

REGIONAL DISTRICT OF EAST KOOTENAY

Solid Waste Management Plan

January 2020



PREPARED FOR: REGIONAL DISTRICT OF EAST KOOTENAY

PREPARED BY: SPERLING HANSEN ASSOCIATES

PRJ17050



SPERLING
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ASSOCIATES



Regional District of
East Kootenay

- Landfill Engineering
- Solid Waste Planning
- Environmental Monitoring
- Landfill Fire Control

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-

Mr. Kevin Paterson
Manager of Environmental Services
Regional District of East Kootenay
19 - 24th Avenue South
Cranbrook B.C.
V1C 3H8

January 23rd 2020

RE: Regional District of East Kootenay Solid Waste Management Plan

Dear Mr. Paterson,

This document presents a Solid Waste Management Plan for the Regional District of East Kootenay (RDEK) which has been completed by Sperling Hansen Associates (SHA). This plan has been completed in accordance with the Ministry of Environment's *A guide to Solid Waste Management Planning*.

The report is organized into the following six sections: Introduction, Background, Actions and Strategies, Finance and Administration, Plan Implementation, and Plan Schedules.

The Solid Waste Management Plan has been developed based on input received from the Regional District's Advisory Committee, public engagement opportunities, RDEK staff and Board members, and work carried out by SHA between July 2017 and December 2019.

We trust that this report covers the requirements for your Solid Waste Management Plan, and that the strategies and actions outlined in this plan will serve as a guide to solid waste planning in the RDEK for the next 5 to 10 years.

It has been a pleasure to work with the RDEK on this project. Please do not hesitate to contact us should you have any questions about the report.

Yours truly,
SPERLING HANSEN ASSOCIATES

Dr. Tony Sperling, P.Eng
President & Chief Engineer

Mairi Dalglish, A.Ag
Environmental Technologist

GLOSSARY

Disposal	Landfilling
Diversio	Activities that divert waste materials away from disposal as garbage to alternatives such as recycling or composting. Does not include combustion of garbage to produce energy.
DIY	Do It Yourself
DLC	Demolition, landclearing and construction
EPR	Extended producer responsibility
Generation	The sum of all materials discarded that require management as solid waste, including garbage, recycling and composting. Does not include organic waste composted at home.
GHG	Greenhouse gas
HHW	Household hazardous waste
ICI	Industrial, commercial and institutional (does not include heavy industry)
RecycleBC	Recycle BC (residential recycling product stewardship organization)
ENV	BC Ministry of Environment and Climate Change Strategy
MRF	Material recycling facility (recycling processor)
ODS	Ozone depleting substance (e.g. CFCs)
Organic Waste	Kitchen scraps, food waste, yard and garden waste
Plan	Regional Solid Waste Management Plan
PPP	Printed Paper and Packaging
RDEK	Regional District of East Kootenay
SWMP	Solid Waste Management Plan

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EXECUTIVE SUMMARY

This document represents the most recent amendment of the Regional District of East Kootenay's (RDEK) Solid Waste Management Plan (SWMP) and once approved by the British Columbia Ministry of Environment and Climate Change Strategy (ENV) (along with any approval conditions), becomes a regulatory document for solid waste management and serves to guide solid waste management related activities and policy development in the RDEK.

The plan applies to the geographic area of the RDEK which includes the Columbia Valley subregion, Central Subregion, and Elk Valley Subregion. The guiding principles for the plan update are based on those established by the Province in the Guide to Solid Waste Management Planning (September 2016) and include the following:

1. Aspire to promote zero waste approaches and support a circular economy
2. Promote the first 3 Rs (Reduce, Reuse and Recycle)
3. Maximize 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 in 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. Structure the system so that private and public solid waste facilities compete on a level playing field.

The permanent population of the RDEK (as per the 2016 Census) is 60,439. It is estimated that approximately 73% of the population resides in urban environments (municipalities or incorporated communities), 26% resides in rural environments and 1% resides in First Nations communities. The seasonal population is an important factor for waste generation in the RDEK. The RDEK has indicated that approximately 14,500 seasonal residents contribute to waste generation in the region's resort communities, raising the equivalent population in the RDEK to 74,975.

A waste characterization study was completed for the region (by SHA) in July 2018 as part of this plan update. Figure A below shows the overall waste composition for the RDEK. The results of the study indicate that the largest component of the waste stream is Compostable Organics (29%), followed by Plastics (14%), Paper and Paperboard (13%), Construction and Demolition (11%), Non-compostable Organics (8%), Textiles (5%), Household Hygiene (5%), Metals (4%), Glass (3%), Household Hazardous Waste (2%), Electronics (2%), Bulky Waste (2%) and Fines (2%).

