THE LAST ANNOUNCEMENT.

Found a good watch in a Terrace store on January. Claimant must answer detailed questions. Phone 250.638.7798

SHOULD YOUR EVENT BE LISTED HERE?

SUPPORT GROUPS

Families and friends of individuals with a mental illness are invited to attend the BCSS Zoom Support Group meeting on the third Monday of each month from 7 p.m. to 8:30 p.m. For information and the zoom link, email terrace@bcss.org or call 250.635.8206 toll free 1.888.888.0029

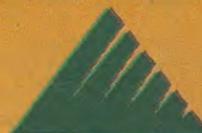
Thinking of breastfeeding? Breast-feed in the past and didn't go exactly how you had hoped? Or do you know someone who is pregnant and might want to know more about breastfeeding? Come empower yourself with reputable information from an IBCLC (international board certified lactation consultant). To register or for more information email laitplease@gmail.com (Max class size is 10 moms).

Memories of a lifetime. A legacy gift for those touched by your death. Trained volunteers record and edit an interview about your life and memories. These are put on a memory stick for your loved ones to keep forever. Call Diana for more information 250.635.4811 or register on our website terracehospice.org

City Scene is a free calendar of the greater Terrace area. Submit your event details two weeks in advance by 4 p.m. Fridays for Thursday publication. Fax: 250.638.8432 or email community@terracestandard.com



Love this place. Reduce your waste.



Regional District of Kitimat-Stikine

Don't WASTE this opportunity!

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We've developed a new Solid Waste Management Plan aimed to reduce waste, recycle more, and better manage our garbage.

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<https://link.rdks.bc.ca/solidwastesurvey2021>



Or complete the survey sent to you by mail. Thanks!

Submit the survey by **March 14**

For more info, visit www.rdks.bc.ca/solidwasteplan or email solidwasteplan@rdks.bc.ca. Thank-you for taking 15 minutes to share your thoughts on waste management in our region.

Prince Rupert long-time hockey trainer and skating instructor passes away

By K-J Millar
Black Press Media

The Prince Rupert hockey community has lost an integral pillar of knowledge and support with the passing away of Jules Robinson head trainer and equipment manager of the Rupert Rampage on Feb. 15.

Ron German, Rupert Rampage Manager said it is going to be difficult to find anyone with the same passion and dedication to the game.

"There is going to be a massive void," German told *The Northern View*.

German first met Robinson in hockey circles more than 30 years ago he said, and throughout the years has known him in various roles.

In the 1970s and 80s Robinson was a trainer with the Halibut Kings senior men's hockey team. When the league folded, he went on to teach the tiny tots program instructing children how to skate, including German's kids and many of the players in today's league.

The Rampage manager said when the senior men's league started up again as the Rupert Rampage, Robinson was there not even needing an invitation to assist.

"Straightaway he was going



Jules Robinson

to be that guy again. He was a trainer for us," German said.

Robinson's dedication was unmatched with him attending the arena on game days as early as 2:30 the afternoon to prep the change rooms and make sure the boys could just walk in and sit at their spot underneath their readily hanging jerseys.

"I don't think he missed a game in town," German said. "He always made the players all feel pretty special in the way that he would have the change rooms ready for them and have everything all the players needed. He had it all like they were in the big show."

German said he will not forget that Robinson insisted on certain

traditions and rituals prior to the games. Even when travelling on the road certain customs were not to be forgotten or precluded as Robinson would just not permit it. Like the double blast at the 'half-hour tower'.

German said back in the days of the Halibut Kings, the road to Terrace would run under the hydroelectric tower. It is located about half an hour out of Prince Rupert. Back in the day when the Kings would drive underneath it, the horn on the bus would be blasted two times for good luck.

Described by many as kind-hearted and selfless, memories and condolences on social media are flooding in for the long time local hockey trainer and supporter with tributes such as:

"We can only imagine the big smile on his face and the nonstop chatting with his old King's buddies along with Reggie and Coach Pyde. Jules will remain in our hearts and we will continue to salute him on the road trip tradition he passed on...a double honk at the half-hour tower." - Rupert Ramage

"Rest in peace Jules, you were one class act my friend. I met you when I was around 11 at the kings game and you invited me to stand by the bench so I could watch the game like a player. We became buddies that day and have remained so

all these many years. I am truly saddened by your passing, but you will always have a special place in my heart buddy. Till we

meet again in the spirit world rest in peace my friend." - Army Nagy
"Prince Rupert hockey community lost a beauty today...."

Jules Robinson... if you had the privilege to know this kind man you're better off for it!

- Brett Stava

Coming March 2

EDEN ROBINSON

RETURN OF THE TRICKSTER

The final book in the Trickster Trilogy by Eden Robinson.

Order your copy today from Misty River Books.

#103 - 4710 Lazelle Avenue, Terrace
P: 250-635-4428
E: info@mistyriverbooks.com
www.mistyriverbooks.com

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Regional District of Kitimat-Stikine

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Submit the survey by **March 14**

For more info, visit www.rdks.bc.ca/solidwasteplan or email solidwasteplan@rdks.bc.ca. Thank-you for taking 15 minutes to share your thoughts on waste management in our region.

Appendix 41 – 2021 Solid Waste Survey Results and RDKS Response

MEMORANDUM

TO: Nicki Veikle, Regional District of Kitimat-Stikine **FROM:** Veronica Bartlett
FROM: Veronica Bartlett, Project Manager **PROJECT No.:**
RE: **2021 SWMP Survey Results and RDKS Response** **DATE:** August 19, 2021
February 2, 2021 – March 13, 2021

X:\PROJ\2019\190497600-RDKS SOLID WASTE MANAGEMENT PLAN\08. WORKING\08 CONSULTATION\SWMP SURVEY #2\2021_08_19_SWMP SURVEY2 RESULTS_FINAL.DOCX

Under the Environmental Management Act, regional districts are required to have a solid waste management plan. The Regional District of Kitimat-Stikine (RDKS; Regional District) initiated the process to update the Solid Waste Management Plan (SWMP, or Plan) in 2017. The development of a new Plan requires consultation with the public, interested parties and stakeholders. The Draft Plan was developed in close collaboration with a Public and Technical Advisory Committee (PTAC) throughout 2019 and 2020.

The Draft SWMP was made available for public review on the RDKS website in October 2020. On February 2, 2021, the RDKS launched a public survey to solicit feedback on initiatives proposed in the Draft Plan. The survey included 19 questions with high-level preambles to provide context to each question. The last question of the survey asked respondents for additional comments and feedback.

The 2021 Solid Waste Survey was publicized as follows:

- On February 1, 2021, the survey was published online using Microsoft Forms at www.link.rdks.bc.ca/solidwastesurvey2021;
- On February 2, 2021, the survey link was publicized as a news story “Don’t WASTE your chance to talk TRASH to us” on the RDKS website;
- On February 2, 2021, the survey was posted on the RDKS social media pages on Facebook, Twitter and Instagram;
- On February 9, 2021, 16,040 printed surveys were sent to all households within the RDKS;
- Advertisements were run in the Terrace Standard, Kitimat Connector, and Bulkley Browser. Ads were run in the Terrace Standard and Kitimat Connector on February 4 and February 25, and in the Bulkley Browser on February 12, 19, and 26, 2021. These ads directed citizens to complete the online survey and provided a QR Code for easily accessing the survey.

The print-version of the survey is included in Appendix 1. All completed print copies of the survey received via mail were manually input into the online survey platform for data analysis.

This Memo summarizes the survey results and feedback gathered via the 2021 Solid Waste Survey.

1 SURVEY RESULTS AND RESPONSE

The survey received a total of 1,215 responses, of which 768 responses were from the Terrace Service Area and 133 responses were from the Hazelton and Highway 37 North Service Area.

The following figures graphically present the results of the Solid Waste Survey. These are the compiled results from both service areas.

Many questions asked respondents to rate their level of agreement with a statement. Respondents who selected “strongly agree” and “agree” are presented together as combined percentage in support of a specific initiative. The same applies to “strongly disagree” and “disagree”.

The RDKS Administration drafted a response to the Solid Waste Survey results, summarizing and addressing the common themes heard through the survey comments. This response, entitled “What we heard from you: RDKS Response to Solid Waste Survey”, is contained in Appendix 2.

1.1 Respondent Profiles (Question 1-4)

Question 1

The majority (92%) of respondents identified themselves as residents, with 6% as both resident and business owner, <1% as business owners and 1% as seasonal residents. The distribution of the respondents is presented in **Figure 1**.

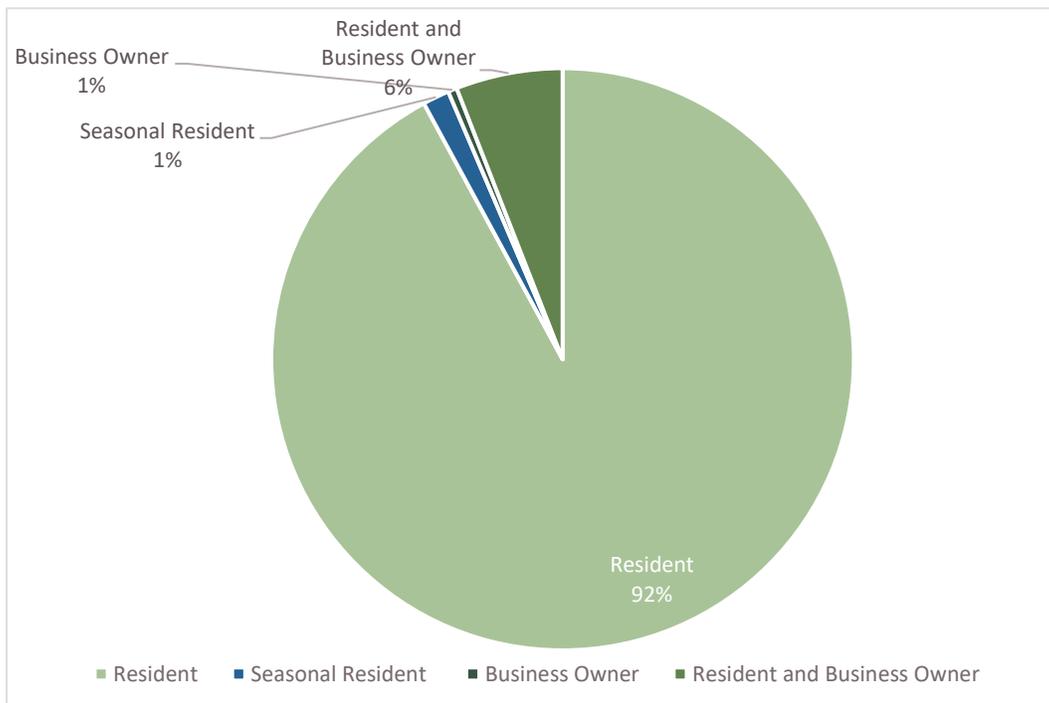


Figure 1: Distribution of Respondents. Survey Question 1 – I am a...:

Question 2

Figure 2 shows the distribution of where the survey respondents reside. Most respondents reside in Terrace (33%), Kitimat (25%) and Thornhill (18%). There were no respondents from the Cedarvale or Klemtu area.

Most respondents (63%) reside in the Terrace Solid Waste Service Area. A total of 11% reside in the Hazelton and Highway 37 Solid Waste Service Area. The remainder reside outside of a current RDKS solid waste service area (i.e., Kitimat residents).

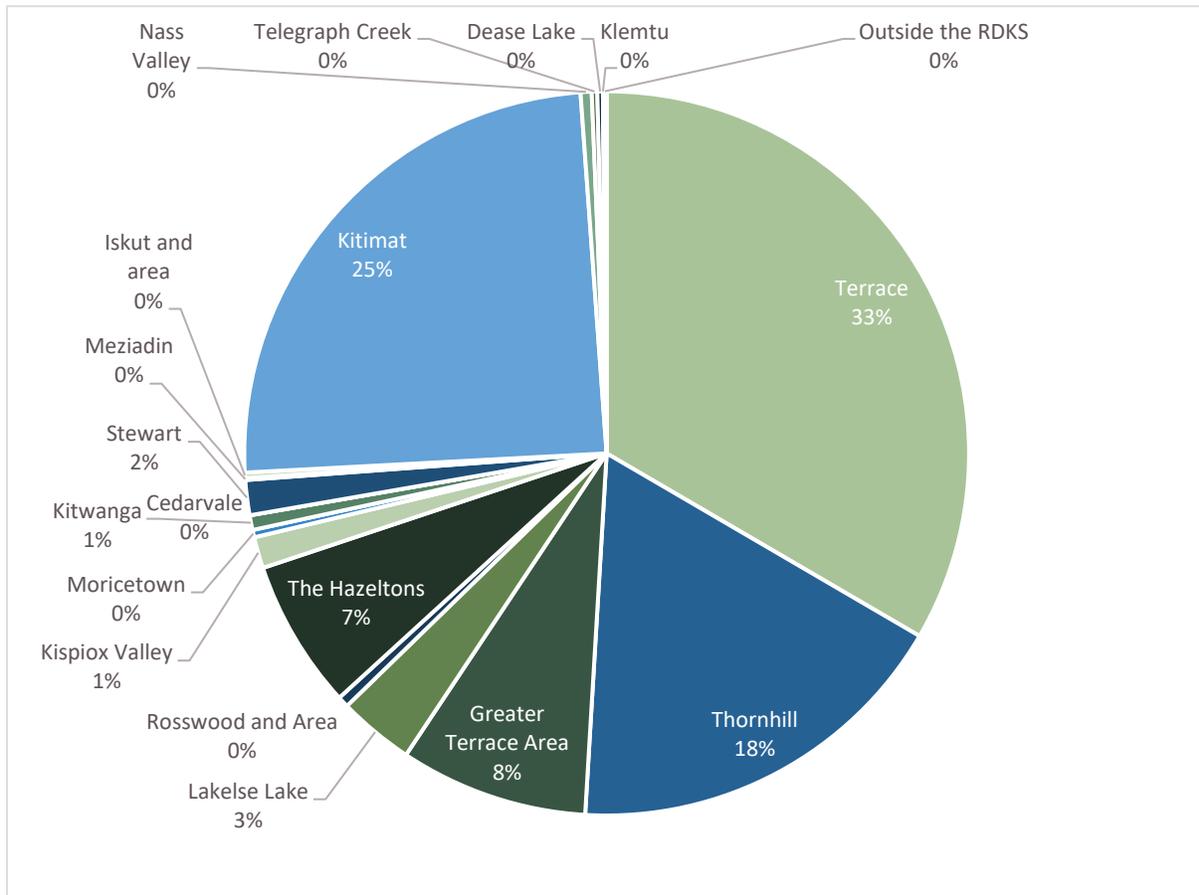


Figure 2: Geographic Location of Survey Respondents. Survey Question 2 – I live in...:

Question 3 and 4

Questions 3 and 4 asked respondents to indicate how important they believe waste reduction, waste diversion is. **Figure 3** and **Figure 4** shows the distribution of the responses.

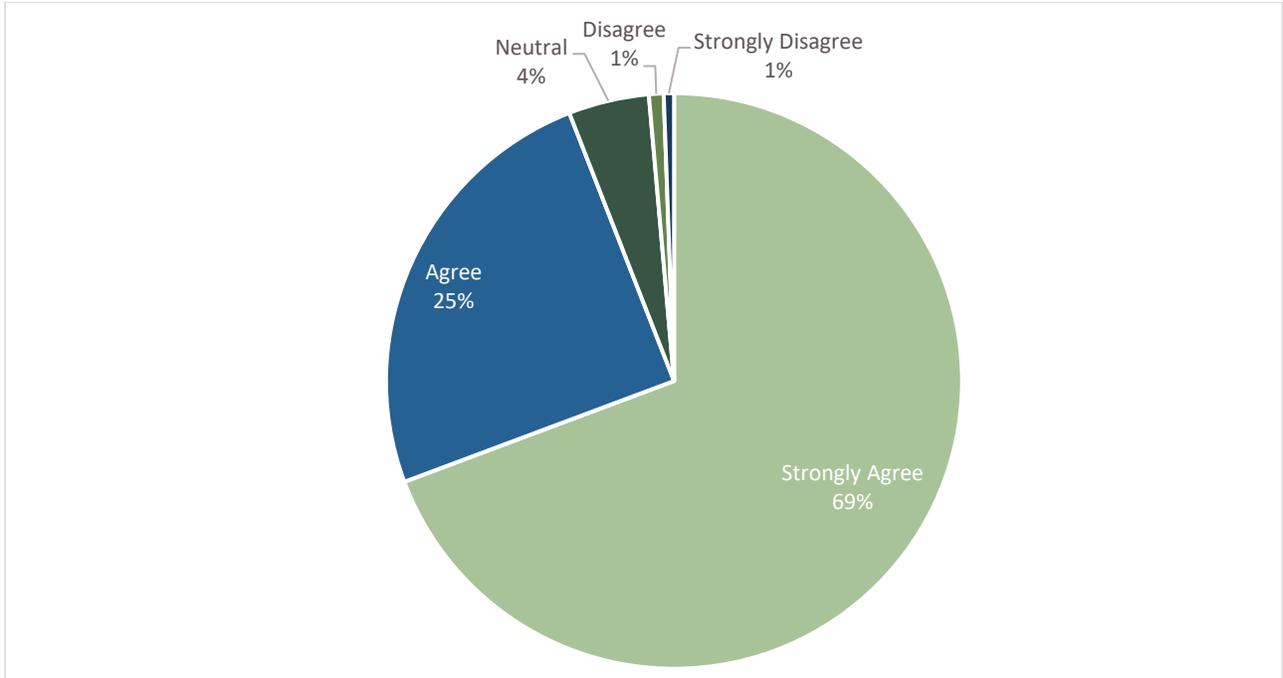


Figure 3: Survey Question 3 - Waste Reduction and Waste Diversion (Reusing, Recycling and Composting) are Important to Me

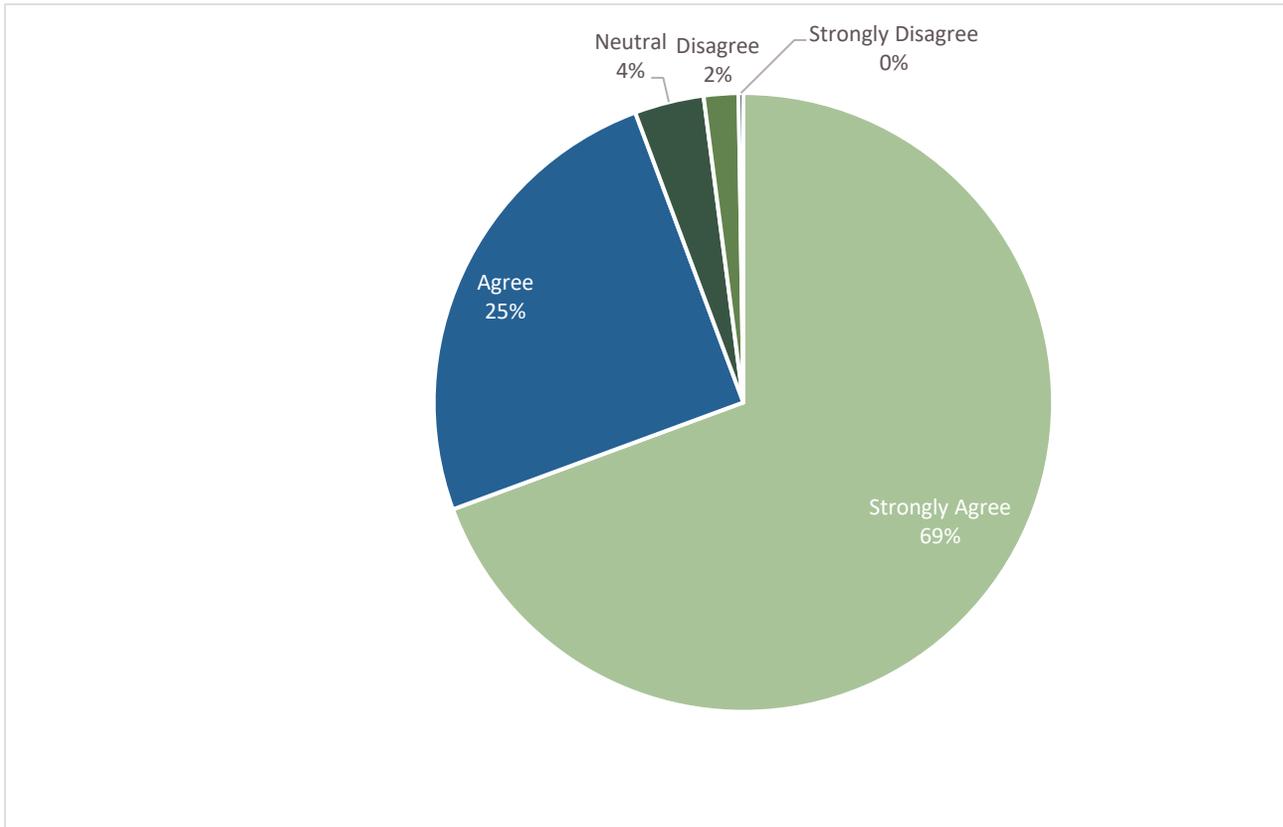


Figure 4: Survey Question 4 - I Make an Effort to Separate and Properly Dispose of My Garbage, Recycling and (Where Applicable) Organics

Figure 3 shows that 94% indicated that waste reduction and diversion are important to them. 5% were neutral and the remaining 2% indicated that waste reduction and diversion are not important to them.

Respondent were further asked if they make an effort to separate and properly dispose of their waste. As shown in **Figure 4**, 94% indicated they make an effort to sort, 4% of respondents were neutral and the remaining 2% indicate they do not make an effort to sort their waste.

1.2 Questions relating to Strategies in Draft SWMP

Question 5

As part of the Canada-wide action plan on zero plastic, the Government of Canada proposes to ban and/or restrict some single-use items such as grocery bags, straws, and disposable cutlery, but it takes time to develop and implement large-scale federal measures.

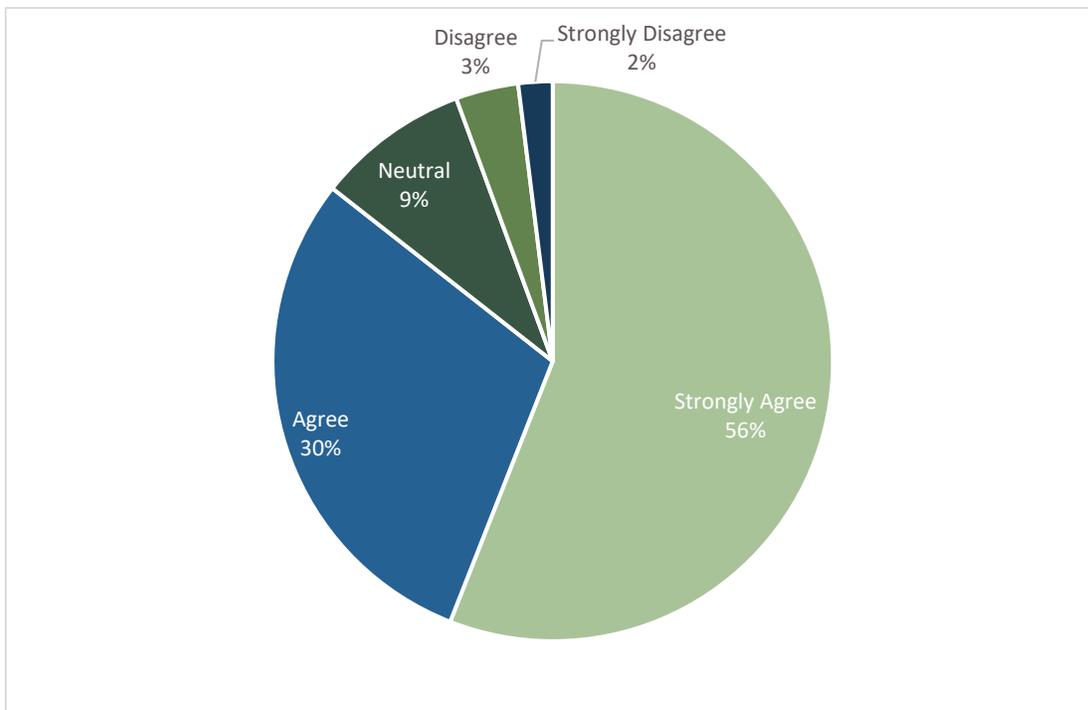


Figure 5: Survey Question 5 - In the Meantime, the RDKS Should Encourage Businesses to Voluntarily Find Alternatives to Single-Use Items

As shown in **Figure 5**, 86% of respondents agreed with the RDKS initiative to encourage business to find alternatives to single-use plastics, 9% were neutral, and 6% disagree with the initiative.

Question 6

The survey provided a list of waste reduction initiatives, and the respondents were asked to select the top three most important ones.

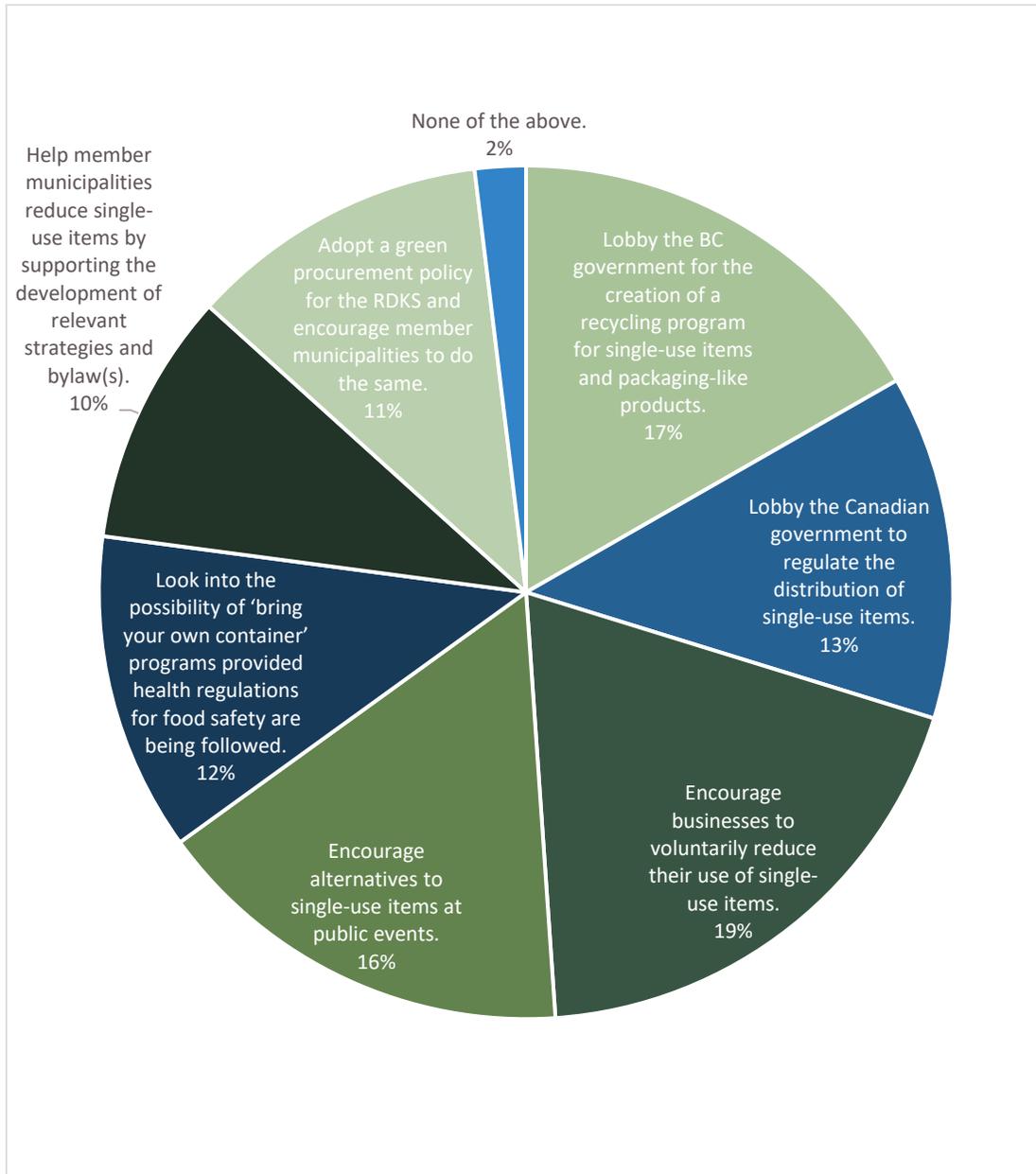


Figure 6: Survey Question 6 - Which of the Following Initiatives Do You Think the RDKS Should Prioritize to Reduce Single-Use Items? [Pick Your Top Three] Note that These Initiatives Would Likely Be Post-Pandemic as Many Single-Use Items are Currently Being Used for Health and Safety Reasons

As shown in **Figure 6**, the top three initiatives with the most support were:

- Encourage businesses to voluntarily reduce the use of single-use plastics (19% of respondents),

- Lobby the BC government for the creation of a recycling program for single-use items and packaging-like products (17%), and
- Encourage alternatives to single-use items at public events (16%).

In total, 98% of respondents supported one or more of the initiatives proposed. 2% disagreed with all the initiatives.

Question 7

Some hazardous household waste - such as pesticides, used oil, etc. - are recyclable through provincially regulated Extended Producer Responsibility programs (EPRs). Through EPRs, producers are responsible for the recycling of materials they produce. EPR regulated waste, however, is only accepted at limited drop-off locations. The RDKS proposes to expand the collection of these items through collection events, which would take place in communities approximately every two years. If feasible, we may also look at offering permanent drop-off options for certain materials at suitable transfer stations (e.g., in communities with limited collection options).

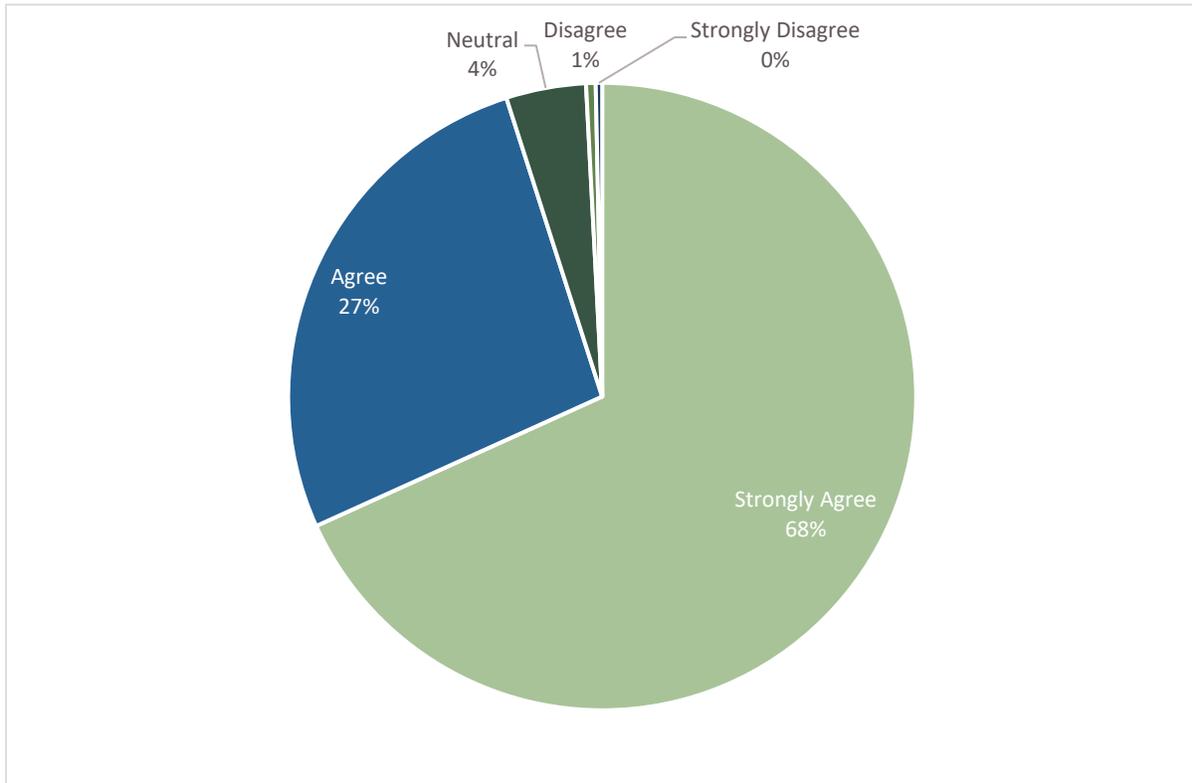


Figure 7: Survey Question 7 - The RDKS Should Improve Drop-Off Options for Hazardous Household Waste

Figure 7 shows that 95% of respondents agreed with this initiative, 4% were neutral, and 0.8% disagree.

Question 8

Recycling costs in the region are high. If the RDKS can reduce recycling contamination rates from over 8% (the current rate) to less than 3%, the Thornhill and greater Terrace area curbside collection program can be subsidized by Recycle BC (City of Terrace already has Recycle BC support), thereby potentially reducing taxes. Recycling contamination increases the program costs by complicating material sorting and reducing the quality of recoverable material. Contamination occurs when unrecyclable material, food soiled materials, or the wrong types of materials end up in the recycling - like glass, Styrofoam and plastic bags in your curbside recycling bin (these items must be returned at the recycling depot).

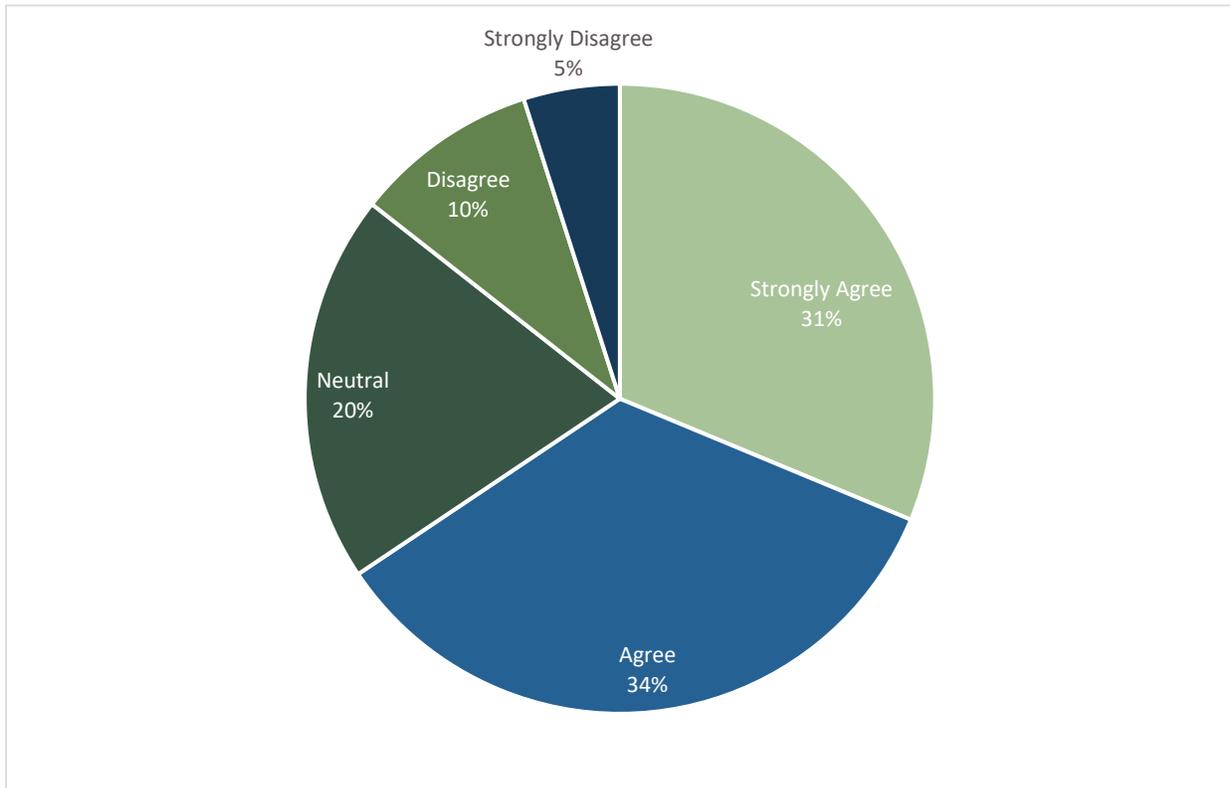


Figure 8: Survey Question 8 – To reduce recycling contamination, the RDKS Should Use Enforcement (Fine Repeat Offenders), Alongside More Public Education

Figure 8 shows that 65% of respondents support the RDKS using enforcement and public education, 20% were neutral and 14% disagreed.

Question 9

The RDKS operates some smaller landfills, such as those in Iskut and Rosswood, which are often expensive to operate and maintain. We can save money on operating costs by closing some of these landfills and replacing them with transfer stations. This happened in Kitwanga, where the RDKS set up a transfer station after closing the landfill there in 2017.

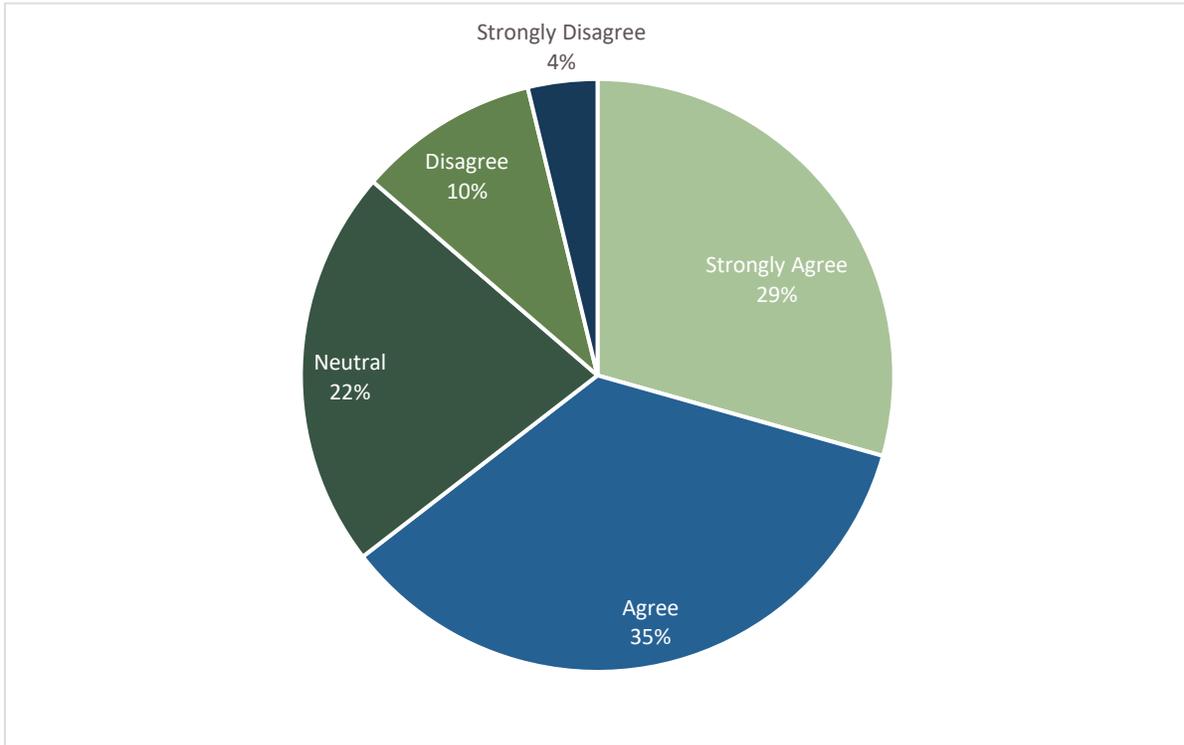


Figure 9: Survey Question 9 - The RDKS Should Close Smaller Landfills if it Makes Sense Financially and Community Needs for Waste Management Can Still Be Met

Figure 9 shows that 64% of respondents agreed that RDKS should close smaller landfills if it makes sense financially. 22% were neutral and 14% disagreed with the initiative. None of the survey respondents from Iskut or Rosswood disagreed with the closing of the smaller landfills.

Question 10

Organic waste, such as food waste, in landfills generates methane, a potent greenhouse gas. The best way to deal with organic waste is by composting it. The Terrace Service Area currently has a compost program, in which organics collected curbside are composted at the local landfill. Compost facilities may be developed in other areas in the region, for example, the Hazelton area and the Stewart or Meziadin area, if feasible.

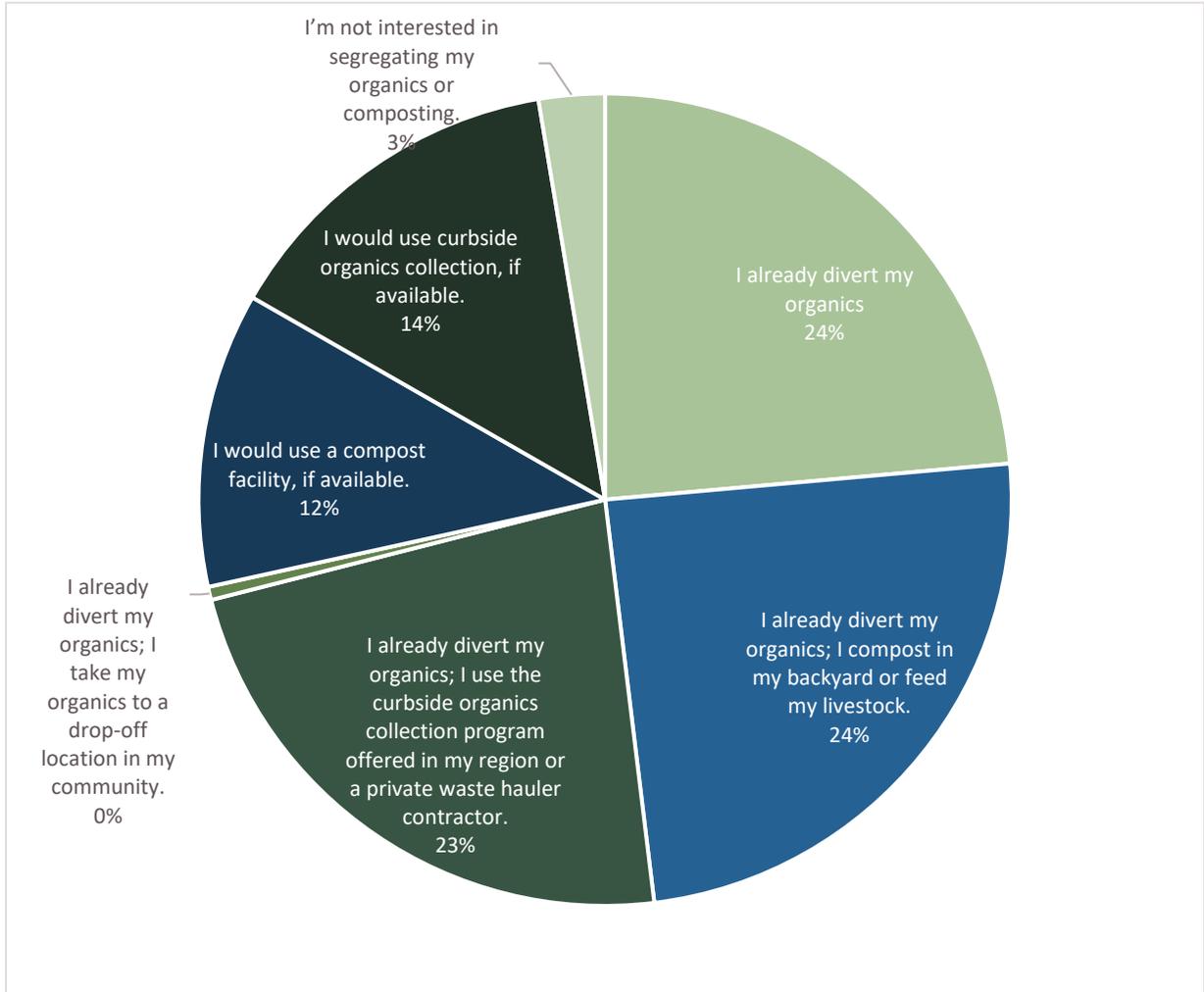


Figure 10: Survey Question 10 - Regarding Organics Diversion....

Figure 10 shows that a total of 72% of respondents indicated that they already divert their organics in some way. A total of 24% indicated that they compost in their backyard or feed their livestock, 23% divert organics using a curbside collection program and 1% take their organics to a drop off location.

A total of 12% indicated that they would use a compost facility if one were available and another 14% would use curbside collection if available. Only 3% of respondents were not interested in segregating organics or composting.

Question 11

Illegal dumping is an ongoing issue for the RDKS. Illegal dump sites often contain materials that can be recycled for free. The RDKS participates in a working group with local and provincial governments and First Nations, committed to addressing illegal public dumping. The RDKS proposes to develop an illegal dumping strategy with the working group. The strategy would aim to improve tracking and reducing illegal dumping through public outreach, education and enforcement.

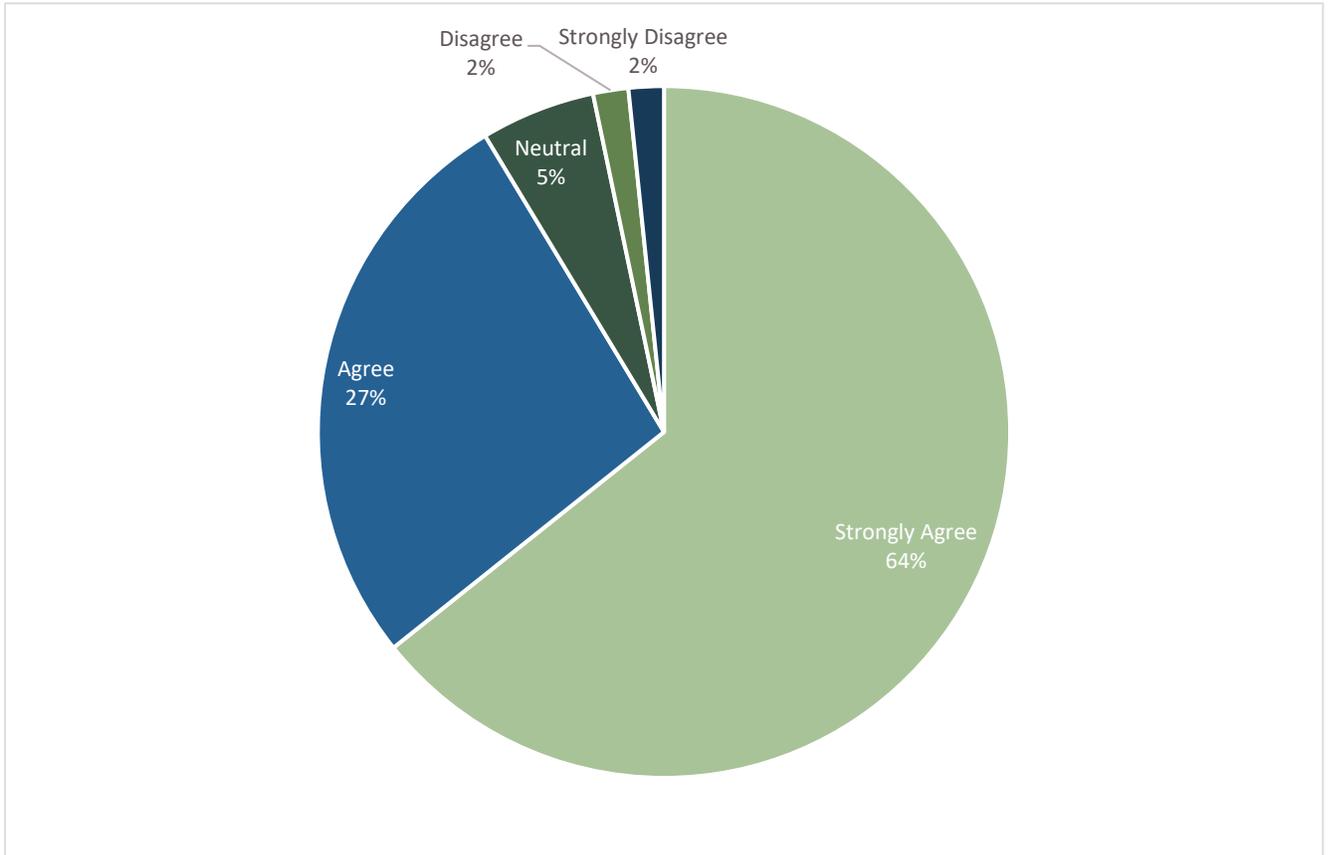


Figure 11: Survey Question 11 - To Reduce Illegal Dumping, the RDKS Should Use Enforcement, Alongside More Public Outreach and Education

Figure 11 shows that 91% of respondents agreed that RDKS should focus on preventing illegal dumping by using enforcement along with more public outreach and education. 5% were neutral and the remaining 4% disagreed with the initiative.

Question 12

The Construction and Demolition sector is responsible for 17% of total waste in the RDKS. Only 5% of construction and demolition waste is separated at worksites and diverted from the landfill.