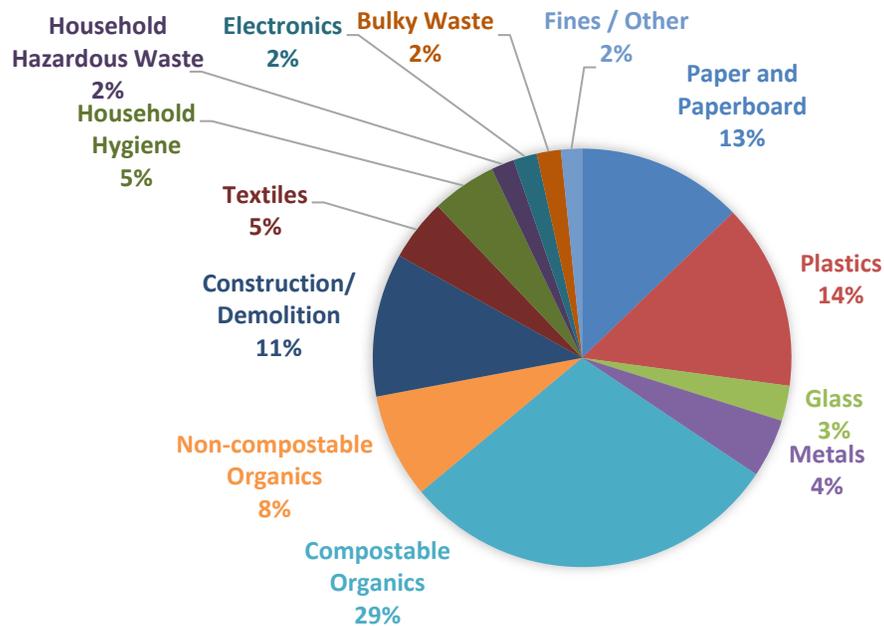


Figure A: Overall Waste Composition in RDEK

The current solid waste management system in the RDEK consists of large attended transfer stations in most major communities and small, unattended rural transfer stations throughout the Columbia Valley and Central subregions. Many municipalities also provide curbside garbage collection to residents. Residential and commercial recycling is managed mostly through the region’s Yellow-Bin program. Recently, the RDEK has joined RecycleBC and has begun developing recycling depots at larger transfers stations. Opportunities for enhanced diversion have been identified at rural transfer stations, which do not provide many opportunities for diverting Extended Producer Responsibility (EPR) items, yard and garden wastes or scrap metal.

The ENV measures waste management system performance in terms of disposal rate (i.e. how much waste is landfilled each year on a per capita basis). In 2017, the waste disposal rate in the RDEK was determined to be 585 kg / person; which is higher than the Provincial average of 506 kg / person. The Province has set a goal of reducing the provincial waste disposal rate to 350 kg/person by 2020.

A number of goals and strategies were discussed throughout the planning process. The action items outlined in this plan are divided into the following categories:

- Strategies to reduce waste and increase recycling;
- Strategies to divert organic waste from the landfill;
- Strategies that enhance residual waste management services in the RDEK;
- Policies and Bylaws that support SWMP action items;
- Promotion and Education programs to support waste management initiatives.

Implementation of the strategies outlined in this report over the plan’s 10-year timeframe is expected to reduce the RDEK’s disposal rate from 585 kg/person in 2017 to: 480 kg/person/year by 2025, and 400 kg/person/year by 2030.

In total, the new proposed expenditures over the 10-year plan are estimated to be \$13,236,000 (including capital), with an average additional expenditure of \$ 1,323,650 per year. The majority of these expenditures are for estimated operating costs for the proposed composting facilities, as well as estimated operating costs for controlled/attended transfer stations. Capital costs of approximately \$3,600,000 are proposed for transfer station upgrades and \$600,000 for composting facility infrastructure.

Also included are staffing costs for the estimated additional effort to administer the strategies outlined in this plan. As shown in Table 3-1, the average additional annual staffing requirement is estimated to be 1 Full Time Equivalent (FTE) or \$90,000 per year.

Funding to implement the actions identified in this plan is expected to continue to be provided by residents and businesses through municipal taxes and user-fees.

Below is a breakdown of the proposed plan expenditures over the next 10-years (presented in 2019-dollars):

Proposed Plan Expenditures (Approx.)	10 YR Costs
Total New Costs for Waste Reduction & Recycling	\$ 57,500
Total New Costs for Organics Diversion	\$ 4,244,000
Total New Costs for Columbia Valley TS Optimization	\$ 4,140,000
Total New Costs for Central TS Optimization	\$ 3,500,000
Total New Costs for Other Residual Waste Management	\$ 155,000
Total New Costs for Policies and Bylaws	\$ 165,000
Total New Costs for Promotion and Education	\$ 60,000
Total New Costs for Plan Monitoring and Measurement	\$ 60,000
New Staffing Costs	<u>\$ 900,000</u>
	\$13,281,500