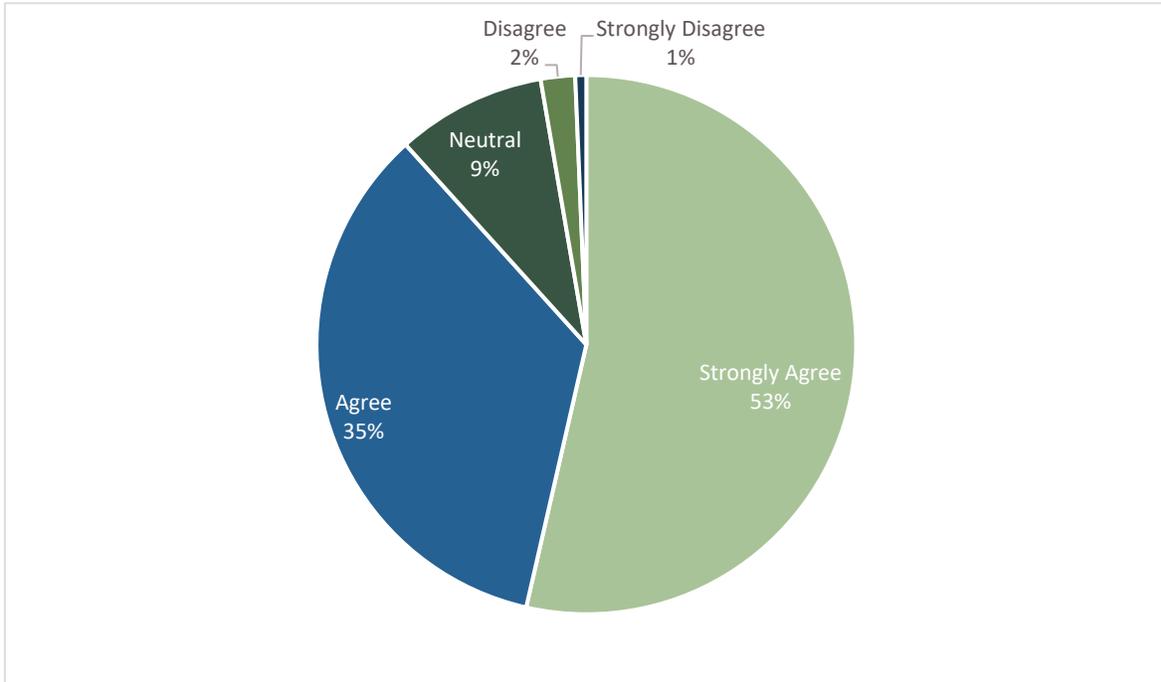


Figure 12: Survey Question 12 - The RDKS Should Focus on Promoting the Reuse and Recycling of Construction and Demolition Waste

Figure 12 shows 88% of respondents agreed with the RDKS promoting the reuse and recycling of construction and demolition waste, 9% were neutral, and the remaining 3% disagree with the initiative.

Question 13

The survey provided a list of waste reduction and diversion initiatives for construction and demolition waste and the respondents were asked to select their top three preferred options.

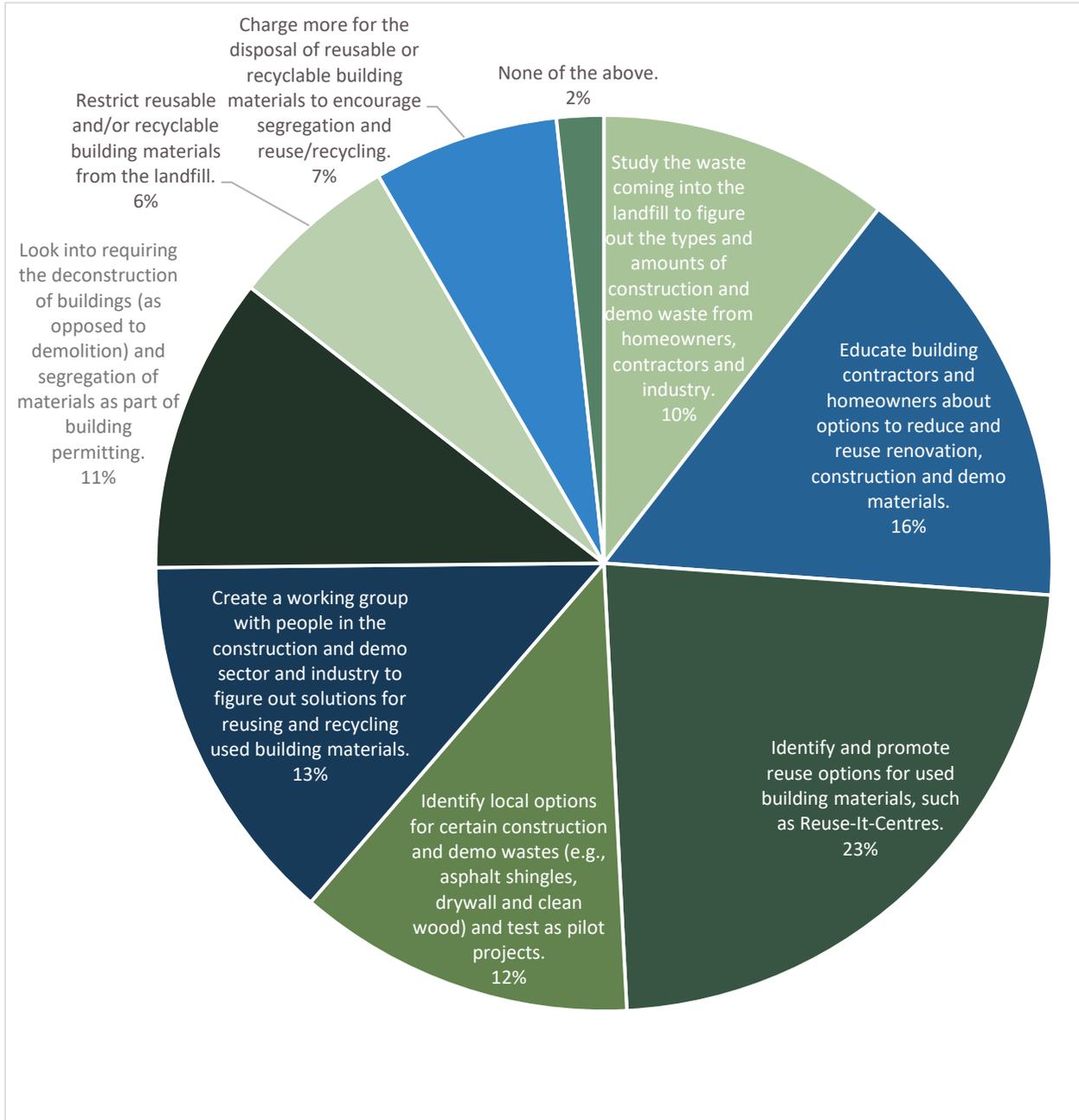


Figure 13: Survey Question 13 - Which of These Initiatives Do You Think the RDKS Should Prioritize? [Pick Your Top Three]

As shown in Figure 13 , the top three initiatives with the most support were:

- Identify and promote reuse options for used building materials, such as Reuse-It-Centres (23% of the respondents),

- Educate building contractors and homeowners about options to reduce and reuse renovation, construction and demo materials (16%), and
- Create a working group with people in the construction and demo sector and industry to figure out solutions for reusing and recycling used building materials (13%).

In total, 98% of respondents supported one or more of the initiatives proposed. Only 2% of the respondents did not support any of the proposed initiatives.

Question 14

When loads of landfilled garbage contain contamination, like recyclable materials, the RDKS can issue fines between \$100 to \$1,000. Fines are currently a fixed rate depending on material type, so the fine for a small load containing contaminated material is currently the same as for a large load containing the same material. Instead of issuing fixed rate fines, the RDKS proposes to apply a tipping fee surcharge (a percentage rate applied to the total load), so that the payment penalty would be proportional to the contaminated load size.

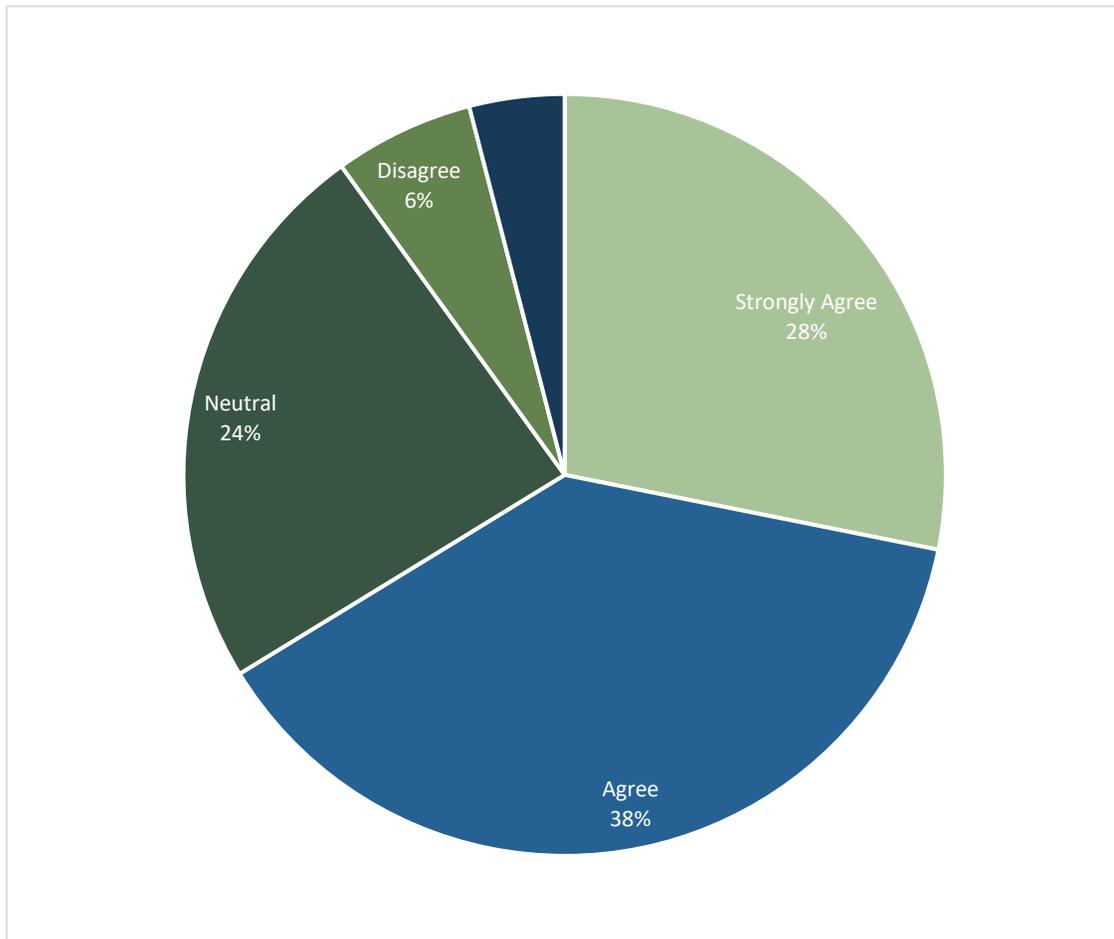


Figure 14: Survey Question 14 - The RDKS should encourage increased waste diversion by Setting Surcharges on Contaminated Loads

Figure 14 shows that 66% of the respondents agree with setting surcharges on contaminated loads to encourage waste diversion, 24% were neutral, and 10% disagreed with the initiative.

Question 15

Currently the RDKS accepts solid waste from non-taxpaying, out-of-service-area users (i.e., project-based industry such as LNG projects and mining work camps). They pay tipping fee surcharges to compensate for not paying taxes (currently a 50% surcharge in the Terrace Service Area and 25% in the Hazelton and Highway 37 North Service Area). Accepting waste from out-of-service-area users fills up the landfill more quickly, shortening the lifespan of our landfills. However, it keeps locally made waste in the region. Revenue generated from surcharges on their large volumes of waste supplements the current tax base and could help pay to expand the landfill in the future.

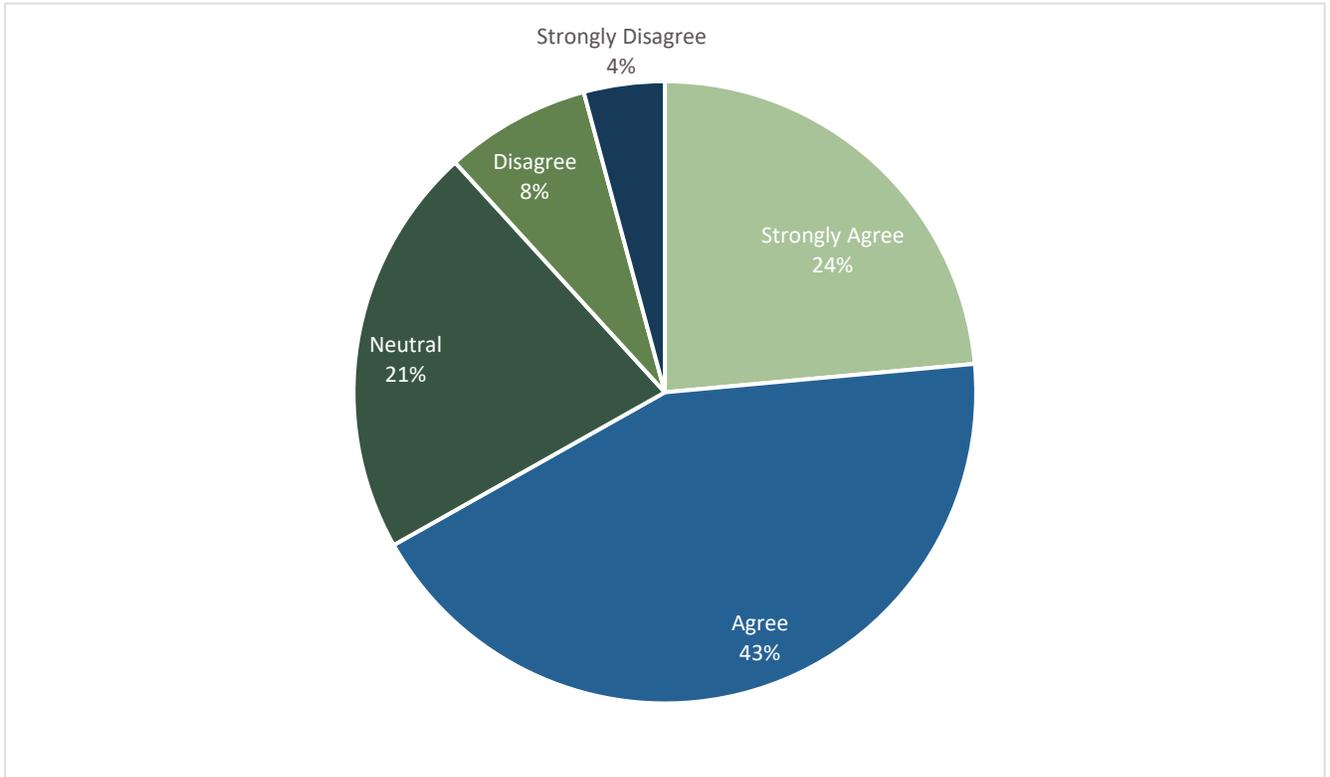


Figure 15: Survey Question 15 - The RDKS Should Continue to Accept Out-of-Service-Area Waste

Figure 15 shows that 67% agreed that the RDKS should continue to accept out-of-service area waste, 21% of respondents were neutral, and 12% disagreed with the initiative.

Question 16

The two solid waste services areas in the RDKS are funded separately. The Terrace Service Area has a partial user-pay model (50% tipping fees and 50% taxes) and has been sufficiently funded in recent years. The Hazelton and Highway 37 North Service Area is tax-funded model (100% taxes) that is currently operating at a loss (high operating expenses from several facilities spread over a large area). Taxes have recently been increased to help cover costs. Commercial and residential taxpayers do not pay any tipping fees, even if they dispose of large volumes of waste, such as reno or demolition waste. The RDKS may look at charging tipping fees on large volumes of certain waste types so that large waste generators pay for their own waste disposal, rather than taxpayers footing the entire bill.

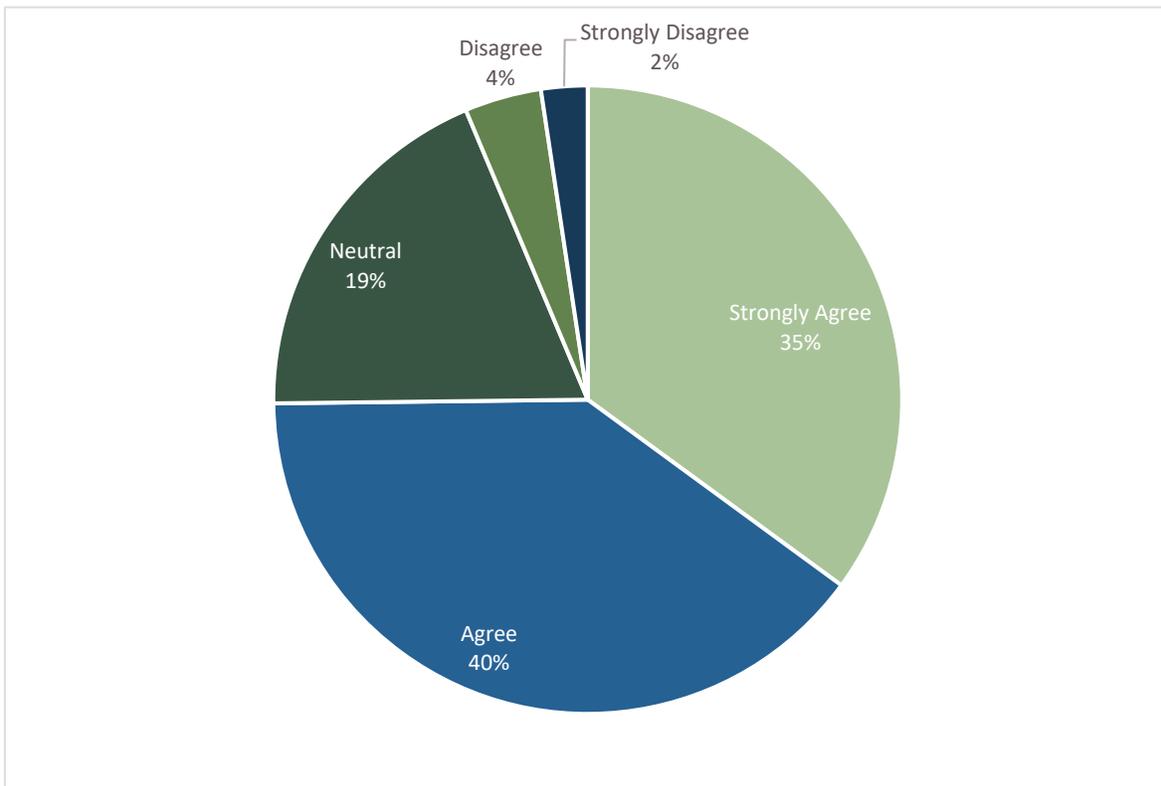


Figure 16: Survey Question 16 - The RDKS Should Look into Possibly Charging Tip Fees for Large Volumes of Certain Types of Waste in the Hazelton and Highway 37 North Service Area

Figure 16 shows that 75% of respondents agreed that the RDKS should look into charging tipping fees for large volumes of certain waste types in the Hazelton and Highway 37 North service area, 19% of respondents were neutral, and 6% disagreed with the initiative. Of the 63 respondents from the Hazelton and Highway 37 North service area, 76% (48 people) agreed, 14% (9 people) were neutral, and 9% (6 people) disagreed.

Question 17

The District of Kitimat is not part of the RDKS service areas. Kitimat’s landfill is nearing capacity and the District is looking into their options for the future. The RDKS plans to assess the costs and benefits of Kitimat possibly using the Forceman Ridge Waste Management Facility. Kitimat would pay their fair share, help cover costs, and supplement the Terrace service area tax base.

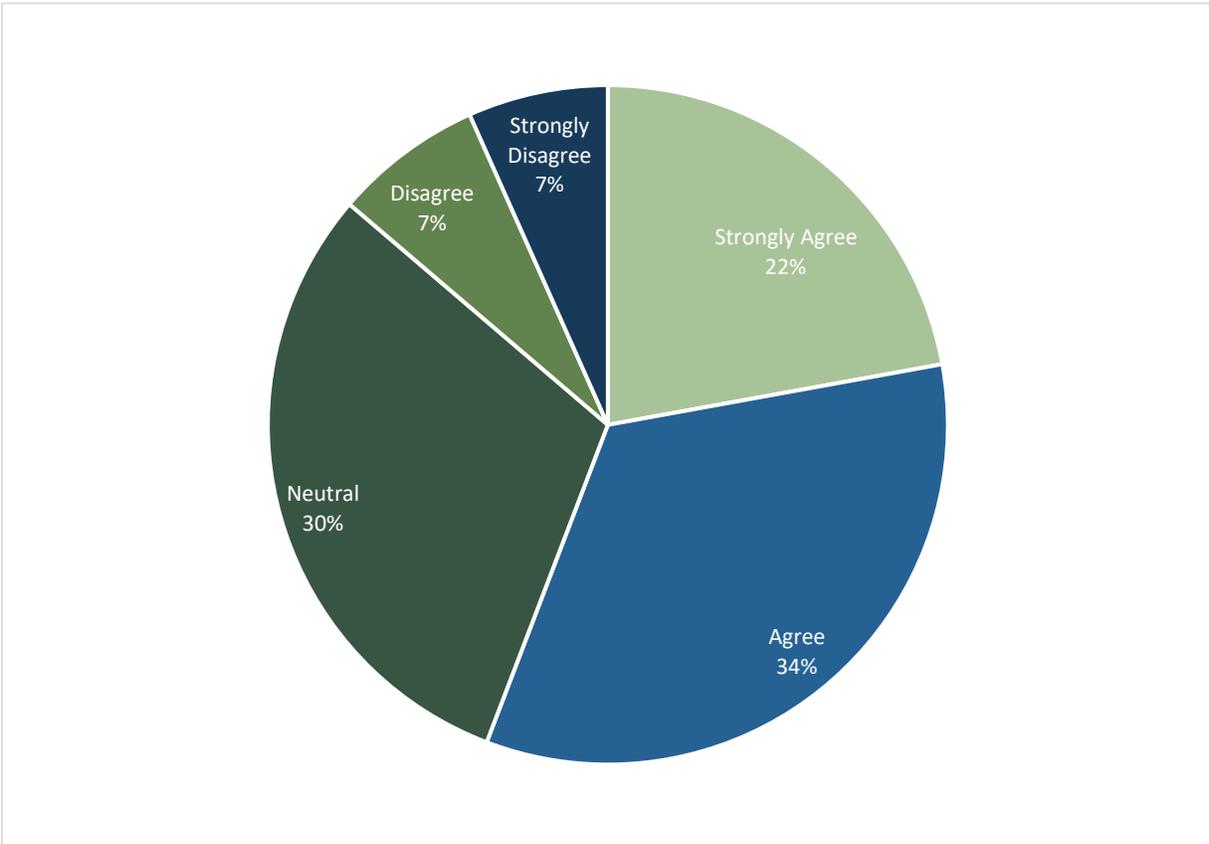


Figure 17: Survey Question 17 - I Support the District of Kitimat Using the Forceman Ridge Waste Management Facility

Figure 17 shows that 56% of respondents agreed with the District of Kitimat using the Forceman Ridge Waste Management Facility, 30% were neutral, and 14% disagreed with this initiative.

Question 18

The survey provided a list of reuse and repair initiatives, and the respondents were asked to select their top three preferred options.

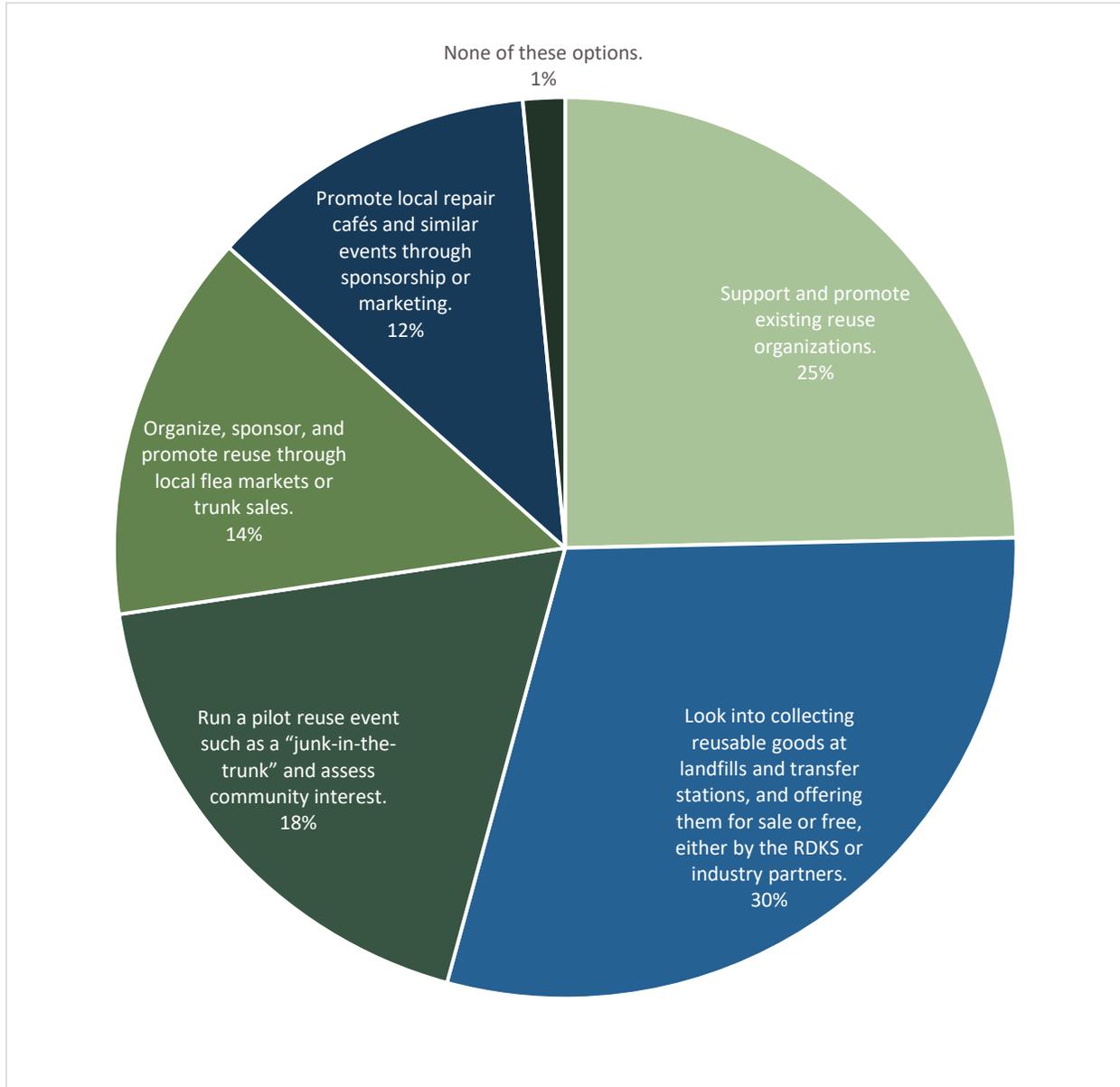


Figure 18: Survey Question 18 - Which of the Following Reuse and Repair Initiatives Do You Think the RDKS Should Prioritize? [Pick Your Top Three]

As shown in **Figure 18**, the top three initiatives with the most support were:

- Look into collecting reusable goods at landfills and transfer stations, and offering them for sale or free, either by the RDKS or industry partners (30% of respondents),
- Support and promote existing reuse organizations (25%), and

- Run a pilot reuse event such as a “junk-in-the-trunk” and assess community interest (18%).

In total, 98% of respondents supported one or more of the initiatives proposed. 2% of the respondents did not support any of the proposed initiatives.

1.3 Summary of Respondents’ Comments (Question 19)

Respondents were given the opportunity to provide feedback and suggestions at the end of the survey in response to Question 19 – “Did we miss anything? Do you have other ideas for how to improve waste management services in your local area or in the region?”

In response to Question 19, 467 respondents provided feedback. Many comments discussed multiple topics. As each comment topic was considered discrete, a total of 720 comments were gathered.

The comments received were categorized by RDKS staff into over 50 sub-categories. **Figure 19** shows an overview of the ten most common themes of comments and their relative percentage of the total comments received.

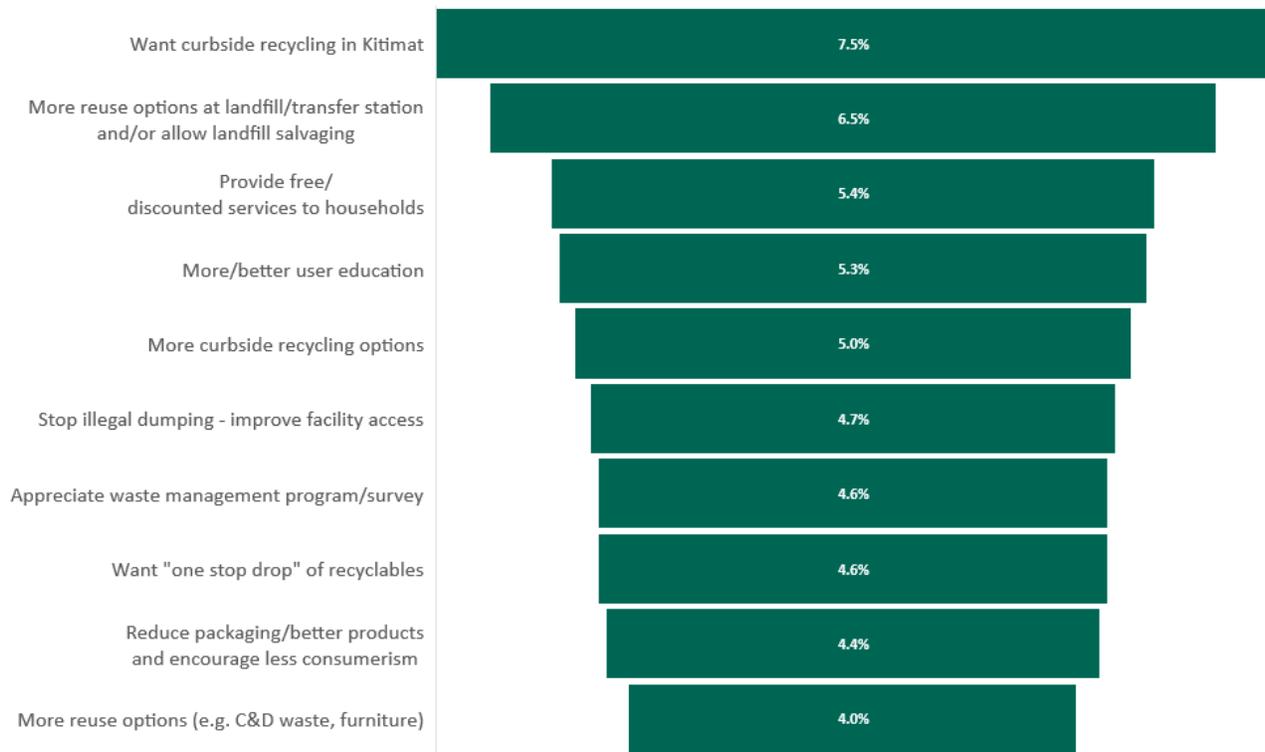


Figure 19: Top 10 Themes of Respondent’s Comments

Although opinions vary on how a particular strategy should be implemented, the comments were generally in support of most strategies proposed in the Draft SWMP. The recurring themes are outlined in the tables below with descriptions how each theme aligns with the Draft SWMP.

1.3.1 Reduction

Comment Theme	% of Comments	Alignment with Draft SWMP
Interest to reduce or ban single use plastics	2.5%	Supported by strategies 1, 2 and 4.
Support to lobby for reduced packaging/better products - Encourage less consumerism	4.4%	Supported by strategies 1, 2, 3 and 4.
Reduce food waste	0.3%	Supported by strategy 3.

1.3.2 Reuse

Comment Theme	% of Comments	Alignment with Draft SWMP
Support for more reuse options for C&D waste, used furniture, etc., through a Re-Use-It Store or Re-Build-It Store or equivalent	4.0%	Supported by strategy 7
Support for more reuse options at landfill / transfer station and/or allowing landfill salvaging	6.5%	Supported by strategy 7.
Support for hosting reuse and repair event(s)	0.8%	Supported by strategy 8.
Support other reuse options, such as supporting "refilleries" (packaging-free stores) locally	0.7%	
Support for requiring source segregation of C&D materials and building deconstruction to encourage reuse	2.1%	Supported by strategy 9.
Against making deconstruction and C&D source segregation mandatory	0.1%	Only one comment was received against making C&D source segregation mandatory.

1.3.3 Curbside Collection

Comment Theme	% of Comments	Alignment with Draft SWMP
Want more curbside recycling options, such as glass, plastic bags, and Styrofoam. Some respondents asked for curbside bulky item collection	5.0%	Improved recycling accessibility is addressed by the SWMP through Strategy 10.
Provide free cans Want larger cans	1.5%	As part of implementing strategy 24, the RDKS will assess the cost-benefit of using contractor vs. in-house staff to deliver the curbside

Comment Theme	% of Comments	Alignment with Draft SWMP
		collection service. This assessment will consider the potential to mirror the curbside collection services in Thornhill/ greater Terrace area with the City of Terrace curbside service, where residents are provided waste cans (tax-funded) by the City. Streamlining services between the City of Terrace and greater Terrace area may improve operational efficiencies and waste diversion.
Issue with curbside collection - organics and recycling or frequency/garbage volume	1.5%	Curbside collection issues are often circumstantial and can generally be addressed on a case-by-case basis as they arise. This is part of RDKS on-going recycling initiatives and is not addressed by any additional SWMP strategy.
Support for curbside enforcement of segregation, e.g., "can tipping", garbage trucks with cameras or clear bags for garbage	1.3%	Supported by strategy 12.
Against curbside enforcement and fines	0.4%	Three respondents were against curbside enforcement and fines, which is against strategy 12. It should be noted that in response to question 8, 65% of respondents supported using enforcement, along with public education. 20% were neutral and 14% disagreed with the initiative.
Some wildlife concerns regarding curbside organics	0.6%	Supported by strategy 12 aimed to provide continuous education and outreach.
Want curbside recycling collection in Kitimat	7.5%	The District of Kitimat (DoK) intends to launch a curbside collection service for organics and recycling in October 2021.
Want curbside organics collection in Kitimat	2.6%	As the RDKS is not responsible for curbside services in Kitimat, this feedback will be passed onto DoK.

1.3.4 Recycling and Organics Diversion

Comment Theme	% of Comments	Alignment with Draft SWMP
Provide segregated waste bins in public spaces	0.1%	This initiative is not currently addressed by the SWMP. Management of waste and recyclables in public spaces is the responsibility of member municipalities. The RDKS can bring this feedback forward to member municipalities.
Support for Household Hazardous Waste (HHW)	1.0%	Supported by strategy 15. Based on previous experience, curbside collection of HHW was

Comment Theme	% of Comments	Alignment with Draft SWMP
roundup events or HHW curbside collection		deemed cost prohibited and was not included in the SWMP. However, the RDKS is proposing to reevaluate this and include an initiative (15D) to review feasibility of developing a HHW curbside collection.
Concerns about recycling; Confusion regarding how to sort recycling; What happens to the materials?	4.8%	Supported by strategy 12 aimed to provide continuous education and outreach.
Concerns based on respondent being uninformed or misinformed about current program	1.9%	Supported by strategy 12 aimed to provide continuous education and outreach.
Interest in "one-stop-drop" location for recyclables	4.6%	This initiative is not currently addressed by the SWMP. The RDKS is proposing to include an initiative (10D) to assess the feasibility of a "one-stop-drop" depot at suitable locations.
Interest in having 24-hour unsupervised recycling drop-off or better access to depot	0.6%	Full-time, unsupervised recycling drop-off is not acceptable by Product Stewardship (recycling) organizations due to high contamination rates. This option was not explored during the SWMP development. The issue of accessibility is addressed by strategies 10 and 23.
Interest in having incentives to encourage waste diversion (recycling and composting)	1.7%	Supports strategy 13. The RDKS is proposing to include an initiative (13D) to establish a recognition program and/or incentives for ICI users who demonstrate excellence in waste diversion and/ or green procurement.
Provide compost to the community	1.0%	Currently compost generated at the Forceman Ridge compost facility is used as cover for landfill closures. The RDKS currently struggles with high contamination rates in the compost (i.e., plastic bags, etc.). In the future, once compost quality improves, the intention is to provide compost to the community for gardening.
Recycling depot needs more opening hours	0.8%	Operating hours of private depots are not controlled by the RDKS. Strategy 23 aims to improve public accessibility to waste management facilities by considering operating hours of private facilities.
Ensure waste segregation by ICI and multi-family residences	1.3%	Supports strategy 12 and 13. Additionally, the RDKS is proposing to include an initiative 10E to improve accessibility to recycling. The new initiative aims to support member municipalities in bylaw updates that may require new ICI and multi-family buildings to have designated waste management space in their design.

Comment Theme	% of Comments	Alignment with Draft SWMP
Create local closed loop economy with private sector	0.1%	This is supported by Strategy 13 in which an ICI waste diversion working group will be established to find local solutions.

1.3.5 Residual Waste Management at Existing Facilities

Comments Theme	% of Comments	Alignment with Draft SWMP
Prevent Illegal dumping by improving public access to solid waste management facilities	4.7%	Supported by strategies 23 and 28. The RDKS is proposing to include an initiative (28C) to pilot scheduled free disposal events for residential waste and implement if feasible. The main purpose of this pilot is to determine if free disposal either through bag tags or free days at the RDKS facilities will assist in preventing illegal dumping.
Prevent illegal dumping by increasing enforcement or fines	1.3%	Supported by Strategy 28.
Prevent illegal dumping by supporting clean-up efforts for illegal dumping	0.1%	The RDKS currently supports clean-up efforts by providing bag tags to receive free curbside garbage pickup for clean-up materials and reimbursing tipping fees for disposal of illegally dumped waste material collected by non-profit organizations. The RDKS is proposing to include this additional information in the SWMP as existing initiatives in section 5.5. Residual Waste Management at Existing Facilities.
Improve access to landfills/transfer stations	3.1%	Supported by Strategy 23.
Concern about facility issues (e.g., design, wildlife access, operation)	0.7%	Each disposal facility is operated by the RDKS in accordance with the Operational Certificate and the Design, Operations, and Closure Plan. The RDKS addresses specific concerns with citizens as they arise.
Environmental concerns regarding facilities	0.6%	Each of the seven solid waste facilities managed by the RDKS has an active environmental effects monitoring program. RDKS staff conduct ongoing groundwater and surface water monitoring in accordance with each facility's Operational Certificate.
Customer service issues	0.4%	These issues relate to curbside or facility contractors and are often circumstantial and are addressed by the RDKS on a case-by-case basis as they arise. This is part of RDKS on-going recycling initiatives and is not addressed by any additional SWMP strategy.

Comments Theme	% of Comments	Alignment with Draft SWMP
Do not support acceptance of waste from industry if it shortens landfill life	0.3%	Supported by Strategy 20, which highlights the need to develop a policy that specifies maximum amounts accepted and that consider the value of landfill space when setting surcharges for disposal by industry.
Support increasing disposal surcharges to industry	1.1 %, of which 0.3% related to supporting user-pay model for industry in the Hazelton Area	Supported by Strategy 20.
Ensure waste segregation by industry	0.8%	Supported by strategies, 9, 13 and 20. The RDKS is proposing to include a sentence in the description of the issue for Strategy 20 stating that surcharges will also encourage segregation of recyclable and compostable materials.
Interest in waste incineration in the north	0.3%	Energy from waste was not considered as part of the SWMP as it was considered too costly for the low volumes of waste generated in the region.
Want local waste solutions, e.g., waste to energy, recycling	2.5%	Energy from waste and local recycling facilities were not considered through the SWMP, as development of these initiatives are cost prohibitive given the low volume of waste generated within the region.
Operate facilities more efficiently	0.4%	Supported by the 9 th guiding principle of the SWMP to improve operational efficiency of the current solid waste system. This principle will be incorporated into all aspects of the SWMP implementation, in particular Strategy 33 to reduce costs by improving operational efficiencies.
Kitimat general waste management concerns	0.7%	As the RDKS is not responsible for waste management in Kitimat, this feedback will be passed onto the District of Kitimat.
Want to keep current waste management system in Kitimat and keep Kitimat Landfill open	0.7%	As the RDKS is not responsible for waste management in Kitimat, this feedback will be passed onto the District of Kitimat.

1.3.6 Cost Recovery and Financial Sustainability

Comments Theme	% of Comments	Alignment with Draft SWMP
Provide free/discounted services to households	5.4%	The SWMP is underpinned by a user-pay approach (refer to the 4 th Guiding Principle). Free or discounted disposal was not explored as an option, as development of this option is cost prohibitive. However, the RDKS remains committed to maintaining a partial user-pay model. The RDKS is proposing to include an initiative (28C) to pilot free disposal events for residential waste and implement if feasible. The main purpose of this pilot is to establish whether providing free disposal either through bag tags or free days at the RDKS facilities will assist in preventing illegal dumping.
Cost recovery model considerations	1.0%	Supported by Strategy 32.
Increase out-of-service area fees	0.6%	Supported by strategies 20 and 34. The RDKS has recently amended its Solid Waste Bylaws to increase tipping fees for out-of-service area waste to adequately cover disposal costs.
Tipping fees too high; Decrease tipping fees and increase taxes	2.2%	The two RDKS Service Areas are financed separately and have different cost recovery models tailored to each area. The Terrace Service Area is funded through a combination of tax requisition and tipping fees with a 50/50 split, whereas the Hazelton and Highway 37 N Service Area is 100% through taxation. The 4 th Guiding Principle of the SWMP is “user-pay”; the RDKS is committed to supporting polluter and user-pay approaches and focusing on incentive-based tipping fees that encourage segregation of materials and waste diversion rather than landfill disposal. To limit the financial impacts on residents in the Hazelton and Highway 37 N Service Area, the RDKS is considering introducing tipping fees for large waste loads only, originating from commercial sources.

2 DISCUSSION

The RDKS received excellent feedback from residents and business owners through the 2021 Solid Waste Survey. In general, respondents are very supportive of waste reduction and waste diversion efforts. The general themes observed throughout the survey have been summarized in a “What we Heard” document, contained in Appendix 2.

In closure, the feedback received through the survey showed a general support for the proposed strategies and initiatives included in the Draft SWMP. The feedback obtained through the survey have highlighted the opportunity to revise or add to the current wording of the Draft Plan when the SWMP is finalized. The proposed changes to the SWMP are outlined in the Consultation Summary Report.

APPENDIX 1: SWMP Survey

1. I am a... (pick all that apply)

- Resident
- Seasonal resident
- Business owner

2. I live in... (pick one)

The Terrace Solid Waste Service Area:

- Terrace
- Thornhill
- The Greater Terrace area
- Lakelse Lake
- Rosswood and surrounding areas

The Hazelton and Highway 37 North Solid Waste Service Area:

- The Hazeltons
- Kispiox Valley
- Moricetown
- Kitwanga
- Cedarvale
- Stewart
- Meziadin
- Iskut and surrounding rural areas

Outside of a current Solid Waste Service Area:

- Kitimat
- Nass Valley
- Telegraph Creek
- Dease Lake
- Klemtu
- Outside of the RDKS

3. Waste reduction and waste diversion (reusing, recycling and composting) are important to me.

- Strongly agree
- Agree
- Neutral
- Disagree
- Strongly disagree

4. I make an effort to separate and properly dispose of my garbage, recycling and (where applicable) organics.

- Strongly agree
- Agree
- Neutral
- Disagree
- Strongly disagree

The District of Kitimat is not part of the RDKS service areas. Kitimat's landfill is nearing capacity and the District is looking into their options for the future. The RDKS plans to assess the costs and benefits of Kitimat possibly using the Forceman Ridge Waste Management Facility. Kitimat would pay their fair share, help cover costs, and supplement the Terrace service area tax base.

17.I support the District of Kitimat using the Forceman Ridge Waste Management Facility.

- Strongly agree
- Agree
- Neutral
- Disagree
- Strongly disagree

Almost half of all respondents in our previous survey wanted more opportunities to reuse items.

18. Which of the following reuse and repair initiatives do you think the RDKS should prioritize? [pick your top three]

- Support and promote existing reuse organizations.
- Look into collecting reusable goods at landfills and transfer stations, and offering them for sale or free, either by the RDKS or industry partners.
- Run a pilot reuse event such as a "junk-in-the-trunk" and assess community interest.
- Organize, sponsor, and promote reuse through local flea markets or trunk sales.
- Promote local repair cafés and similar events through sponsorship or marketing.
- None of these options.

19. Did we miss anything? Do you have other ideas for how to improve waste management services in your local area or in the region?

When loads of landfilled garbage contain contamination, like recyclable materials, the RDKS can issue fines between \$100 to \$1,000. Fines are currently a fixed rate depending on material type, so the fine for a small load containing contaminated material is currently the same as for a large load containing the same material. Instead of issuing fixed rate fines, the RDKS proposes to apply a tipping fee surcharge (a percentage rate applied to the total load), so that the payment penalty would be proportional to the contaminated load size.

14. The RDKS should encourage increased waste diversion by setting surcharges on contaminated loads.

- Strongly agree Agree Neutral Disagree Strongly disagree

Currently the RDKS accepts solid waste from non-taxpaying, out-of-service-area users (i.e., project-based industry such as LNG projects and mining work camps). They pay tipping fee surcharges to compensate for not paying taxes (currently a 50% surcharge in the Terrace Service Area and 25% in the Hazelton and Highway 37 North Service Area). Accepting waste from out-of-service-area users fills up the landfill more quickly, shortening the lifespan of our landfills. However, it keeps locally made waste in the region. Revenue generated from surcharges on their large volumes of waste supplements the current tax base and could help pay to expand the landfill in the future.

15. The RDKS should continue to accept out-of-service-area waste.

- Strongly agree Agree Neutral Disagree Strongly disagree

The two solid waste services areas in the RDKS are funded separately. The Terrace Service Area has a partial user-pay model (50% tipping fees and 50% taxes) and has been sufficiently funded in recent years. The Hazelton and Highway 37 North Service Area is tax-funded model (100% taxes) that is currently operating at a loss (high operating expenses from several facilities spread over a large area). Taxes have recently been increased to help cover costs. Commercial and residential taxpayers do not pay any tipping fees, even if they dispose of large volumes of waste, such as reno or demolition waste. The RDKS may look at charging tipping fees on large volumes of certain waste types so that large waste generators pay for their own waste disposal, rather than taxpayers footing the entire bill.

16. The RDKS should look into possibly charging tip fees for large volumes of certain types of waste in the Hazelton and Highway 37 North service area.

- Strongly agree Agree Neutral Disagree Strongly disagree

As part of the Canada-wide action plan on zero plastic, the Government of Canada proposes to ban and/or restrict some single-use items such as grocery bags, straws, and disposable cutlery, but it takes time to develop and implement large-scale federal measures.

5. In the meantime, the RDKS should encourage businesses to voluntarily find alternatives to single-use items.

- Strongly agree Agree Neutral Disagree Strongly disagree

6. Which of the following initiatives do you think the RDKS should prioritize to reduce single-use items? [pick your top three]

Note that these initiatives would likely be post-pandemic as many single-use items are currently being used for health and safety reasons.

- Lobby the BC government for the creation of a recycling program for single-use items and packaging-like products.
- Lobby the Canadian government to regulate the distribution of single-use items.
- Encourage businesses to voluntarily reduce their use of single-use items.
- Encourage alternatives to single-use items at public events.
- Look into the possibility of 'bring your own container' programs provided health regulations for food safety are being followed.
- Help member municipalities reduce single-use items by supporting the development of relevant strategies and bylaw(s).
- Adopt a green procurement policy for the RDKS and encourage member municipalities to do the same. (A green procurement policy is when goods and services are assessed by their environmental impact as well as their cost.)
- None of the above.

Some hazardous household waste - such as pesticides, used oil, etc. - are recyclable through provincially regulated Extended Producer Responsibility programs (EPRs). Through EPRs, producers are responsible for the recycling of materials they produce. EPR regulated waste, however, is only accepted at limited drop-off locations. The RDKS proposes to expand the collection of these items through collection events, which would take place in communities approximately every two years. If feasible, we may also look at offering permanent drop-off options for certain materials at suitable transfer stations (e.g. in communities with limited collection options).

7. The RDKS should improve drop-off options for hazardous household waste.

- Strongly agree Agree Neutral Disagree Strongly disagree

Recycling costs in the region are high. If the RDKS can reduce recycling contamination rates from over 8% (the current rate) to less than 3%, the Thornhill and greater Terrace area curbside collection program can be subsidized by Recycle BC (City of Terrace already has Recycle BC support), thereby potentially reducing taxes. Recycling contamination increases the program costs by complicating material sorting and reducing the quality of recoverable material. Contamination occurs when unrecyclable material, food soiled materials, or the wrong types of materials end up in the recycling - like glass, Styrofoam and plastic bags in your curbside recycling bin (these items must be returned at the recycling depot).

8. To reduce recycling contamination, the RDKS should use enforcement (fine repeat offenders), alongside more public education.

- Strongly agree Agree Neutral Disagree Strongly disagree

The RDKS operates some smaller landfills, such as those in Iskut and Rosswood, which are often expensive to operate and maintain. We can save money on operating costs by closing some of these landfills and replacing them with transfer stations. This happened in Kitwanga, where the RDKS set up a transfer station after closing the landfill there in 2017.

9. The RDKS should close smaller landfills if it makes sense financially and community needs for waste management can still be met.

- Strongly agree Agree Neutral Disagree Strongly disagree

Organic waste, such as food waste, in landfills generates methane, a potent greenhouse gas. The best way to deal with organic waste is by composting it. The Terrace Service Area currently has a compost program, in which organics collected curbside are composted at the local landfill. Compost facilities may be developed in other areas in the region, for example, the Hazelton area and the Stewart or Meziadin area, if feasible.