1. INTRODUCTION

In British Columbia (BC), regional districts develop solid waste management plans (SWMP) under the provincial *Environmental Management Act* (EMA) that provide long term visions of how regional districts manage their municipal solid waste (MSW) in accordance with the pollution prevention (5 R) hierarchy. MSW is defined in BC as waste generated from the following sources: residential, commercial, institutional, light industrial (office), demolition, land clearing or construction sources, plus any MSW deemed by the Ministry of Environment & Climate Change (ENV) to be included (e.g. treated biomedical, pet crematorium waste). As required by the EMA, this plan will be renewed on a 10-year cycle to ensure that it reflects the current needs of the Regional District of East Kootenay (RDEK) as well as current market conditions, technologies and regulations.

This document represents the most recent amendment of the RDEK's SWMP and once approved by the ENV (along with any approval conditions), becomes a regulatory document for solid waste management and serves to guide solid waste management related activities and policy development in the RDEK. In conjunction with regulations and operational certificates (OC) that may apply, this plan regulates the operation of sites and facilities that make up the region's waste management system. The details of the existing system are discussed in Section 2.2 of this plan.

1.1 Guiding principles

The guiding principles for the plan update are based on those established by the Province in the Guide to Solid Waste Management Planning (September 2016), except for revisions made by the SWMP Advisory Committee (AC) during the December 2018 Meeting.

The principles guiding the development and implementation of this plan (and a brief description of each) are shown in Table 1-1 below.

**Table 1-1: British Columbia’s Guiding Principles
(from: A Guide to Solid Waste Management Planning)**

1.	Aspire to promote zero waste approaches and support a circular economy
	<i>Encourage 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.</i>
2.	Promote the first 3 Rs (Reduce, Reuse and Recycle)
	<i>Elevate the importance of waste prevention by prioritizing programming and provision of services for the first 3 Rs in the 5 R hierarchy. Implement programs and services that consider provincial and regional targets for waste reduction and environmental protection. Encourage investments in technology and infrastructure and ensure they occur as high up on the hierarchy as possible.</i>
3.	Maximize use of waste materials and manage residuals appropriately
	<i>Technology, best practices, and infrastructure investments should continue to develop to recover any remaining materials and energy from the waste stream and to manage residuals for disposal.</i>
4.	Support polluter and user-pay approaches and manage incentives to maximize behaviour outcomes
	<i>Producer and user responsibility for the management of products can be supported through the provision of market-based incentives, disposal restrictions on industry-stewarded products, zoning to support collection facilities, and support for reuse and remanufacturing businesses. Education and behavior change strategies aimed at consumers and businesses will help foster further waste reduction, reuse and recycling.</i>
5.	Prevent organics and recyclables from going in the garbage wherever practical
	<i>Maintaining a system to prevent organics and recyclables from going into the garbage will provide clean feedstock of greater economic value as well as a potential end product use to the recycling industry, while reinforcing behavior to reduce, reuse and recycle.</i>
6.	Collaborate with other regional districts wherever practical
	<i>Collaboration on many aspects of solid waste management will support the most efficient and effective overall municipal solid waste system.</i>
7.	Develop collaborative partnerships with interested parties to achieve regional targets set in plans
	<i>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.</i>
8.	Structure the system so that private and public solid waste facilities compete on a level playing field.
	<i>Solid waste management facilities within a given region should be subject to similar requirements. A consistent set of criteria should be used to evaluate the waste management solutions proposed by private sector and by a regional district or municipality.</i>

1.2 Pollution prevention hierarchy and targets

This plan adopts the 5 R pollution prevention hierarchy (see Figure 1-1). As per the hierarchy, waste management is prioritized as follows: Reduce, Reuse, Recycle, Recovery and Residuals Management.

Strategies to address each tier in the hierarchy are laid out in Section 3, and are divided into the following categories: Waste Reduction and Recycling; Organics Diversion; Residual Waste Management; Policies and Bylaws; and Promotion and Education.



Figure 1-1: ENV Pollution Prevention Hierarchy

Implementation of these strategies over the plan’s 10-year timeframe is expected to contribute to the provincial disposal rate target of 350 kg per person, and reduce the RDEK’s MSW disposal rate from 585 kg/person in 2017 to: 480 kg/person/year by 2025, and 400 kg/person/year by 2030.

1.3 Plan history

The RDEK’s first SWMP was prepared and submitted to the Ministry for approval in 1996; a series of updates to the plan were completed to identify preferred landfill locations in the Elk Valley Subregion and the Central Subregion and the updated plan was completed in 2003.

The goals of the 2003 SWMP included:

- Minimizing waste generation and reducing disposal;

- Managing waste in accordance with the 5-R Hierarchy;
- Striving for annual decreases in waste generation;
- Introducing a “user pay” system; and,
- Managing the system in a way that is economically viable, efficient, and environmentally sound.