10. Please check all that apply

- I already divert my organics; I compost in my backyard or feed my livestock.
- I already divert my organics; I use the curbside organics collection program offered in my region or a private waste hauler contractor.
- I already divert my organics; I take my organics to a drop-off location in my community.
- I would use a compost facility, if available.
- I would use curbside organics collection, if available.
- I'm not interested in segregating my organics or composting.
- Other; please specify_____

Illegal dumping is an ongoing issue for the RDKS. Illegal dump sites often contain materials that can be recycled for free. The RDKS participates in a working group with local and provincial governments and First Nations, committed to addressing illegal public dumping. The RDKS proposes to develop an illegal dumping strategy with the working group. The strategy would aim to improve tracking and reducing illegal dumping through public outreach, education and enforcement.

11. To reduce illegal dumping, the RDKS should use enforcement, alongside more public outreach and education.

- Strongly agree Agree Neutral Disagree Strongly disagree

The Construction and Demolition sector is responsible for 17% of total waste in the RDKS. Only 5% of construction and demolition waste is separated at worksites and diverted from the landfill.

12. The RDKS should focus on promoting the reuse and recycling of construction and demolition waste.

- Strongly agree Agree Neutral Disagree Strongly disagree

13. Which of these initiatives do you think the RDKS should prioritize? [pick your top three]

- Study the waste coming into the landfill to figure out the types and amounts of construction and demo waste from homeowners, contractors and industry.
- Educate building contractors and homeowners about options to reduce and reuse renovation, construction and demo materials.
- Identify and promote reuse options for used building materials, such as Reuse-It-Centres.
- Identify local options for certain construction and demo wastes (e.g., asphalt shingles, drywall and clean wood) and test as pilot projects.
- Create a working group with people in the construction and demo sector and industry to figure out solutions for reusing and recycling used building materials.
- Look into requiring the deconstruction of buildings (as opposed to demolition) and segregation of materials as part of building permitting.
- Restrict reusable and/or recyclable building materials from the landfill.
- Charge more for the disposal of reusable or recyclable building materials to encourage segregation and reuse/recycling.
- None of the above.

APPENDIX 2: What We Heard From You RDKS Response to the 2021 Solid Waste Survey

Appendix 42 – September 10, 2021, News Release re: SWMP Survey Results



Regional District of
Kitimat-Stikine

NEWS RELEASE

For immediate release

September 10, 2021

Survey results shows significant interest in reuse, recycling and waste management

In the spring of 2021, the Regional District of Kitimat-Stikine (RDKS) released a survey asking for feedback on waste management in the region. An impressive 1,215 residents completed the survey with several themes emerging. For example, citizens want:

- Curbside collection of more types of materials,
- Clarity around what can and can't be recycled and where to recycle items,
- A better understanding of how recyclables are managed (Fear not! Recyclables are not being landfilled; most recyclables are processed here in BC),
- More opportunities to reuse items like construction waste and furniture,
- Ways to keep reusable items out of the landfill,
- Transfer station/landfill hours that are more convenient and align better with recycling depot hours,
- Strategies to prevent illegal dumping, including improved public access to transfer stations/landfills, public education, and increased enforcement and fines.

"The survey highlighted what's important to residents when it comes to reducing, reusing, recycling and disposing of waste in our region," said RDKS Environmental Coordinator Nicki Veikle. "The excellent response rate also shows that people really care and want to have a say in how waste is managed in our region."

The survey results will inform the RDKS Solid Waste Management Plan, which will be finalized this fall. The Plan will outline how waste will be managed in the region for the next decade.

"We weren't surprised by the responses or questions we received," said Veikle. "If anything, the results show that the RDKS is on the right track and has the same concerns and goals for waste management as our citizens."

The draft Solid Waste Management Plan, along with a summary of the survey results and "*What We Heard from You: RDKS Response to the 2021 Solid Waste Survey*" are available at: www.rdks.bc.ca/solidwasteplan.

Media Contacts

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Appendix 43 – April 2021 Open House Presentation



Love this place.
Reduce your waste.



Regional District of
Kitimat-Stikine

LET'S TALK TRASH!

Consultation on Draft Solid Waste
Management Plan

Virtual Open House - April 2021





Background

Why are we here?

How was the Draft Plan created?

What's in the Plan? Focus on 4 topics

Q and A throughout

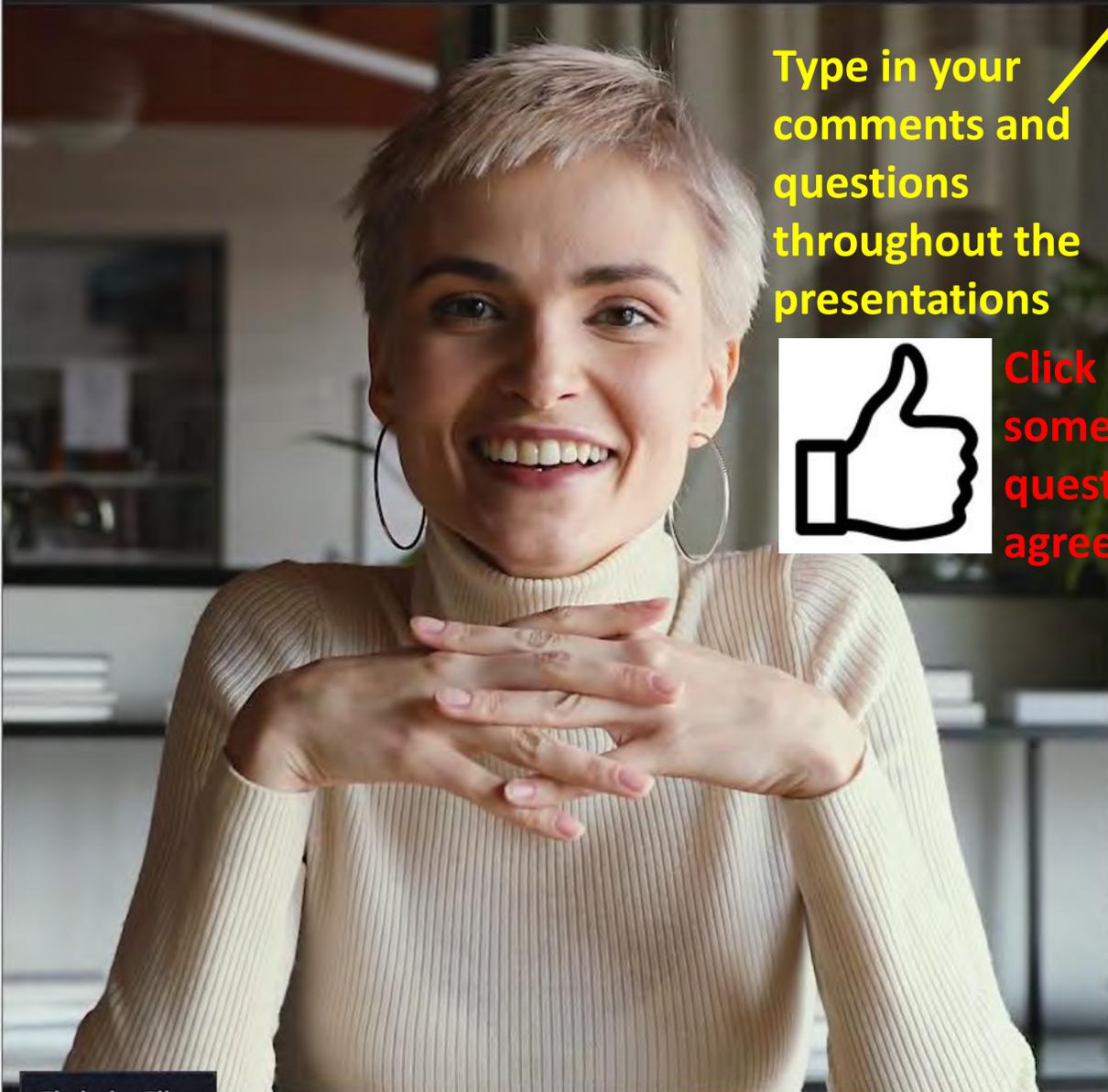
What's next?



Love this place.
Reduce your waste.

- Activity
- Chat
- Teams
- Calendar
- Files
- Calls
- ...
- Apps

Navigation icons: List, People, Chat, Raise Hand, More, Video, Microphone, Share, Leave



Type in your comments and questions throughout the presentations



Click "like" on someone's question if you agree



Raise your hand to speak after the presentations

Microphone and video controls

Callers, please dial *6 to unmute yourself.



Poll:
Where do
you live?



Solid Waste Facilities





Regional District of **Kitimat-Stikine**

Strategic Priorities



Engaging and
Communicating with
our Citizens



Partnerships with
Communities and First
Nations



Provision of Services
in Rural Areas

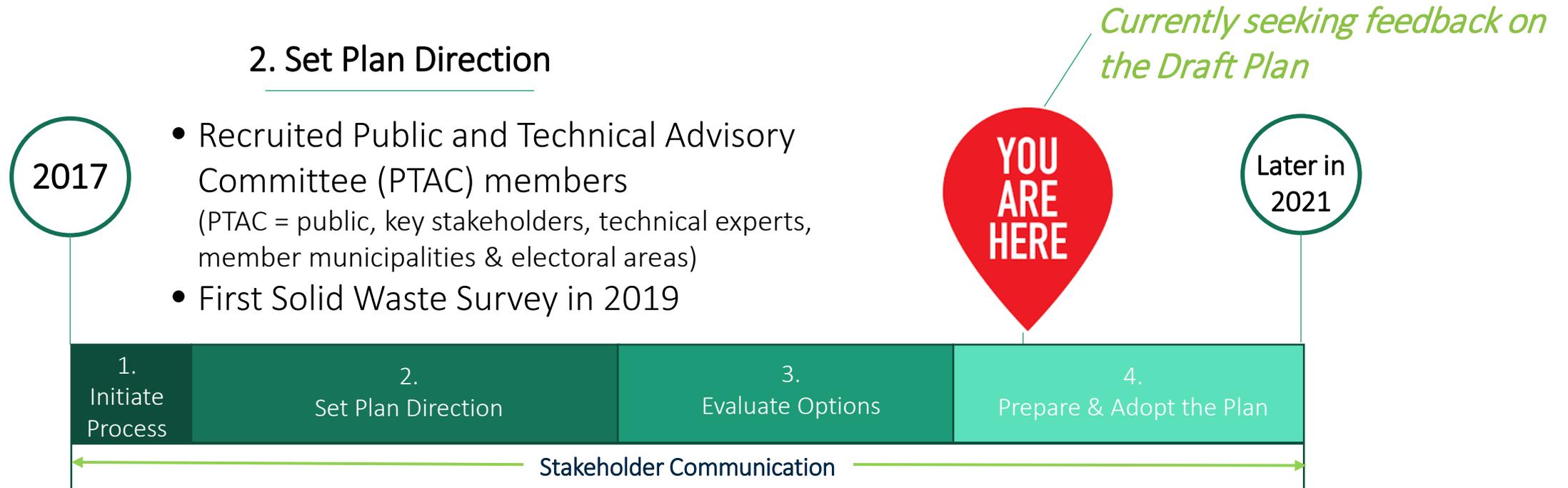


Why are we here?

- Regional Districts must have a Solid Waste Management Plan
- The Plan sets future direction for waste management
- The process requires extensive public consultation

Creation of the Draft Solid Waste Management Plan

2. Set Plan Direction



1. Initiate Process

- Set the Plan area and scope
- Assessed the current system
- Developed the consultation strategy

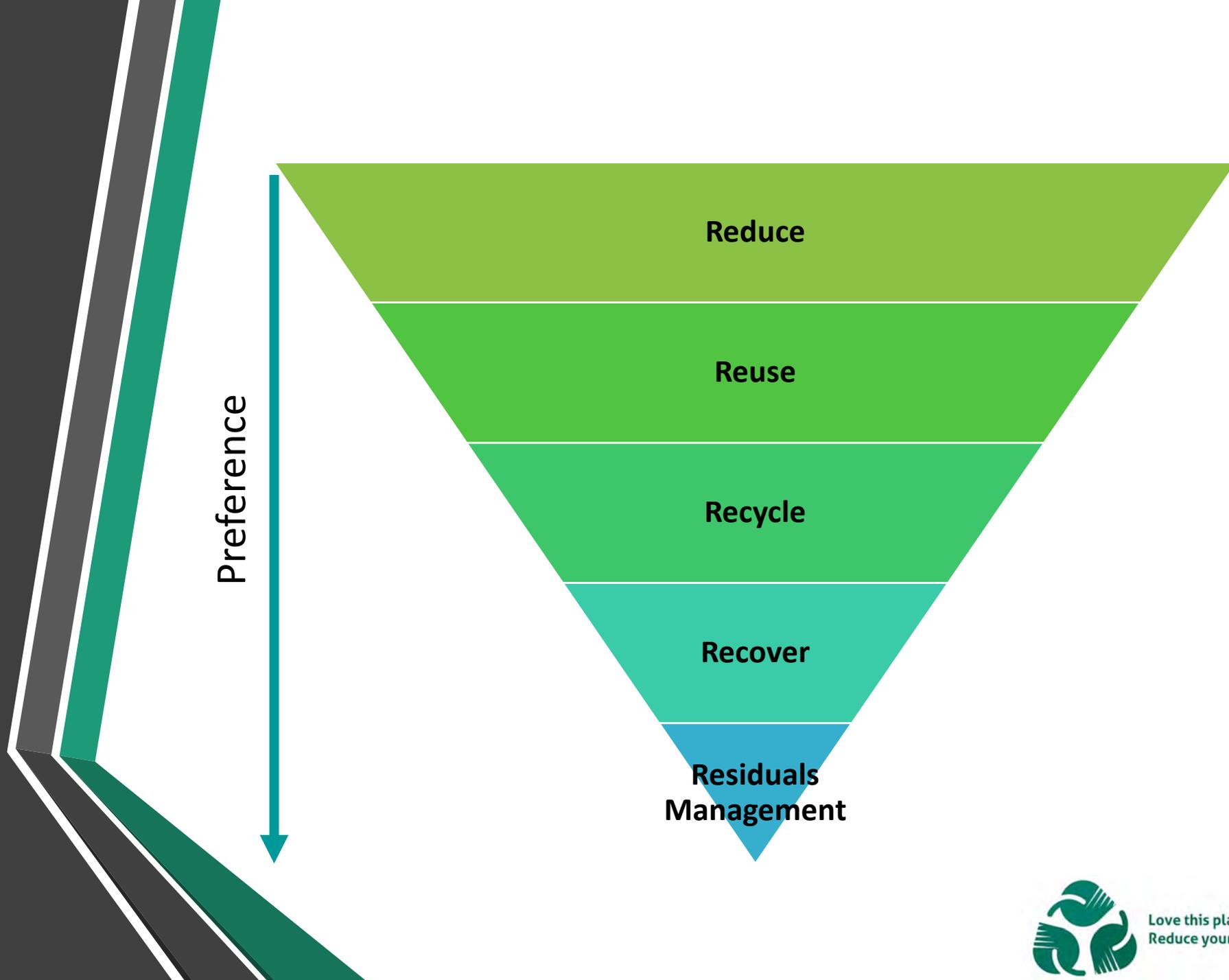
3. Evaluate Options

- Held many PTAC meetings
- Evaluated options & identified preferred options
- First Draft of Plan

4. Prepare & Adopt the Plan

- Public consultation on Draft Plan
 - 2021 Solid Waste Survey
 - Open Houses
- Review feedback and finalize the Plan
- Ministry Approval and RDKS Board adoption

Pollution Prevention “Waste” Hierarchy



Love this place.
Reduce your waste.

Solid Waste Management Plan Topics

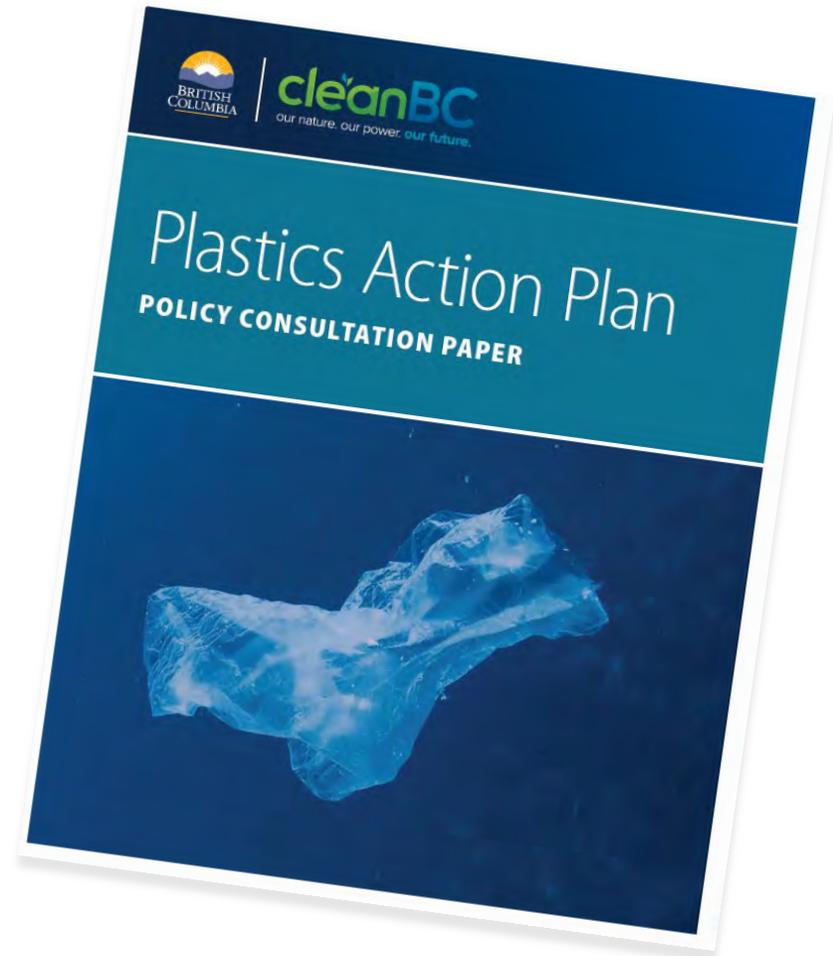
- Reduce & reuse
- Recycling & composting
- Waste to landfill
- Funding



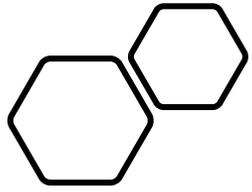
Reduce and Reuse



Reduce Single Use-Items



Love this place.
Reduce your waste.



Reduce Single Use-Items

Encourage

Encourage businesses to voluntarily reduce their use of single-use items

Lobby

Lobby the BC government for the creation of a recycling program for single-use items and packaging-like products

Encourage

Encourage alternatives to single-use items at public events

Repair & Reuse



Reuse of bulky items at a Restore



Trunk Sale facilitated by the Regional District of Central Okanagan



Repair Café organized by the Regional District of Central Okanagan



Deconstruction by Sea-to-Sky Removal

Questions and Answers: Reduce and Reuse Initiatives



Love this place.
Reduce your waste.



Recycling & Composting



Extended Producer Responsibility (EPR) Programs

You think recycling is confusing?



Referred to as “Stewards”



There are 22 EPR programs in BC



EPR programs shift the cost of end-of-life management from local governments to producers and consumers



The collection of EPR materials in partnership with stewards can reduce recycling costs





Plastic Containers



Foam Packaging



**Paper &
Cardboard**



Steel Containers



RECYCLEBC™



Glass



**Plastic Bags/
Overwrap**



**Aluminum
Containers**



Paper Packaging

Packaging and Printed Paper Stewardship/ EPR Program



Reducing Recycling Contamination



Garbage



Cardboard



Organics



Commercial Waste Diversion

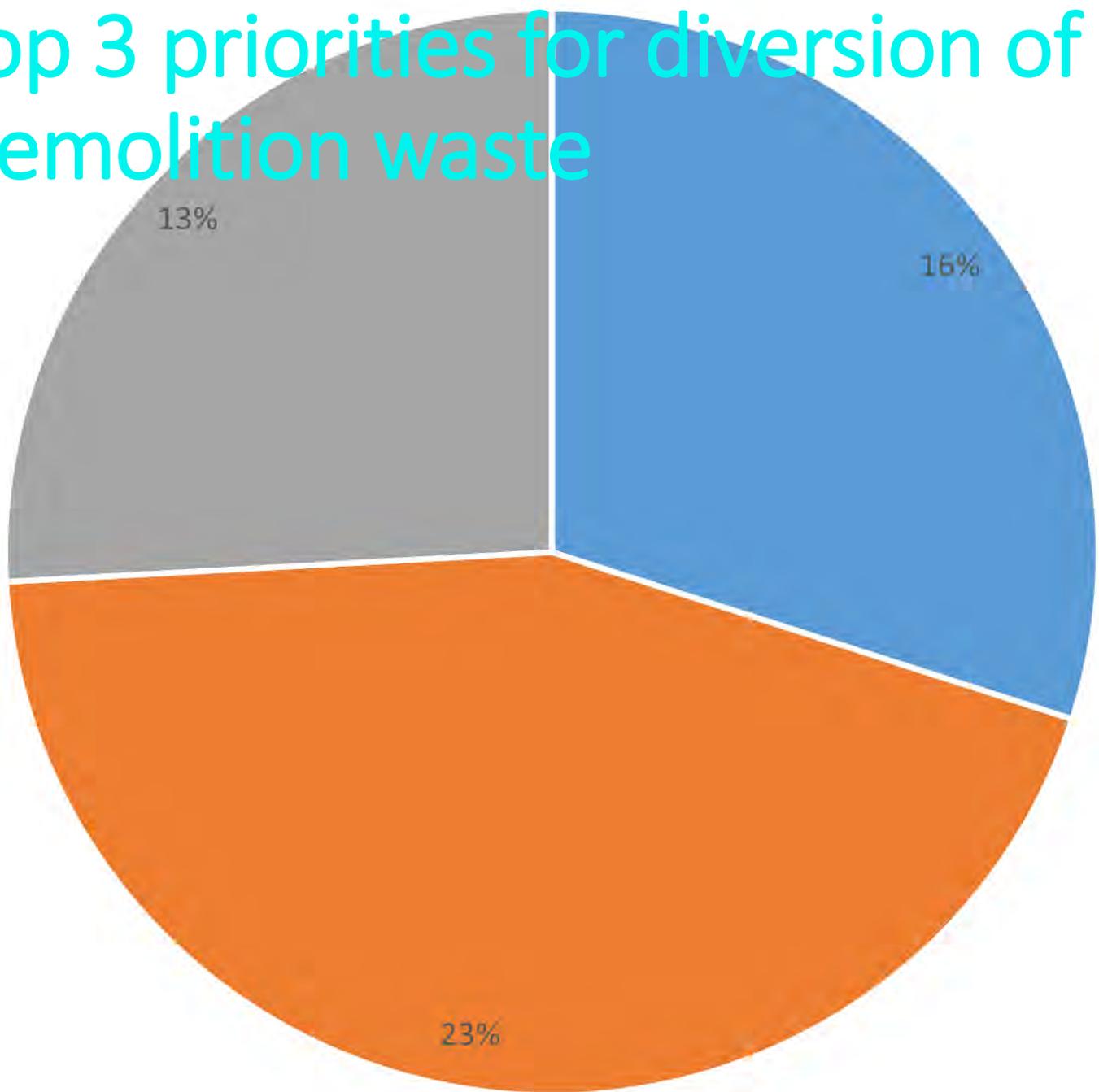


Construction & Demolition Waste Diversion





Top 3 priorities for diversion of Construction and Demolition waste



- Educate building contractors and homeowners about options to reduce and reuse renovation, construction and demo materials.
- Identify and promote reuse options for used building materials, such as Reuse-It-Centres.
- Create a working group with people in the construction and demo sector and industry to figure out solutions for reusing and recycling used building materials.



Composting



Questions and Answers: Recycling and Composting Initiatives



Love this place.
Reduce your waste.