A number of policies were outlined to support these goals, as well as actions for implementing the plan. The actions and their implementation status are outlined in Detail in the Stage 1 Report (included in Schedule A).

In general, the RDEK has successfully implemented most of the action items outlined in the 2003 SWMP, such as:

- Providing waste reduction education to all age groups;
- Implementing waste reduction techniques in daily operations;
- Chipping and composting wood waste;
- Developing composting facilities at landfills and encouraging community groups to use backyard composting;
- Designating areas at residual facilities to enable separation of reusable and recyclable materials;
- Continuing to offer recycling drop boxes and consider curbside recycling collection;
- Providing recycling containers to businesses and institutions and arrange for regular pick-up of recyclables;
- Providing a directory of businesses and organizations that provide recycling services;
- The City of Fernie, City of Cranbrook and District of Elkford landfills have been closed.

The current planning process was initiated in 2017. Participants in the planning process included:

- RDEK personnel and Sperling Hansen Associates, acting as the planning team, coordinated the planning process, participated in the development of technical reports, and consulted with the public and stakeholders.
- The RDEK’s Board of Directors (Board) was provided updates throughout the SWMP process.
- The Advisory Committee (AC) consisted of representatives from the public and stakeholders who reviewed information associated with the planning process, and provided input to personnel and the Board. The RDEK also appointed three board members (one from each subregion) to sit on the AC and review all planning documents and provide input throughout the process.
- Interested parties (including the public): were kept informed during the plan development and participated in consultation opportunities to provide input to the plan team and Board.

The plan update was completed in three phases, as indicated in Figure 1-2 below.

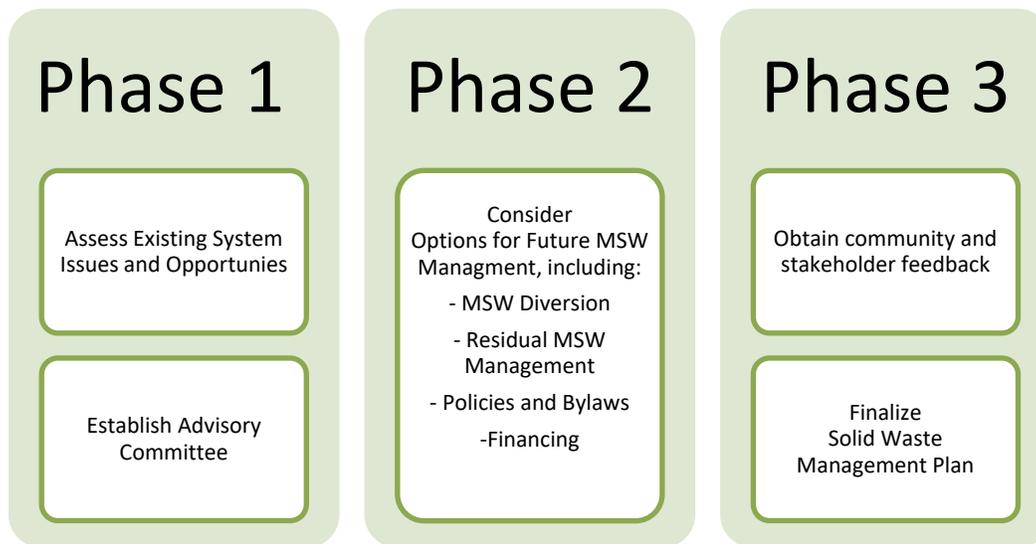


Figure 1-2: Planning Process

As shown in Figure 1-2, Phase 1 of the plan consisted of a review of the existing system (in 2017), and completion of a Waste Characterization study (in 2018). In 2017, a SWMP webpage was developed and the communication and consultation program was initiated. The AC was formed over the summer of 2018, with the first meeting held in the Fall 2018.

Following a gap analysis and a review of best management practices, a short-list of preferred options was developed to address future solid waste management needs within the RDEK. Phase 2 consisted of conducting a feasibility analysis of each of these options that included consideration of, for example: risks, community suitability, community capacity and financial implications. Consultation and communication were carried out throughout this stage, mainly through community surveys, newsletters and establishment of the RDEK’s engagement platform (engage.rdek.bc.ca).

Phase 3 consisted of a public outreach campaign on the Draft SWMP. The consultation phase was completed by RDEK staff between July 12th and November 7th 2019 and is summarized in the Consultation Report which can be found in Schedule A of this report.

In support of Phases 1 to 3, several technical reports were prepared by SHA as part of this plan update, to assist the SWMP AC with their discussions and workshops, as well as provide RDEK personnel and Board members with information. These documents are listed below and are available on the RDEK’s engagement platform and included in Schedule A of this report:

- Stage 1 Characterization of the System Report
- Waste Reduction and Diversion Opportunities
- Optimizing the RDEK Solid Waste System (Residual Waste Management and Transfer Station Review)
- Policies & Bylaws for Enhancing Solid Waste Management in the RDEK

- Financial Implications of Proposed Solid Waste Management System Changes

1.4 Key Drivers

The key drivers for developing this update were identified by the RDEK and include examining ways to:

- Explore opportunities to increase service at small transfer stations (through expanded diversion programs)
- Consider providing supervision at unattended transfer stations to encourage diversion of recyclable materials
- Explore opportunities to provide incentive for waste reduction
- Explore opportunities to increase organic waste diversion
- Explore opportunities to increase the efficiency of the waste management system
- Explore the addition of a full-service transfer station in the Columbia Valley
- Maintain Financial Sustainability

2. BACKGROUND

2.1 Plan area

The plan applies to the geographic area of the RDEK, as shown in Figure 2-1. The RDEK is divided into three subregions: Columbia Valley, Central, and Elk Valley. The sub regions were established in 1993, through adoption of a local service area bylaw. Each of the subregions are responsible for implementing MSW programs within their areas.

The Columbia Valley subregion consists of Electoral Areas F & G and the municipalities of Radium Hot Springs, Invermere, and Canal Flats. The Central subregion consists of Electoral Areas B, C, and E and the municipalities of Kimberley and Cranbrook. The Elk Valley subregion consists of Electoral Area A and the City of Fernie, District of Elkford and District of Sparwood. The Region is also home to numerous unincorporated communities and First Nations communities.

2.2 Population

According to the 2016 Census data, the RDEK's total population is 60,439. Approximately 73% of the population resides in urban environments (municipalities or incorporated communities), 26% resides in rural environments and 1% resides in First Nations communities. Population statistics from the past 15 years are shown in Table 2-1 below.

An important factor for waste generation in the East Kootenay's is the seasonal population. Throughout the year, seasonal residents travel to the RDEK to take part in the regions' recreational activities. To assist with accurate MSW disposal reporting, the RDEK has estimated the seasonal population as shown in Table 2-2. This estimate has been developed based on the number of seasonal dwellings in resort communities such as Fernie, Invermere, Radium etc. As shown in Table 2-2, it is estimated that there are approximately 14,500 seasonal residents that contribute to waste generation in the region. This raises the

equivalent permanent population for the region to 74,975 people (from 60,439). The greatest influence of seasonal residents is seen in the Columbia Valley Subregion, with over 7,600 seasonal residents; the Central and Elk Valley subregions see approximately 3,300 - 3,600 seasonal residents each year respectively.