Waste to
Landfill

Illegal Dumping





RDKS owned facilities:

- Stewart
- Kitwanga
- Thornhill
- Forceman Ridge
- Hazelton
- Meziadin
- Iskut
- Rosswood

Solid Waste Facilities

Operated by others:

- Dease Lake
- Telegraph
- Gitlax'taamiks
- Kitimat

Potential Closure of Smaller Landfills

- Rosswood and Iskut Landfills
- High costs to operate
- Potential to replace with transfer stations / other suitable waste management services



Potential future solid waste services

- Dease Lake Landfill
- Telegraph Creek Transfer station and closed landfill





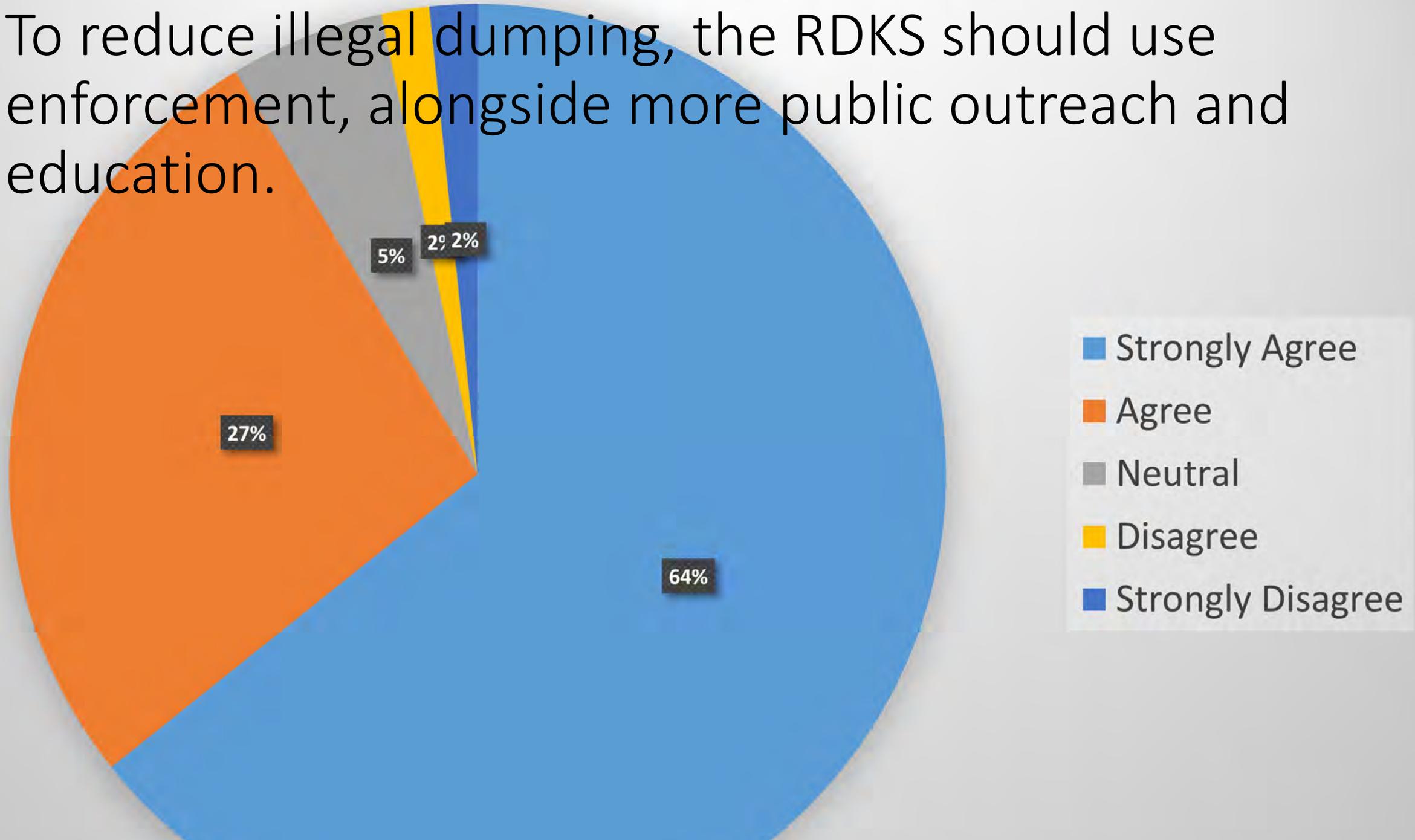
Potential future solid waste service

- Accepting organics and garbage from Kitimat



Illegal Dumping

To reduce illegal dumping, the RDKS should use enforcement, alongside more public outreach and education.



Questions and Answers: Waste to Landfill & Illegal Dumping



Love this place.
Reduce your waste.



Funding



Waste from Industry (Non-taxpayers)



Landfill airspace is being consumed at a faster rate than initially projected due to waste from industry



Currently a surcharge for disposal at RDKS facilities



Uneven financial benefits to the two service areas



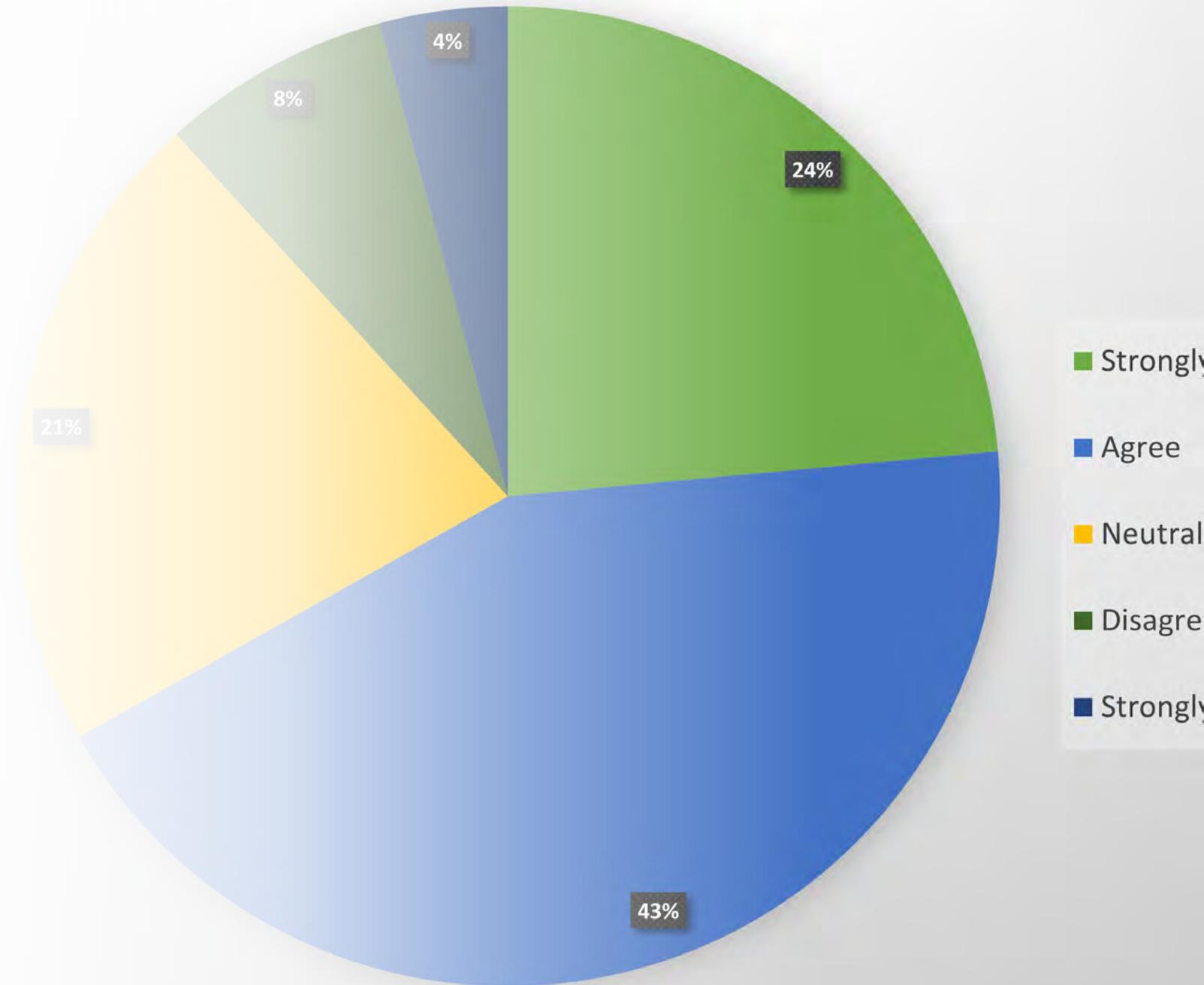
Make sure non-taxpayers are adequately charged



Love this place.
Reduce your waste.



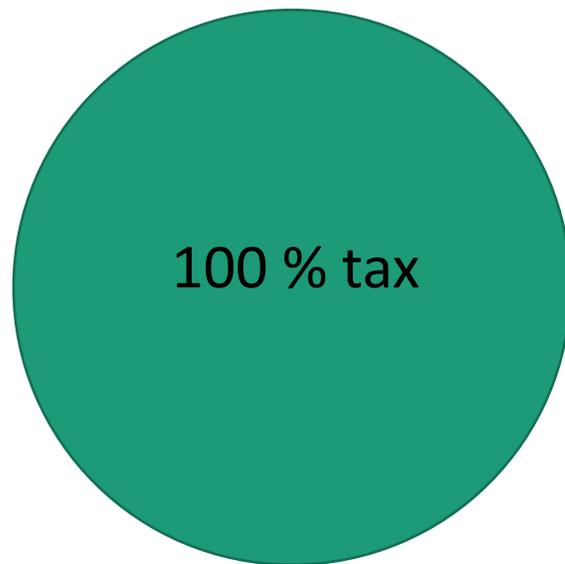
The RDKS should continue to accept out-of-service area waste (from non-taxpayers)



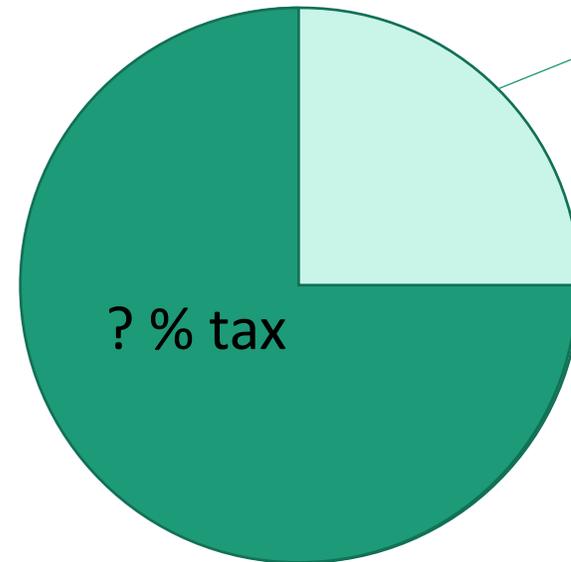


Hazelton and Highway 37 North Service: Moving to User-Pay Model

Current Funding



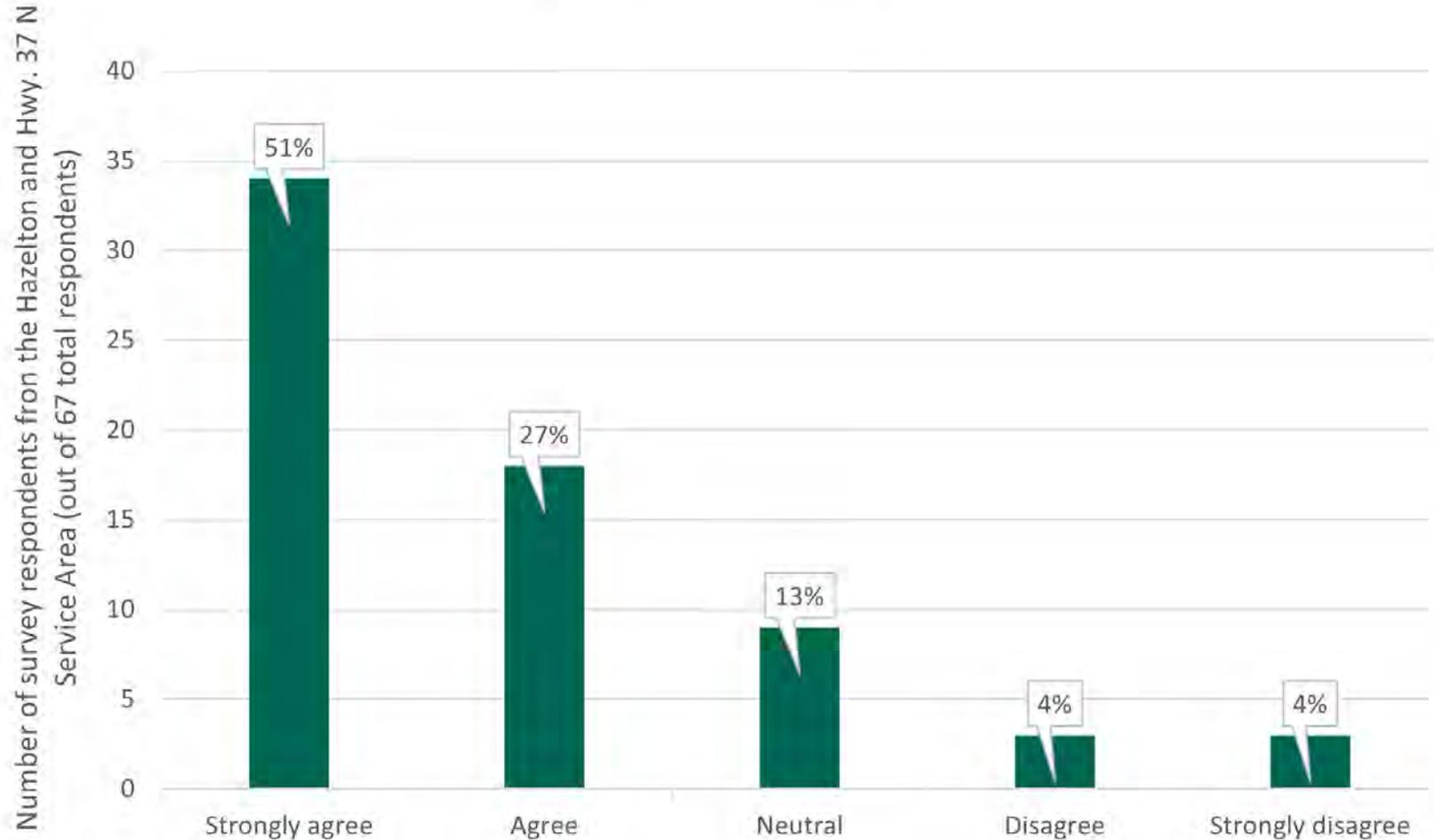
Future Funding



Partial user-pay model:
Tipping fees
for large volumes
of certain wastes

Hazelton and Highway 37 North Service Area: Support for Select Tipping Fees

The RDKS should look into possibly charging tip fees for large volumes of certain types of waste in the Hazelton and Highway 37 North service area.



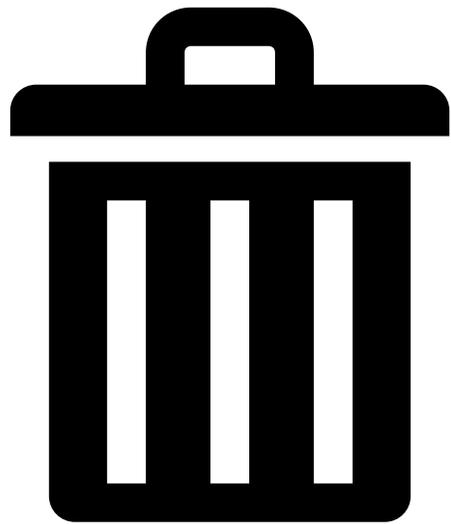
Questions and Answers: Funding



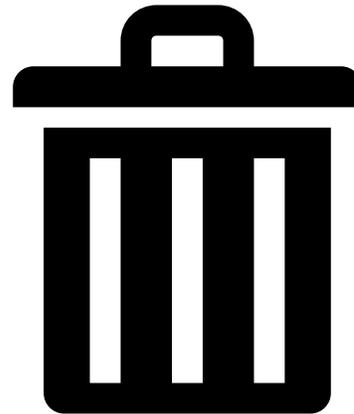
Love this place.
Reduce your waste.



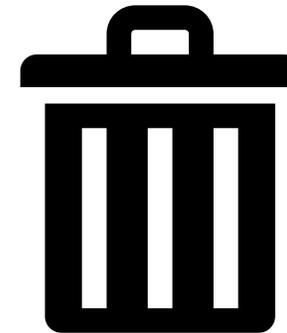
What can this Plan achieve?



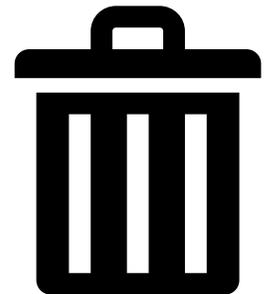
Current 2020:
800 kg/capita



2025:
663 kg/capita



2030:
556 kg/capita



Beyond 2030:
350 kg/capita



Next Steps

Consult

- Gather public feedback on the draft plan

Submit

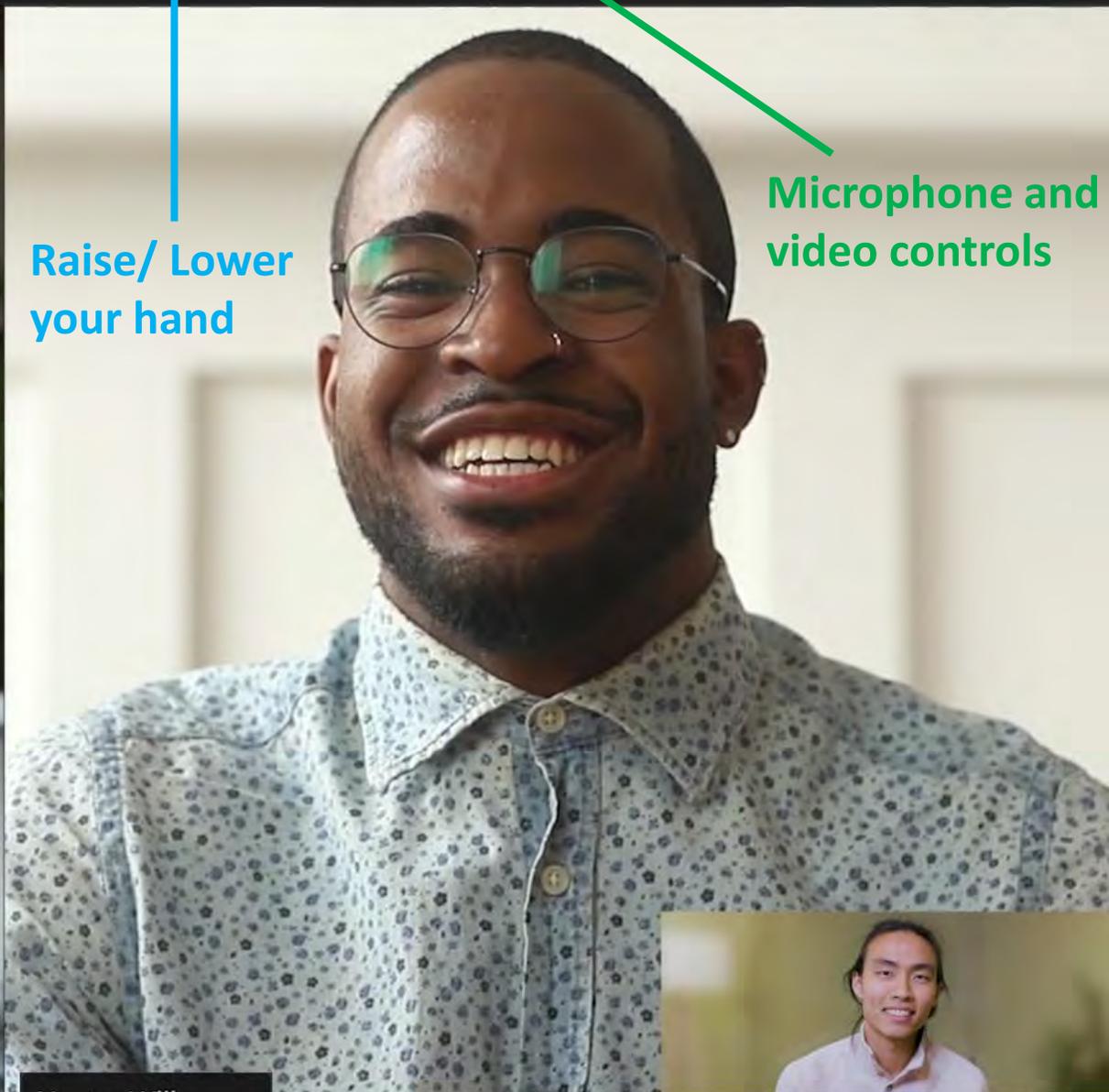
- Revise the plan and submit for Ministry approval

Adopt

- Board adoption of approved plan

- Activity
- Chat
- Teams
- Calendar
- Files
- Calls
- Apps

Navigation icons: List, People, Chat, Hand icon, More, Video, Microphone, Share, and a red 'Leave' button.



Raise/ Lower your hand

Microphone and video controls



Thank-you for your time!

Nicki Veikle
Environmental Coordinator
Regional District of Kitimat-Stikine
nveikle@rdks.bc.ca

Erin Blaney
Zero Waste Coordinator
Regional District of Kitimat-Stikine
eblaney@rdks.bc.ca

Veronica Bartlett
Solid Waste Planner
Morrison Hershfield
vbartlett@morrisonhershfield.com



Appendix 44 – Advertising for the 2021 Virtual Open Houses



Regional District of
Kitimat-Stikine



Love this area.
Reduce your waste.

Let's Talk Trash!

Join a **VIRTUAL OPEN HOUSE** to learn about the region's new Solid Waste Management Plan and share your thoughts! Use this link to join an Open House at your preferred event time:

<https://link.rdks.bc.ca/OpenHouse>



1:00 pm – Wednesday, April 7
7:00 pm – Wednesday, April 7
9:00 am – Saturday, April 10
10:00 am – Tuesday, April 13
7:00 pm – Tuesday, April 13
3:00 pm – Thursday, April 15

Have questions? Call us at
1-800-663-3208 or visit www.rdks.bc.ca





Regional District of
Kitimat-Stikine

Let's Talk Trash!



Join a **VIRTUAL OPEN HOUSE** to learn about the region's new Solid Waste Management Plan and share your thoughts! Open houses are being hosted online due to COVID-19. Each event will be about 1.5 hours long and include a series of brief presentations followed by Q&A.

JOIN ONLINE

Use this link to join an Open House at your preferred event time:

<https://link.rdks.bc.ca/OpenHouse>



JOIN BY PHONE

If you are unable to join online, phone into an Open House at your preferred event time.

1:00 pm – Wednesday, April 7

1-833-253-7696; ID: 335555567#

7:00 pm – Wednesday, April 7

1-833-253-7696; ID: 153654449#

9:00 am – Saturday, April 10

1-833-253-7696; ID: 932559867#

10:00 am – Tuesday, April 13

1-833-253-7696; ID: 268242214#

7:00 pm – Tuesday, April 13

1-833-253-7696; ID: 353603045#

3:00 pm – Thursday, April 15

1-833-253-7696; ID: 296486109#

Have questions? Call us at 1-800-663-3208 or visit www.rdks.bc.ca



Publicized the Open House events through a free radio advertisement on CBC Daybreak North

CBC Radio North offers a free, short radio ad for community events. Nicki Veikle, RDKS Environmental Coordinator, called CBC Radio North at 1-866-340-1932 on March 17, 2021, and left the following short (<60 second) message:

“Are you passionate about waste? Concerned or confused about reuse or recycling in the north? Well, here’s your opportunity to talk trash! The Regional District of Kitimat-Stikine is in the final stages of developing a new Solid Waste Management Plan to set the direction for how waste is managed in our region for the next decade. We recently ran a survey and had over 1200 responses. Thank-you to all of our citizens for your input! Now we’re hosting a series of Virtual Open House events for those that want to learn more. These virtual events will be an hour and a half long and are scheduled for April 7th, 10th, 13th and 15th. Please visit our website at www.rdks.bc.ca to learn more! That’s www.rdks.bc.ca. Hope to hear from you at one of our Virtual Open House events!”

From: [Nicki Veikle](#)
To: [Solid Waste Management PTAC Committee](#)
Cc: [Veronica Bartlett](#); [Erin Blaney](#); [Megan Haley](#); [Cook, Leonard ENV:EX](#)
Subject: Invitation to PTAC: Let's Talk Trash! Open Houses for Solid Waste Management Plan
Date: April 1, 2021 3:00:00 PM
Attachments: [image001.png](#)

Good afternoon PTAC Committee Members

Our consultation on the draft Solid Waste Management Plan has, so far, been quite successful. Our recent Solid Waste Survey, which closed on March 14th, received over 1250 responses and provided some excellent feedback.

Now we're hosting a series of six "Let's Talk Trash" virtual Open House events through early April to further consult our citizens on initiatives proposed in the draft Plan. The Open Houses will be about 1.5 hours long and will include a series of short presentations followed by brief Q&A sessions. We will open the microphones for verbal questions and comments from the audience at the end of the Open House. Although our PTAC members are already well-versed in the initiatives proposed in the Plan, I'd like to invite you to attend an Open House.

[Click here to register for a "Let's talk trash" virtual Open House](#) OR [Click here to join online at your preferred Open House event time.](#)

If you register, a meeting invitation will be emailed to you.




Regional District of Kitimat-Stikine

Let's Talk Trash!


Love this place. Reduce your waste.

Join a **VIRTUAL OPEN HOUSE** to learn about the region's new Solid Waste Management Plan and share your thoughts! Use this link to join an Open House at your preferred event time:

<https://link.rdks.bc.ca/OpenHouse>



1:00 pm – April 7
7:00 pm – April 7
9:00 am – April 10
10:00 am – April 13
7:00 pm – April 13
3:00 pm – April 15

Have questions? Call us at 1-800-663-3208 or visit www.rdks.bc.ca

Alternatively, you can join us by phone using the call-in details below.

Open House #1	April 7	1:00 to 2:30 pm	 (833) 253-7696, 33555567#	Canada (Toll-free)
Open House #2	April 7	7:00 to 8:30 pm	 (833) 253-7696, 153654449#	Canada (Toll-free)
Open House #3	April 10	9:00 to 10:30 am	 (833) 253-7696, 932559867#	Canada (Toll-free)
Open House #4	April 13	10:00 to 11:30 am	 (833) 253-7696, 268242214#	Canada (Toll-free)
Open House #5	April 13	7:00 to 8:30 pm	 (833) 253-7696, 353603045#	Canada (Toll-free)
Open House #6	April 15	3:00 to 4:30 pm	 (833) 253-7696, 296486109#	Canada (Toll-free)

Hope to hear from you at one of our "Let's Talk Trash" Open Houses!

Warm regards,

Nicki Veikle A.Sc.T.

Environmental Coordinator

From: [Renee Lukasser](#)
To: [RDKS Bruce Bidgood, Director Electoral Area C, Rural Terrace area, south coast](#); [RDKS David Brocklebank, Director Electoral Area D, Telegraph Creek, Iskut, Bob Quinn](#); [Dean Paranych; RDKS Dennis Sterritt, Mayor Village of Hazelton, and Director](#); [Eric Nyce; glowry@newhazelton.ca; gmckay@districtofstewart.com; jcordeiro@terrace.ca; Jeffery Hammond; RDKS Phillip Germuth, Chair, Mayor District of Kitimat](#); [Sean Bujtas; RDKS Tina Etzerza, Director Electoral Area F, Dease Lake](#)
Cc: [Nicki Veikle; Ron Poole](#)
Subject: FW: Board Invitation to "Let's Talk Trash!" Open Houses for Solid Waste Management Plan
Date: April 1, 2021 1:21:52 PM
Attachments: [image001.png](#)

Hello RDKS Board, Please see Nicki's email below- Renee

Good afternoon RDKS Board,

To support consultation on our draft Solid Waste Management Plan, we recently ran a Solid Waste Survey and received over 1250 responses. Now we're hosting a series of six virtual Open House events through early April to further consult our citizens on the initiatives proposed in our draft Plan. The Open Houses will be about 1.5 hours long and will include a series of short presentations followed by brief Q&A sessions. We will open the microphones for verbal questions and comments from the audience at the end of the Open House.

We'd like to invite you, our Directors, to attend an Open House. Also, we would really appreciate if you could please promote our Open House advertising on social media (<https://www.facebook.com/kitimatstikine>, <https://twitter.com/KitimatStikine>, <https://www.instagram.com/kitimatstikine/>).

[Click here to register for a "Let's talk trash" virtual Open House](#) OR [Click here to join online at your preferred Open House event time.](#)

If you register, a meeting invitation will be emailed to you.



Regional District of Kitimat-Stikine **Let's Talk Trash!** Love it in place. Reduce your waste.

Join a **VIRTUAL OPEN HOUSE** to learn about the region's new Solid Waste Management Plan and share your thoughts! Use this link to join an Open House at your preferred event time:
<https://link.rdks.bc.ca/OpenHouse>

1:00 pm – April 7
7:00 pm – April 7
9:00 am – April 10
10:00 am – April 13
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Have questions? Call us at 1-800-663-3208 or visit www.rdks.bc.ca

Alternatively, you can join us by phone using the call-in details below.

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Open House #2	April 7	7:00 to 8:30 pm	833) 253-7696, 153654449# Canada (Toll-free) Phone Conference ID: 153 654 449#
Open House #3	April 10	9:00 to 10:30 am	833) 253-7696, 932559867# Canada (Toll-free) Phone Conference ID: 932 559 867#
Open House #4	April 13	10:00 to 11:30 am	833) 253-7696, 268242214# Canada (Toll-free) Phone Conference ID: 268 242 214#
Open House #5	April 13	7:00 to 8:30 pm	833) 253-7696, 353603045# Canada (Toll-free) Phone Conference ID: 353 603 045#
Open House #6	April 15	3:00 to 4:30 pm	833) 253-7696, 296486109# Canada (Toll-free)

Hope to hear from you at one of our Solid Waste Open Houses!

Warm regards,

Nicki Veikle A.Sc.T.

Environmental Coordinator



Regional District of
Kitimat-Stikine
Suite 300 - 4545 Lazelle Avenue
Terrace, B.C. V8G 4E1

Office: 250-615-6100 Toll Free: 1-800-663-3208 Cell: 250-638-6804

Email: nveikle@rdks.bc.ca Website: <http://www.rdks.bc.ca>

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Open House #5	April 13	7:00 to 8:30 pm	 (833) 253-7696, 353603045# Canada (Toll-free)
Open House #6	April 15	3:00 to 4:30 pm	 (833) 253-7696, 296486109# Canada (Toll-free)

Hope to hear from you at one of our "Let's Talk Trash" Open Houses!

Warm regards,

Nicki Veikle A.Sc.T.

Environmental Coordinator



Office: 250-615-6100 Toll Free: 1-800-663-3208 Cell: 250-638-6804

Email: nveikle@rdks.bc.ca Website: <http://www.rdks.bc.ca>

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From: Nicki Veikle
Cc: Erin Blaney; "Veronica Bartlett"; Megan Haley; Nicole Lavoie; Megan Glover; Bobby Laird
Bcc: "greenskillsbc@gmail.com"; "deborah@citywest.ca"; "Delinamoran@icloud.com"; "m.gauvin44@gmail.com"; "Michele.Sharon.Barbosa@gmail.com"; "michellebrinson@hotmail.com"; "Justin.roger@outlook.com"; "hcc994@gmail.com"; "Heather13morgan@yahoo.ca"; "Jeffritch@gmail.com"; "louycifer@gmail.com"; "mayank.agga2018@gmail.com"; "Karanvirgill11@gmail.com"; "sittboake@gmail.com"; "stephenfb@citywest.ca"; "Raylenechapman@aol.com"; "somejc@telus.net"; "Pmgiffiths89@gmail.com"; "Janelle.fortin@gmail.com"; "neil_kin@telus.net"; "hjeppen@citywest.ca"; "amybarbosa@msn.com"; "mgordichuk56@gmail.com"; "tedandfransmith@gmail.com"; "Tweet25@hotmail.com"; "Hsiebring@hotmail.com"; "Smoneette@citywest.ca"; "peterking@pgkmanagement.com"; "Terresa5@hotmail.com"; "mhurrell@shaw.ca"; "benjaminkorol@gmail.com"; "Katepdillon@gmail.com"; "p.ramsayconstruction@gmail.com"; "Malobrandi@gmail.com"; "etiennebourke@gmail.com"; "Carmenhooge@gmail.com"; "lilacasse48@gmail.com"; "Natalie.Chimko@hotmail.com"; "Arhummel@telus.net"; 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"Zpkarker@protonmail.com"; "karenc@citywest.ca"; "pat_ferguson3@hotmail.com"; "aimccoll@telus.net"; "camthomas20@gmail.com"; "nuthatch07@gmail.com"; "RuthSmith6218@gmail.com"; "dmmlvin67@gmail.com"; "Earlucy@hotmail.com"; "abown_315@hotmail.com"; "kieranjcampbell@gmail.com"; "amykleptar98@yahoo.com"; "allye.tuzlak@gmail.com"; "fsjkaysha@gmail.com"; "emchaleannett@yahoo.ca"; "rshanmugaveloo@gmail.com"; "doitrightpau@gmail.com"; "rfive@bulkleve.net"; "vickidenis@gmail.com"; "thorgrimssons@gmail.com"; "ericjosephclarke@gmail.com"; "im19ross@gmail.com"; "cmmackay@telus.net"; "send2gagnon@gmail.com"; "hadjiru1993@gmail.com"; "babetteducharme@gmail.com"; "hcollier@uvic.ca"; "cyn_gregoire@hotmail.com"; "gagnon@wilset.ca"; "sarahartis@gmail.com"; "liacwallace@gmail.com"; "firedragon1@me.com"; "w6berg@telus.net"; "kmorrisson35.KM@gmail.com"; "rinaqem@gmail.com"; "dexhob@outlook.com"; "jeff@rueger.ca"; "bisset@msn.com"; "damateri@telus.net"; "cecil1647@citywest.ca"; "dwesterman2010@gmail.com"; "ryanjosephine16@gmail.com"; "coltonwoodcat@gmail.com"; "maximumdestruction19@gmail.com"; "zephyr3@citywest.ca"; "fredheather64@hotmail.com"; "Maryhoulden7071@gmail.com"; "jelevjules@yahoo.ca"; "Sabrinab_18@hotmail.co.uk"; "tsims@telus.net"; "stevעדudra@gmail.com"; "silverhead.hanna@gmail.com"; "ambenwright9@hotmail.com"; "ericazwiers@gmail.com"; "hrd@telus.net"; "swthorne@telus.net"; "Eric2jansen@gmail.com"; "mwarcup1950@gmail.com"; "jumpingpuddles@hotmail.com"; "millwright2012@me.com"; "tessswarner@gmail.com"; "julian.krick@posteo.de"; "stacey602@hotmail.com"; "josefietwiler@starlynx.ca"; "jparmar@kves.ca"; "4thidvya@telus.net"; "Whosteves@gmail.com"; "camazozla@hotmail.com"; "gagnon@wilset.ca"; "if58811@gmail.com"; "Bdchesterman@gmail.com"; "cindyforsyth@gmail.com"; "lindaferretti@gmail.com"; "Alexa.kalina85@gmail.com"; "T.O.treid.77@gmail.com"; "gmacdon@bulkleve.net"; "smbellisle@icloud.com"; "maurie.hurst@gmail.com"; "Stuckinahole@hotmail.com"; "mailipa@hotmail.com"; "Lnsmsahnuk@hotmail.com"; "brendasissons@citywest.ca"; "Janetemfrancis@gmail.com"; "sebhasbeenhacked@gmail.com"; "barbo390@citywest.ca"; "Angeliawouters@gmail.com"; "hazelduchesne@gmail.com"; "dianawood@live.ca"; "rgnconsulting@outlook.com"; "kganderson71@gmail.com"; "icolong@telus.net"; "howard-t@telus.net"; "kitimat7@telus.net"; "kayladegerness@hotmail.com"; "Blaze439137@gmail.com"; "sharonraineybaker@hotmail.com"; "lukeharrison@live.ca"; "y_tashoots@yahoo.ca"; "lucas.shoop01@gmail.com"; "Sky-high.jr@hotmail.com"; "aaronwindsurfs@gmail.com"; "Doyboy14.cman@hotmail.com"; "Todd_sherstone@hotmail.com"; "dblock66@icloud.com"; "davidheinimann@gmail.com"; "lori@cedariverphysio.ca"; "manthony1945@hotmail.com"; "katelautens@gmail.com"; "carolap45@hotmail.com"; "markwbrown213@gmail.com"; "dw.bjorgaard@citywest.ca"; "Gloriak101@hotmail.com"; "chris.jennings@gov.bc.ca"; "nycesally@hotmail.com"; "laura_smlth07@hotmail.com"; "dmw63@icloud.com"; "ltanner1856@gmail.com"; "carla.glen@gmail.com"; "Angelamotschilnig@gmail.com"; "uptownrosswood@gmail.com"; 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"dartcart68@gmail.com"; "sala@telus.net"; "kimnagk@gmail.com"; "edgraf@telus.net"; "lmlynch@telus.net"; "cpastershank@yahoo.ca"; "gadgetgirl@eagleapps.net"; "tamaramurrell33@gmail.com"; "colleenyce@gmail.com"; "prettzel@gmail.com"; "ravens.nest@telus.net"; "christiansen-sa@hotmail.com"; "Kellyanne_burkett@hotmail.ca"; "Danielle.billey@gmail.com"; "k3north@gmail.com"; "Walter.Anderson@outlook.com"; "carisa_devost@yahoo.ca"; "Je_papps@hotmail.com"; "joandham@hotmail.com"; "nkparry@icloud.com"; "rabut@citywest.ca"; "sylviaondease@hotmail.com"; "dwiler@telus.net"; "monej@hotmail.com"; "martalnelson@gmail.com"; "Soutarcraig@gmail.com"; "Flockinginsane@hotmail.ca"; "j.m.m86@live.com"; "penny.dickson@yahoo.ca"; "dsmdced@telus.net"; "jnidd@hotmail.com"; "alex@unbc.ca"; "Juliana.c.christiansen@gmail.com"; "Carolinecollins1975@hotmail.com"; "kalmas@live.ca"; "summerain57@hotmail.com"; "sandrajbouchard@hotmail.com"; "killerwhaleprincess@gmail.com"; "Jmailand82@hotmail.com"; "inkekase@telus.net"; "lmpcpherson20@hotmail.com"; "jeanniehiebert@mail.com"; "Millwright2012@me.com"; "dominicparent89@gmail.com"; "mrypma@telus.net"; "Ditcka@hotmail.com"; "dwongadams@hotmail.ca"; "Sanchez.terrace@gmail.com"; "Tickityboo91@gmail.com"; "denisemcg63@gmail.com"; "lojsonhome@gmail.com"; "hopkins.sara@gmail.com"; "boomer@citywest.ca"; "susan_rusch@hotmail.com"; "peterlina4822@gmail.com"; "poprightinn@telus.net"; "poprightinn@telus.net"; "snowpuffy@hotmail.com"; "x4llison@gmail.com"; "apfeffer@telus.net"

Subject: Let's Talk Trash! - Open Houses for Solid Waste Management Plan
Date: March 31, 2021 3:02:00 PM
Attachments: [image001.png](#)

Good afternoon,

You recently responded to our Solid Waste Survey indicating your interest to learn more about waste management in the Regional District of Kitimat-Stikine. Thank-you for completing the survey! We really appreciate your input. We've received a very good response to the survey, with over 1250 respondents. Now we're hosting a series of six virtual Open House events through early April to consult our citizens on the initiatives proposed in our draft Solid Waste Management Plan. During the Open Houses, we will be presenting a series of short presentations followed by brief Q and A sessions. We will open the microphones for verbal questions and comments from the audience at the end of the Open House. We hope you can join!

[Click here to register for a "Let's talk trash" virtual Open House OR Click here to join online at your preferred Open House event time.](#)

If you register, a meeting invitation will be emailed to you.



Regional District of
Kitimat-Stikine

Let's Talk Trash!



Join a **VIRTUAL OPEN HOUSE** to learn about the region's new Solid Waste Management Plan and share your thoughts! Use this link to join an Open House at your preferred event time:

<https://link.rdks.bc.ca/OpenHouse>



1:00 pm – April 7
7:00 pm – April 7
9:00 am – April 10
10:00 am – April 13
7:00 pm – April 13
3:00 pm – April 15

Have questions? Call us at 1-800-663-3208 or visit www.rdks.bc.ca



Alternatively, you can join us by phone using the call-in details below.

Open House #1	April 7	1:00 to 2:30 pm	833) 253-7696 , 335555567# Canada (Toll-free) Phone Conference ID: 335 555 567#
Open House #2	April 7	7:00 to 8:30 pm	833) 253-7696 , 153654449# Canada (Toll-free) Phone Conference ID: 153 654 449#
Open House #3	April 10	9:00 to 10:30 am	833) 253-7696 , 932559867# Canada (Toll-free) Phone Conference ID: 932 559 867#
Open House #4	April 13	10:00 to 11:30 am	833) 253-7696 , 268242214# Canada (Toll-free) Phone Conference ID: 268 242 214#
Open House #5	April 13	7:00 to 8:30 pm	833) 253-7696 , 353603045# Canada (Toll-free) Phone Conference ID: 353 603 045#
Open House #6	April 15	3:00 to 4:30 pm	833) 253-7696 , 296486109# Canada (Toll-free) Phone Conference ID: 296 486 109#

Can't wait to hear from you at one of our Solid Waste Open Houses!

Warm regards,

Nicki Veikle A.Sc.T.

Environmental Coordinator



Regional District of
Kitimat-Stikine
Suite 300 - 4545 Lazelle Avenue
Terrace, B.C. V8G 4E1

Office: 250-615-6100 Toll Free: 1-800-663-3208 Cell: 250-638-6804

Email: nveikle@rdks.bc.ca Website: <http://www.rdks.bc.ca>

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Let's Talk Trash! Join us for a Virtual Open House



Let's Talk Trash! Join us for a Virtual Open House

Posted on 03/29/2021

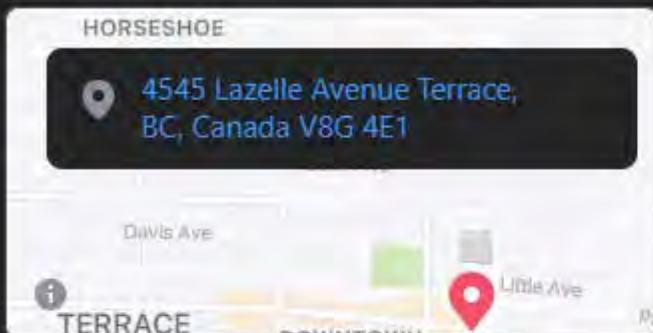


Let's talk trash! Join one of our virtual Open Houses to learn about solid waste management in the RDKS and share your thoughts. Six events are being held through early April.

- Wednesday, April 7 at 1:00 p.m.
- Wednesday, April 7 at 7:00 p.m.
- Saturday, April 10 at 9:00 a.m.
- Tuesday, April 13 at 10:00 a.m.
- Tuesday, April 13 at 7:00 p.m.
- Thursday, April 15 at 3:00 p.m.

Use this link to join an Open House at your preferred event time: link.rdks.bc.ca/OpenHouse.

Hope to hear from you at one of our Open Houses!



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Regional District of Kitimat-Stikine

March 29 at 4:05 PM

Let's talk trash! Join one of our virtual Open Houses to learn about solid waste management in the RDKS and share your thoughts. Six events are being held through early April. See post below for event times. Use this link to join an Open House at your preferred event time at link.rdks.bc.ca/OpenHouse. Hope to hear from you at one of our Open Houses!

Let's Talk Trash!

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Have questions? Call us at 1-800-663-3208 or visit www.rdks.bc.ca

You, Megan Glover and 2 others

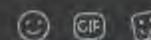
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Write a comment...





Rod Taylor, pictured in 2019, will be the Christian Heritage Party's candidate for Skeena — Bulkley Valley in the next federal election. (Black Press Media Photo)

Taylor last ran for office in the 2020 provincial election, now chosen candidate for Skeena-Bulkley Valley

Continued from Page B4

Taylor most recently ran for office in the 2020 provincial general election as a candidate in the Stikine riding, receiving 831 votes or just over 11 per cent of the popular vote.

In 2019, Taylor was also the CHP nominee for the federal riding of Skeena-Bulkley Valley. He garnered 1,350 votes — just over three per cent of all valid ballots. He represented the party in the 2004, 2006

and 2008 federal elections in Skeena-Bulkley Valley, never eclipsing four per cent of valid ballots.

Taylor worked in the lumber industry in Smithers and Witsset before becoming leader of the federal

Christian Heritage Party in 2014. He served as the provincial wing's interim leader from 2013 until Sept. 14, 2020, when Laura-Lynn Tyler Thompson was elected provincial leader.

Cruise Ship Tourism

Throughout the pandemic, governments around the world have been taking steps to support businesses and industries that have been negatively affected by COVID-19. Because of the loss of international and even local travel, our tourism industry has been one of the hardest-hit industries in B.C. In 2020 alone, British Columbia's tourism sector lost \$16.6 billion of an estimated \$20 billion in annual GDP. While tourism businesses and operators are desperately waiting for some of the supports promised by the provincial government, neighbouring jurisdictions are taking steps to protect and promote their tourism industry — measures that could have both temporary and permanent impacts on our tourism sector.

A prime example of this is legislation currently being brought forward by Alaskan Governor Lisa Murkowski called the *Alaska Tourism Recovery Act*. As it stands, U.S. law requires that ships hailing from foreign nations



Ellis Ross, MLA

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250-615-4895

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250-632-8518

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cannot travel directly between U.S. ports and must stop in a foreign port first. This has been a great benefit to many of B.C.'s coastal towns and cities as they have become stopover destinations for cruise ships travelling to and from Alaska — many of which are registered in foreign nations. The *Alaska Tourism Recovery Act* would allow cruise ships to bypass B.C. ports — a direct attack

on our struggling tourism industry.

Cruise ship tourism is responsible for \$4.2 billion in annual revenue to Canada as well as 20,000 direct and indirect jobs. It is estimated that every ship that arrives in Vancouver brings \$3 million in tourism revenue to the local economy. While we know cruise ships won't be able to operate in B.C. until 2022 at the earliest, there is no guarantee that this won't become a permanent change if the U.S. legislation is passed. This would have very serious impacts on our tourism industry for years to come.

As your MLA, I am working closely with my colleagues in the Official Opposition to ensure that government is taking steps to work with our U.S. neighbours and ensure that the measures they take to protect and support their tourism industry don't devastate ours.

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Let's Talk Trash!



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1-833-253-7696; ID: 335555567#

1-833-253-7696; ID: 153654449#

1-833-253-7696; ID: 932559867#

1-833-253-7696; ID: 268242214#

1-833-253-7696; ID: 353603045#

1-833-253-7696; ID: 296486109#

Have questions? Call us at 1-800-663-3208 or visit www.rdks.bc.ca



CHP selects Rod Taylor as Skeena—Bulkley Valley candidate

by Ben Bogstie
Local Journalism Initiative reporter

Rod Taylor will be the Christian Heritage Party's candidate for Skeena — Bulkley Valley in the next federal election.

As the leader of the party and only name on the nomination ballot, Taylor was selected unanimously at the electoral district association's virtual annual general meeting on March 12. The nomination process started in mid-February and voting was conducted using anonymous electronic balloting. "The CHP continues to be the party of life, family and freedom," said Taylor in



Rod Taylor, pictured in 2019, will be the Christian Heritage Party's candidate for Skeena — Bulkley Valley in the next federal election. (Black Press Media File Photo)

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a media release. "We bring those values to the political spectrum and offer Canadians an opportunity to protect life, strengthen the family and defend our God-given freedoms." Taylor most recently ran for office in the 2020 provincial general election as a candidate in the Stikine riding, receiving 831 votes or just over 11 per cent of the popular vote. In 2019, Taylor was also the CHP nominee for the federal riding of Skeena-Bulkley Valley. He garnered 1,350 votes — just over three per cent of all valid ballots. He represented the party in the 2004, 2006 and 2008 federal elections in Skeena-Bulkley Valley, never eclipsing four per cent of valid ballots. Taylor worked in the lumber industry in Smithers and Witsset before becoming leader of the federal Christian Heritage Party in 2014. He served as the provincial wing's interim leader from 2013 until Sept. 14, 2020, when Laura-Lynn Tyler Thompson was elected provincial leader.



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April 2, 2021 Page 7

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Appendix 45 – Letter to RDKS First Nations re: Support for the SWMP



August 18, 2021

Gingolx Nisga'a Village Government
General Delivery
Gingolx, BC V0J 1B0

Re: New RDKS Solid Waste Management Plan

The Regional District of Kitimat-Stikine (RDKS) has developed a new **Solid Waste Management Plan** (SWMP; the Plan) aimed to reduce waste, recycle more, and better manage our garbage.

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We hope to hear from you before September 30.

Best regards,

Nicki Veikle, B.Sc., A.Sc.T.
Environmental Services Coordinator
nveikle@rdks.bc.ca
250.615.6100

NV/tp



August 18, 2021

Gitanmaax Band
PO Box 440
Hazelton, BC V0J 1Y0

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Environmental Services Coordinator
nveikle@rdks.bc.ca
250.615.6100

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August 18, 2021

Gitanmaax Market
15 Kispiox Valley Road
Hazelton, BC V0J 1Y2

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250.615.6100

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August 18, 2021

Gitanyow Band
PO Box 340
Kitwanga, BC V0J 2A0

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August 18, 2021

Gitksan Government Commission
4125 Field Street, Upper Level
Hazelton, BC V0J 1Y0

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August 18, 2021

Gitlaxt'aamiks Village Government
PO Box 233
Gitlaxt'aamiks, BC V0J 1A0

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August 18, 2021

Gitsegukla Band
710 Ray Charles Avenue
Gitsegukla, BC V0J 2J3

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August 18, 2021

Gitwangak Band Council
PO Box 400
Kitwanga, BC V0J 2A0

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nveikle@rdks.bc.ca
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August 18, 2021

Gitxsan Development Corporation
PO Box 65
Hazelton, BC V0J 1Y0

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Gitxsan Hereditary Chiefs
PO Box 229
Hazelton, BC V0J 1Y0

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Glen Vowell Band - Sik-e-dakh
RR1, Comp 3, Site J
Hazelton, BC V0J 1Y0

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PO Box 460
New Hazelton, BC V0J 2J0

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Haisla Nation Council
PO Box 1101
Kitamaat Village, BC V0T 2B0

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August 18, 2021

Iskut Band Council
PO Box 30
Iskut, BC V0J 1K0

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Kispiox Band
1336 Kispiox Valley Road
Kispiox, BC V0J 1Y4

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PO Box 87
Klemtu, BC V0T 1L0

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Kitselas Band
2225 Gitaus Road
Terrace, BC V8G 0A9

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PO Box 544
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Lax Kw'alaams
206 Shashaak Street
Lax Kw'alaams, BC V0V 1H0

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As one of our key regional stakeholders, your community is now invited to offer final input on the new SWMP, which will set the direction for how our waste is managed for the next decade. You can review the Draft Plan here: <https://link.rdks.bc.ca/DraftSWMP>.