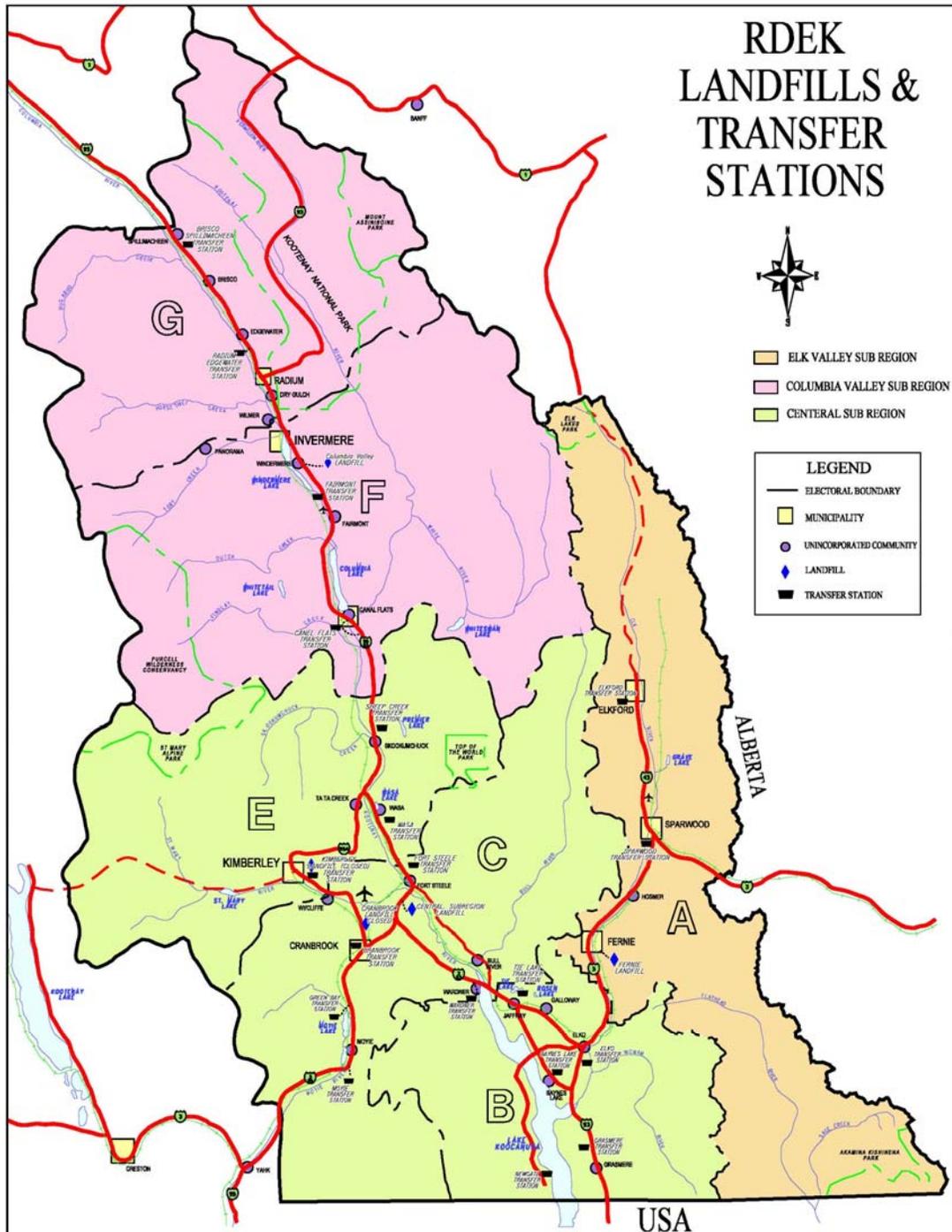


Figure 2-1: RDEK Landfills and Transfer Stations

Table 2-1: RDEK Census Population

Area	Urban, Rural, Indian Reserve	Population (Census)				
		2001	2006	2011	2016	% total
Columbia Valley Subregion						
Canal Flats	U	754	700	715	668	1%
Invermere	U	2,858	3,002	2,955	3,391	6%
Radium	U	583	735	777	776	1%
Electoral Areas F & G	R	4,237	4,502	4,065	4,188	7%
Columbia Lake IR	IR	165	153	131	140	0%
Shuswap IR	IR	176	169	293	319	1%
Total		8,773	9,261	8,936	9,482	16%
Central Subregion						
Cranbrook	U	18,476	18,267	19,319	20,047	33%
Kimberley	U	6,484	6,139	6,652	7,425	12%
Electoral Areas C & E	R	7,618	7,597	7,335	7,789	13%
Cassiamayooks IR	IR	5	5	5	-	0%
St. Mary IR	IR	166	159	104	170	0%
Total		32,749	32,167	33,415	35,431	59%
Elk Valley						
Fernie	U	4,611	4,217	4,448	5,249	9%
Sparwood	U	3,812	3,618	3,667	3,784	6%
Elkford	U	2,589	2,463	2,523	2,499	4%
Electoral Areas A & B	R	3,675	3,692	3,644	3,919	6%
Tobacco Plains IR	IR	82	67	57	75	0%
Total		14,769	14,057	14,339	15,526	26%
RDEK Total		56,291	55,485	56,690	60,439	
Total Urban					43,839	73%
Total Rural					15,896	26%
Total First Nations					704	1%

Table 2-2: RDEK Population including Seasonal Population Estimates

Area	Population (2016)	% Total
Population Adjusted with Seasonal Population Estimates		
Columbia Valley Subregion		
Permanent Residents (2016 Census)	9,482	13%
Seasonal Population Estimate	7,605	10%
Total Combined Columbia Valley Subregion	17,087	23%
Central Subregion		
Permanent Residents (2016 Census)	35,431	47%
Seasonal Population Estimate	3,320	4%
Total Combined Central Subregion	38,751	52%
Elk Valley Subregion		
Permanent Residents (2016 Census)	15,526	21%
Seasonal Population Estimate	3,611	5%
Total Combined Elk Valley	19,137	26%
RDEK Total Permanent	60,439	81%
RDEK Total Seasonal	14,536	19%
RDEK Total Combined	74,975	100%

2.3 Existing System

2.3.1 Recycling and Diversion

Mixed recycling has historically been collected through the RDEK's "Yellow Bin" system. The program consists of over 800 yellow recycling bins strategically placed throughout the region for single-stream recyclables including paper, cardboard, tin/aluminum cans, grocery bags, and plastics number 1 through 6. Separate bins are provided for "glass only." The yellow bins are also located at RDEK transfer stations and landfills. The yellow bin program services both residential and ICI recycling and all bins are available for use by public and commercial users. Since reaching an agreement with Recycle BC, the RDEK is beginning to transition to provide recycling depots at their attended transfer stations for printed paper and packaging (PPP) and other stewardship agencies when deemed by the RDEK as appropriate. Recyclables from the yellow bins and the recycling depots are transported to the South Sky Recycling Center, a materials recovery facility (MRF) located in Cranbrook.