For more information or to provide comments, please contact the undersigned. For more details on the planning process, please visit our website at www.rdks.bc.ca/solidwasteplan.

We welcome your feedback, and your input will help us finalize the Plan. If you are generally in agreement with the strategies proposed within the Plan, we would sincerely appreciate if your community could provide a **letter of support for the Solid Waste Management Plan**, which we will include as part of our consultation.

We hope to hear from you before September 30.

Best regards,

Nicki Veikle, B.Sc., A.Sc.T.
Environmental Services Coordinator
nveikle@rdks.bc.ca
250.615.6100

NV/tp



August 18, 2021

Laxgalts'ap Village Government
PO Box 200
Greenville, BC V0J 1X0

Re: New RDKS Solid Waste Management Plan

The Regional District of Kitimat-Stikine (RDKS) has developed a new **Solid Waste Management Plan** (SWMP; the Plan) aimed to reduce waste, recycle more, and better manage our garbage.

The Plan was developed using feedback from a public survey in 2019 and by working with a Public and Technical Advisory Committee (PTAC). Your community received an invitation to participate in PTAC in November 2018.

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Environmental Services Coordinator
nveikle@rdks.bc.ca
250.615.6100

NV/tp



August 18, 2021

Moricetown Band
205 Beaver Road, Suite 3
Smithers, BC V0J 2N1

Re: New RDKS Solid Waste Management Plan

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Best regards,

Nicki Veikle, B.Sc., A.Sc.T.
Environmental Services Coordinator
nveikle@rdks.bc.ca
250.615.6100

NV/tp



August 18, 2021

Nisga'a Lisims Government
PO Box 231
Gitlaxt'aamiks, BC V0J 1A0

Re: New RDKS Solid Waste Management Plan

The Regional District of Kitimat-Stikine (RDKS) has developed a new **Solid Waste Management Plan** (SWMP; the Plan) aimed to reduce waste, recycle more, and better manage our garbage.

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Nicki Veikle, B.Sc., A.Sc.T.
Environmental Services Coordinator
nveikle@rdks.bc.ca
250.615.6100

NV/tp



August 18, 2021

Nisga'a Village of Gitwinksihlkw
PO Box 1
Gitwinksihlkw, BC V0J 3T0

Re: New RDKS Solid Waste Management Plan

The Regional District of Kitimat-Stikine (RDKS) has developed a new **Solid Waste Management Plan** (SWMP; the Plan) aimed to reduce waste, recycle more, and better manage our garbage.

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Environmental Services Coordinator
nveikle@rdks.bc.ca
250.615.6100

NV/tp



August 18, 2021

Office of the Wet'suwet'en
Suite 1 - 205 Beaver Road
Moricetown, BC V0J 2N1

Re: New RDKS Solid Waste Management Plan

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Nicki Veikle, B.Sc., A.Sc.T.
Environmental Services Coordinator
nveikle@rdks.bc.ca
250.615.6100

NV/tp



August 18, 2021

Tahltan Band
PO Box 46
Telegraph Creek, BC V0J 2W0

Re: New RDKS Solid Waste Management Plan

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Nicki Veikle, B.Sc., A.Sc.T.
Environmental Services Coordinator
nveikle@rdks.bc.ca
250.615.6100

NV/tp



August 18, 2021

Tahltan Central Government
PO Box 69
Dease Lake, BC V0C 1L0

Re: New RDKS Solid Waste Management Plan

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Environmental Services Coordinator
nveikle@rdks.bc.ca
250.615.6100

NV/tp



August 18, 2021

Village of Gingolx Office
General Delivery
Gingolx, BC V0J 1B0

Re: New RDKS Solid Waste Management Plan

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Environmental Services Coordinator
nveikle@rdks.bc.ca
250.615.6100

NV/tp



August 18, 2021

Village of Gitlaxt'aamiks Office
PO Box 233
Gitlaxt'aamiks, BC V0J 1A0

Re: New RDKS Solid Waste Management Plan

The Regional District of Kitimat-Stikine (RDKS) has developed a new **Solid Waste Management Plan** (SWMP; the Plan) aimed to reduce waste, recycle more, and better manage our garbage.

The Plan was developed using feedback from a public survey in 2019 and by working with a Public and Technical Advisory Committee (PTAC). Your community received an invitation to participate in PTAC in November 2018.

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Best regards,

Nicki Veikle, B.Sc., A.Sc.T.
Environmental Services Coordinator
nveikle@rdks.bc.ca
250.615.6100

NV/tp

Appendix 46 – Letters of Support for the SWMP



OFFICE OF THE MAYOR

September 28, 2021

*Regional District of Kitimat-Stikine
Nicki Veikle (via email: nveikle@rdks.bc.ca)
300-4545 Lazelle Avenue
Terrace, BC
V8G 4E1 Via email to: nveikle@rdks.bc.ca*

To Whom it May Concern:

Re: Letter of Support for the Regional District of Kitimat-Stikine's Solid Waste Management Plan

On behalf of the City of Terrace, I am pleased to provide a letter of support for the Regional District of Kitimat-Stikine's new Solid Waste Management Plan. We understand that this plan will set the direction for regional waste management for the next decade.

The plan was developed in consultation with a Public and Technical Advisory Committee (PTAC) and has included extensive public engagement.

The City of Terrace has appreciated the opportunity to provide ongoing feedback on the plan through our involvement in the PTAC Committee. We look forward to seeing the progression of the development of the Plan and collaborating on solid waste initiatives in the future.

Sincerely,

*Carol Leclerc
Mayor*

3215 EBY STREET, TERRACE, B.C.
CANADA V8G 2X8
250-635-6311
FAX 250-638-4777

Corporation of the
VILLAGE OF HAZELTON

Office of the Mayor

P.O Box 40
4310 Field St.
Hazelton, B.C. V0J 1Y0



Tel (250) 842-5991
Fax (250) 842-5152
www.hazelton.ca

September 21, 2021

File: 0400-60

To whom it may concern

Re: Solid Waste Management Plan

The Village of Hazelton supports The Regional District of Kitimat-Stikine's Solid Waste Management Plan. The Village understands the importance of forethought and organization in planning for future waste management needs. This plan very thoroughly provides a path forward for waste reduction and facility management in the region.

We look forward to see how, in conjunction with Hazelton's own waste reduction efforts, implementing the Solid Waste Management Plan can make the Upper Skeena a greener place to live.

Please feel free to contact Lina Gasser, Chief Administrative Officer for the Village of Hazelton at 250-842-5991 or email lgasser@hazelton.ca, if you have any questions.

Sincerely,

A handwritten signature in black ink, appearing to read 'Dennis Sterritt', with a long horizontal line extending to the right.

Dennis Sterritt
Mayor



October 10, 2021

Regional District of Kitimat Stikine
Suite 300 - 4545 Lazelle Avenue
Terrace, BC V8G 4E1

To Whom it May Concern:

Re: Proposed Solid Waster Management Plan

On behalf of the District of New Hazelton, I am pleased to write this letter of support for the proposed Solid Waste Management Plan for the Regional District of Kitimat Stikine.

The District understands the importance of setting direction for the future waste management needs within the Regional District. This Plan was developed in consultation with the Public and Technical Advisory Committee (PTAC), staff and consultants, as well as extensive public engagement. It will provide a solid path on which to move forward. The District is appreciative of the opportunity to participate in the PTAC committee in an effort to assist with the creation of this Plan. We look forward to continued collaboration with all of our local government partners and communities on solid waste initiatives as the RDKS moves forward.

If you have any further questions or concerns, please do not hesitate to contact our Chief Administrative Officer, Wendy Hunt.

Sincerely,

Gail Lowry
Mayor



DISTRICT OF STEWART

Canada's Most Northerly Ice-Free Port

October 6, 2021

Ms. Erin Blaney, BSc.
Solid Waste Manager
Regional District of Kitimat Stikine
Suite 300 – 4545 Lazelle Avenue
Terrace BC V8G 4E1

Dear Ms. Blaney,

RE: Solid Waste Management Plan

At the Regular Council meeting of September 27, 2021, Council considered the Proposed Solid Waste Management Plan for the Regional District of Kitimat-Stikine and made a resolution to support this plan.

The District of Stewart understands the importance of forethought and organization in setting the direction for future waste management needs. This plan very thoroughly provides a path forward for waste reduction and facility management in the region.

We look forward to seeing how – in conjunction with Stewart's own waste reduction efforts – implementing the Solid Waste Management Plan can improve operational efficiency; thereby creating a greener environment.

On behalf of the District of Stewart, I am pleased to provide this letter of support, and welcome you to contact Tammy McKeown, Chief Administrative Officer, if you would like to discuss this further.

Sincerely,



Gina McKay
Mayor



September 21, 2021

Regional District of Kitimat Stikine (RDKS)
300 4545 Lazelle Ave
Terrace BC V8G 4E1

Attention: RDKS Board of Directors

Re: Dease Lake Landfill and the Solid Waste Management Plan

The landfill in Dease Lake has been operated by the Ministry of Transportation and Infrastructure (MoTI) since 1979 as there was no local government with the capacity to oversee this type of work at the time and MoTI has ensured this necessary work was undertaken. Our road and bridge maintenance contractor operates the landfill under a local area specification (created solely for the purpose of as landfill operation is not typical for highway maintenance contractors, nor does it seem to be the best fit).

In 2017, MoTI implemented a recycling program at the landfill that successfully diverts waste from the landfill to a recycling facility in Terrace. Even with the success of the program, the landfill is nearing capacity. When the current Dease Lake landfill can no longer be used as a solid waste disposal facility, MoTI will retain all environmental liability at the site and complete the required closure, and long term monitoring of the site.

The Ministry is in support of the recommendations in the RDKS's Solid Waste Management Plan to work towards the Regional District taking over the operational responsibilities for solid waste in the Dease Lake Area. As a first step, MoTI is committing up to \$20,000 to complete a feasibility study for solid waste management in the Dease Lake area.

**Ministry of Transportation and
Infrastructure
Bulkley Stikine District**

Mailing Address:

Bag 5000
Smithers BC, V0J 2N0

Telephone: 250-847-7403
Facsimile: 250-847-7219

We look forward to continuing to work with the RDKS for the feasibility study and to ensure solid waste management in the Dease Lake area is undertaken by the RDKS.

Yours truly,



Rena Gibson
District Manager, Transportation
Bulkley Stikine District
Ministry of Transportation and Infrastructure

cc: Nicki Veikle
Erin Blaney
Lauren Bell
Rosemary Barnewall

RDKS Environmental Coordinator
RDKS Solid Waste Manager
MoTI Operations Manager
MoTI Program Manager

KITSUMKALUM

INDIAN BAND
AN ORIGINAL TRIBE OF THE TSIMSHIAN NATION
P.O. BOX 544, TERRACE, BC
CANADA V8G 4B5

TEL: (250) 635-5100
FAX: (250) 635-4622
Web: www.kitsumkalum.com

Project Name:

New RDKS Solid Waste Management Plan

FN Consultation ID:

KITSUM-584

Consulting Org Contact:

Nicki Veikle

Consulting Organization:

[Regional District of Kitimat-Stikine](#)

Date Received:

Monday, August 23, 2021

Regional District of Kitimat-Stikine

Dear: Nicki Veikle

Re: Referral Package KITSUM-584

Thank you for sending the approved waste management plan for the RDKS.

Kitsumkalum has reviewed the RDKS waste management plan and does not have any concerns with the plan proceeding at this time. Kitsumkalum would like to remind the RDKS that in the plan, Kitsumkalum is referred to as "Stakeholder".

Kitsumkalum is more than a stakeholder on the land. Kitsumkalum holds Title and Rights on over RDKS areas. This needs to be recognized and the language coming from the RDKS needs to be updated.

We would appreciate if this change could be made prior to further distribution of the waste management plan.

We look forward to discussing the above statements with you. If you have any questions in the meantime, please contact our referrals team directly at projects@kitsumkalum.com

Sincerely,

Quinton Ball
Environment, Lands and Referrals,
projects@kitsumkalum.bc.com

***Appendix 47 – Proposed Revisions to the Solid Waste Management Plan
(September 2021)***



MORRISON HERSHFIELD

September 17, 2021

Nicki Veikle, A.Sc.T.
Environmental Coordinator
300-4545 Lazelle Avenue
Terrace, BC, V8G 4E1
Email: nveikle@rdks.bc.ca

Dear Ms. Veikle:

Re: Proposed revisions to the Solid Waste Management Plan

Under the Environmental Management Act, regional districts are required to have a solid waste management plan (SWMP or Plan), which must be developed following the solid waste management planning guidelines provided by the Ministry of Environment and Climate Change Strategy (the Ministry) for content and process.

Morrison Hershfield (MH) has supported the Regional District of Kitimat Stikine (RDKS) in the development of a new SWMP. The Public Technical Advisory Committee (PTAC) was involved in exploring options and determining the content of the Draft SWMP, which was approved by the Board for public consultation in late 2020. The Draft Plan was made available to the public in early February 2021 and the public had the opportunity to attend several virtual open houses and to respond to a survey about the proposed strategies and initiatives presented in the Draft Plan.

PTAC members can refer to MH's memo "2021 SWMP Survey Results and RDKS Response, February 2, 2021 – March 13, 2021", which contains information about the survey and responses, as well as the RDKS responses to public feedback received through the survey.

This letter presents:

- Revisions and additions made to the Draft SWMP to address public consultation feedback
- Smaller changes to the Plan that will improve document accuracy and readability
- The remaining steps to finalize the SWMP

PROPOSED REVISIONS TO THE SWMP BASED ON PUBLIC CONSULTATION

The majority of proposed strategies were supported by the public. Table 1 summarizes which proposed strategies received public consultation feedback and how the feedback was taken into consideration when finalizing the Plan.

Table 1 Proposed revisions to the SWMP

Level of support	Changes requested	Revised wording for inclusion in the SWMP
STRATEGY 7. Support reuse through share sheds and/or reuse stores		
<p>Two of the ten most common themes of comments related to this strategy. There is large public support for more reuse options for C&D waste, used furniture, etc., through a Re-Use-It Store, Re-Build-It Store or equivalent (4% of survey comments). There is also large support for more reuse options at landfills/transfer stations and/or allowing landfill salvaging (6.5% of comments).</p>	<p>Feedback received largely supports this strategy. Scavenging will remain prohibited from the active landfill face, as per the requirements set by the BC Landfill Criteria.</p> <p>Due to strong community interest in this strategy, the RDKS proposes to increase the annual RDKS staffing hours from 100 to 200 hours per year throughout the entire Plan duration (i.e., Years 1 to10).</p>	<p>No text revisions made.</p>
STRATEGY 10. Lobby for Improved Accessibility to EPR Programs		
<p>There is large public support for improving accessibility to recycling.</p>	<p>Accessibility should not be limited to Extended Producer Responsibility (EPR) programs. The RDKS is proposing a change to the strategy title to expand the scope beyond EPR programs. The revised wording will also make the strategy apply to non-regulated materials.</p> <p>Due to strong community interest in this strategy, The RDKS wishes to increase the annual RDKS staffing hours from 40 to 100 hours per year throughout Years 1 to 5.</p>	<p>Rename strategy title: STRATEGY 10. Improve Accessibility to Recycling</p>
<p>Many categories of comments related to wanting more or improved curbside recycling options.</p>	<p>The RDKS is proposing a minor change to initiative 10B (Lobby for better service levels for existing EPR materials in rural areas) to emphasize its role to lobby for more stewardship support (e.g., accessibility and funding) to the communities in the region.</p>	<p>Reword initiative 10B. to: "Lobby for increase stewardship support in member municipalities and electoral areas."</p>

Level of support	Changes requested	Revised wording for inclusion in the SWMP
<p>4.6% of the survey comments related to interest in "one-stop-drop" location for recyclables.</p>	<p>This initiative is not currently addressed by the SWMP. The RDKS is proposing to include an initiative (10C) to assess the feasibility of this type of depot at suitable locations.</p> <p>A budget increase of \$15,000 is proposed for consulting support in Year 3 for a feasibility assessment to determine the viability of one-stop-drop recycling in select areas within the region.</p>	<p>Add initiative: "10C. Assess the feasibility of offering one-stop-drop depots at suitable locations."</p>
<p>1.3% of survey comments related to ensuring waste segregation by the institutional, commercial and industrial (ICI) sector and multi-family residences.</p>	<p>The RDKS is proposing to include an initiative (10D) to improve accessibility to recycling. The new initiative aims to ensure that sufficient recycling space are made mandatory for all new multi-family and ICI building designs. The initiative will require collaboration with member municipalities for implementation through bylaws and building permits.</p>	<p>Add initiative: "10D. Support member municipalities in bylaw updates that require new multi-family and ICI building designs to include designated waste management space."</p>
<p>STRATEGY 13. Support ICI and Encourage Waste Diversion</p>		
<p>There is large public support for Strategy 13. Several categories of comments related to ICI waste diversion.</p>	<p>The RDKS is proposing to combine 13A and 13B into one initiative, as there is significant overlap. Current wording:</p> <p>13A. Support private collectors with an updated hauler information package to encourage better ICI recycling amongst its customers.</p> <p>13B. Promote available waste diversion opportunities and provide or support diversion education for commercial generators.</p>	<p>Reword 13A and 13B as:</p> <p>"13A. Promote available waste diversion opportunities and provide or support diversion education for commercial waste generators and haulers."</p>

Level of support	Changes requested	Revised wording for inclusion in the SWMP
<p>1.7% of survey comments related to incentivizing waste diversion (recycling and composting) for ICI. The feedback supports strategy 13.</p>	<p>The RDKS is proposing to include an initiative (13D) to establish a recognition program and/or incentives for ICI users who demonstrate excellence in waste diversion and/or green procurement.</p> <p>This may involve developing a preferred supplier list, developing an award recognition system, showcasing local “green” businesses through advertisements or other promotion, or potentially providing monetary or other incentives (i.e., through tipping fee reductions).</p> <p>\$8,000 was included in Year 1 for the for the launch of a recognition program and \$2,000 every subsequent year.</p> <p>To support implementation of this new initiative, the RDKS proposes to increase the annual RDKS staffing hours from 50 to 200 hours per year throughout Years 1 to 10.</p>	<p>Add initiative “13D. Establish a recognition program and/or incentives for ICI users who demonstrate excellence in waste diversion and/or green procurement.”</p>
<p>STRATEGY 15. Improve Drop-off Options for Household Hazardous Waste where Gaps Exist</p>		
<p>1% of survey comments supported roundup events or curbside collection of Household Hazardous Waste (HHW).</p>	<p>Based on previous experience, curbside collection of HHW was deemed cost prohibited and was not included in the SWMP. However, the RDKS is proposing to reevaluate this and include an initiative (15D) to review feasibility of developing a HHW curbside collection program. \$15,000 has been budgeted for reviewing the feasibility of a HHW curbside collection program in Year 6.</p>	<p>Add initiative: “15D. Review the feasibility of collecting HHW through existing curbside collection programs.”</p>
<p>STRATEGY 18. Support communities to introduce curbside collection</p>		
<p>10% of survey comments related to curbside collection issues. This relates closely with STRATEGY 10.</p>	<p>No significant change is proposed. The RDKS has included wording in the context of the strategy that the RDKS will work closely with member municipalities to identify opportunities to harmonize curbside collection services across service areas.</p> <p>A minor change to the strategy name is suggested to also include communities with existing curbside collection programs.</p>	<p>Rename strategy title: “STRATEGY 18. Support communities to introduce or enhance curbside collection”</p>



Level of support	Changes requested	Revised wording for inclusion in the SWMP
STRATEGY 28. Assist in the Prevention of Illegal Dumping		
<p>4.7% of survey comments related to preventing Illegal dumping by improving public access to solid waste management facilities.</p>	<p>Illegal dumping is an important issue for many residents. The overall strategy was given a long-term priority with implementation in Years 6 to 10. The RDKS will now prioritize this this strategy throughout the entire Plan implementation timeframe from Years 1 to 10.</p> <p>The SWMP is underpinned by a user-pay approach (refer to the 4th Guiding Principle). Free or discounted disposal was not originally explored as an option, as the RDKS remains committed to maintaining a partial user-pay model. However, based on survey feedback, the RDKS is proposing to include an initiative (28C) to pilot periodic free disposal events for residential waste in the Terrace Service Area (i.e., limited free bags tags or scheduled free days) and implement annually if feasible. This is not applicable in the Hazelton and Highway 37 North Service Area, as there are currently no tipping fees. The purpose of the pilot would be to determine whether limited free disposal would assist in the prevention of illegal dumping. This strategy may also help improve public perception and social credibility of the RDKS in relation to the management of solid waste.</p> <p>The RDKS is proposing to include the following implementation costs: \$12,000 in Year 1 for distribution of two free bag tags to homes in the greater Terrace area curbside collection program; and \$22,000 annually in Years 2 and 3 for distribution of two free bag tags and one free disposal weekend at the Thornhill Transfer Station (assuming \$10,000 in waived tipping fee revenue).</p>	<p>Add initiative: “28C. Pilot free disposal events for residential waste and implement if feasible.”</p>



PROPOSED CHANGES TO THE SWMP TO IMPROVE READABILITY AND CLARITY

In revisiting the Draft SWMP, RDKS and MH staff have noted that some minor changes are needed to the SWMP prior to finalization. Appendix 1 presents a summary of the proposed changes. None of these changes emerged through consultation feedback; the changes are minor and relate to improving the Plan's readability and clarity.

NEXT STEPS

The RDKS is asking PTAC members to review the proposed revisions and provide feedback before or during the PTAC meeting on September 28 at 10:00 am.

Once the Final SWMP is approved by PTAC, the document will be presented to the Board on October 22 for approval of submission to the Ministry.

Sincerely,



Veronica Bartlett, M.Sc.
Solid Waste Planner, Environment
Morrison Hershfield Limited

Appendix 2. Minor Changes to the SWMP

Proposed Change	Section #
Change the terminology from “industrial waste” to “waste from industry” to better align with the updated RDKS bylaw.	Throughout the Plan
Removal of the terminology from proposed to new strategies as these are now finalized for Board approval and Ministry review.	Throughout the Plan
Include Klemtu/Kitasoo when listing which areas the RDKS does not provide waste services in.	2.2 Plan Area
Correct 2017 disposal data for Iskut Landfill, which had been incorrectly estimated, and include the region’s complete 2020 disposal data.	4.1 Waste Disposal, Composition, and Diversion
Remove initiative 29A: Assess the costs and benefits of including Kitimat in the RDKS Greater Terrace curbside collection program. Develop cost sharing between Kitimat and RDKS to create a system fair to all. A curbside collection program has already been implemented by the District of Kitimat.	5.6 Waste Management at New Facilities or in New Service Areas
Revise initiative 29B to: “Assess the costs and benefits of including Kitimat in the RDKS Terrace Service Area, which may include support for development of a transfer station in Kitimat and/or hauling waste to Forceman Ridge WMF. Develop options for cost sharing and responsibilities related to a future transfer station.” A budget decrease is proposed as Kitimat is paying for the majority of the feasibility study of joining the service area or paying as an out-of-service-area user. Only \$5,000 is required to support initiative 29B.	5.6 Waste Management at New Facilities or in New Service Areas
Update Strategy 34 to reflect the current surcharges of 50% in Terrace Service Area and 25% in the Hazelton and Highway 37 North Service Area.	5.7 Cost Recovery and Financial Sustainability
Omit initiative 33B to: “Perform a cost-benefit analysis of baling and/or compacting recyclable materials hauled from the Hazelton and Highway 37 North Service Area.” This initiative is no longer relevant as the Kitwanga transfer station receives Recycle BC funding.	5.7 Cost Recovery and Financial Sustainability
Update the estimated resource needs resulting from the new strategies.	6.1 Staffing Implications
Include the Klemtu transfer station in Schedule B.	Schedule B: List of Other Waste Management Facilities
Include the Klemtu closed landfill in Schedule C.	Schedule C: List of Closed Disposal Sites
Include the estimated cost of \$45,000 for a third party 5-year effectiveness review in Schedule E.	Schedule E: Expenditures for Plan Implementation