Reuse centers (share sheds) are extremely popular in the region and are located at all of the attended transfer stations and landfills. The reuse centers provide a place for residents and tourists to "drop-and-shop." Thrift stores are also located throughout the RDEK encouraging the reuse of clothing, house wares and sporting goods.

The RDEK also publishes recycling guides for each subregion which indicate the locations that items, including Extended Producer Responsibility (EPR) products, can be recycled. The Stage 1 Report summarizes the material types collected and their corresponding collection location throughout the region. Currently, the majority of EPR programs in the RDEK are situated at local retailers as well as at bottle depots. For example: lighting products can be recycled at Home Hardware in Cranbrook, Invermere, and Fernie; computers can be recycled at the Cranbrook Bottle Depot, the Invermere Bottle Depot, and the Fernie Bottle Depot; and, pharmaceuticals can be recycled at 7 pharmacy locations in Cranbrook, at 1 pharmacy in Invermere, and at 3 pharmacy locations in Fernie. More information can be found on the Recycling Council of British Columbia website.

Some EPR materials are also accepted at attended transfer stations; these materials include tires, large appliances and PPP. A year-round household hazardous waste depot was recently established at the Cranbrook transfer station.

Waste reduction is also encouraged through backyard composting. The RDEK offers a composting course in the summer. For a nominal fee of \$20/person, attendees receive a black bin composter and learn the basics of backyard composting. In addition to the course, the RDEK sells backyard composters at wholesale cost (i.e. \$55/composter) all year round.

The RDEK diverts chipped clean wood waste and some green waste from the Central Subregion Landfill and Columbia Valley Subregion Landfill for energy recovery. The material is chipped onsite and hauled to a cogeneration facility located in Skookumchuck, at the Paper Excellence mill. In addition to energy production, diverting organic materials (wood waste) from the landfill reduces greenhouse gas emissions from the landfill and saves landfill airspace. Further wood waste diversion is facilitated through the RDEK's burn permits at designated transfer stations and landfills.

2.3.2 Residual Waste System

The residual waste management system in the RDEK consists of a network of both attended/controlled transfer stations and unattended rural transfer stations. Additionally, curbside garbage collection is offered by municipalities in most large communities, such as Cranbrook, Kimberley, Fernie, Sparwood, Elkford and Invermere.

Attended transfer stations are located in most large communities, such as Kimberley, Cranbrook, Fernie, Sparwood and Elkford. These transfer stations provide diversion opportunities for yard and garden waste, clean wood, mixed recycling, scrap metal, large appliances, and reuse-centres (i.e. share sheds). Of note, Invermere and Radium (in the Columbia Valley) are the only large communities without a dedicated attended transfer station – other than the Columbia Valley Landfill located in Windermere BC.

Rural transfer stations in the RDEK offer garbage and mixed recycling services to residents; three of the transfer stations are also equipped with marshalling areas for scrap metal and wood waste. Many of the rural transfer stations are located in recreational areas, particularly in the central subregions’ “South Country” (near Lake Kookanusa). As such, seasonal users are an important consideration for these transfers stations.

Challenges with the rural transfer station system that have been identified by RDEK staff include: unauthorized MSW dumping in recycle material piles and around bins, as well as having few diversion opportunities. Due to the unattended nature of these transfer stations, bins are serviced frequently and, as such, often have not been filled to their maximum capacity; reducing efficiency and increasing unit service costs.

2.3.3 Existing facilities

The RDEK operates three landfill facilities (one in each subregion). The authorized sites or facilities are shown on Figure 2-1 and include:

- Central Subregion Landfill (buries approximately 32,000 MT of waste per year)
- Columbia Valley Subregion Landfill (buries approximately 10,500 MT of waste per year)
- Sparwood Landfill (buries approximately 600 MT of demolition waste per year)

Due to the Columbia Valley Subregion Landfill’s close proximity to residences on Windermere Loop Road, the RDEK has committed to meeting with the Windermere Loop Road residents on a semi-annual basis to share information and provide an opportunity for residents to share any concerns that they may have. The RDEK will continue to be transparent with surrounding homeowners and stakeholders regarding development plans at the landfill.

As per the 2016 British Columbia Landfill Criteria for Municipal Solid Waste (the Criteria), the status of the aforementioned existing landfills should be reviewed and evaluated for conformance with the Criteria, during a Landfill Criteria Conformance Review. The conformance should be reviewed for only those requirements applicable to a particular landfill site. If a need for upgrades is identified then the Conformance Review shall also include an Upgrading Plan and a schedule for all proposed upgrades. The Conformance Review and Upgrading Plan shall be submitted to the director during the next SWMP

review or within 5 year of the issuance of the Criteria whichever time period is shorter. As discussed in Section 3, the RDEK will complete conformance reviews in 2020-2021.

Table 2-3 lists other facilities integral to the regional waste system as well as the location of closed landfills and / or dumps previously operating in the region. The RDEK has a number of “Legacy Landfills” which were former dump sites that have now been converted to transfer stations or informally closed. The RDEK will work with staff, the ENV, and Qualified Professionals (QP) to develop effective strategies for completing closure of these sites and minimizing environmental risks and liabilities. RDEK Staff will work to prepare a priority list and schedule for evaluation of the legacy landfills, which should include reviewing the current site conditions, identifying closure requirements, and implementing closure works as necessary.

2.3.4 Future facilities

Proposed new facilities to manage the RDEK’s MSW which are contemplated in this plan include the following:

- New attended transfer station located in the Columbia Valley (such as in Invermere or Radium). The contemplated location(s) and layout for the aforementioned transfer station(s) have been detailed in SHA’s Transfer Station and Residuals Management report, included in Schedule A. Two locations have been identified as being suitable for a new transfer station: in Invermere near the Invermere Public Works yard and in Radium east of the Canfor sawmill in an area which houses the Radium wastewater treatment lagoons.
- New Centralized or Subregional Organics Waste Management Facility/Facilities. The RDEK is currently considering the construction of three composting facilities (one in each subregion), potentially in partnership with local governments, as part of the Organics Infrastructure Program. The details and location of such a facility are unknown at this time and are subject to a feasibility study, Board approval, and the outcome of the Organics Infrastructure Program funding approval.
- Upgrades or changes to existing rural transfer stations throughout the regional district to provide additional diversion opportunities.

The process for development of new sites and facilities shall include, but not be limited to:

- An appropriate procurement process;
- Ensuring that authorizations (including OCs, licences and registration under OMRR) are obtained as necessary, and that any requirements from other levels of government are also met;
- Environmental assessment, including an assessment of human health risk acceptable to the applicable health authority and public consultation, as may be required by provincial and federal regulations;
- Public consultation on new (or amended) sites or facilities that require authorization under the EMA;

- Any additional assessment as laid out in the minister’s conditions for approval of this plan.

The addition of new sites or facilities not contemplated in this plan would require an amendment to the plan. As outlined further in Section 5.5, the RDEK will consider new technologies, as they arise, in order to bring efficiencies into the plan.

2.3.5 Roles in Solid Waste Management

Organizations that contribute to the RDEK’s solid waste management system are described below:

Who	Roles in Waste Management
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 through the EMA
RDEK (Board and personnel)	<ul style="list-style-type: none"> • Develops regional SWMP plan to provide waste management in the RDEK • Through the regional SWMP and implementation instruments (including bylaws, policies and programs), works to meet MSW disposal goals and targets and ensures that each community has access to MSW management services that are environmentally sound and cost effective • Ensures that legislative and policy requirements are followed, including monitoring and reporting • Continually updates and reviews the SWMP itself through the feedback received from associated committees • Provides services including but not limited to the operation of facilities and collection systems that manage waste • Supports product stewardship programs • Strives to follow the pollution prevention hierarchy (Figure 2-1)
Municipalities (council and personnel)	<ul style="list-style-type: none"> • May provide / coordinate MSW management services and/or own and/or operate facilities in accordance with the regional SWMP • May make bylaws dealing with MSW collection and management
First Nations	<ul style="list-style-type: none"> • Participate on the regional plan monitoring committee. • May participate in regional waste management system within federal jurisdiction unless required to comply with provincial legislation regarding waste management (e.g. Treaty requirements)
Product stewardship producers and agencies	<ul style="list-style-type: none"> • Comply with applicable Ministry approved stewardship plans and RDEK regional MSW plan • Ensure reasonable and free consumer access to collection facilities • Collect / process stewarded products and packaging • Coordinate local government delivery as a service provider where applicable • Provide and / or fund education and marketing • Provide deposit refunds to consumers (where applicable) • Monitor / report on key performance indicators such as recovery rates

Private sector involved in MSW management (e.g., haulers, facility operators)	<ul style="list-style-type: none"> • Provide recycling and MSW management services and own/operate facilities in compliance with regional MSW • Generally, services multi-family residential buildings, commercial and institutional sources, and construction, demolition and land clearing sectors • Comply with Ministry operational certificates and/or RDEK regional SWMP and any related facility or hauler licenses
Residents and businesses	<ul style="list-style-type: none"> • Responsible for carrying out proper MSW reduction, recycling and disposal activities

2.4 Waste generation and management

Provincial Targets

The ENV measures waste management system performance in terms of disposal rate, rather than diversion rate, as was previously measured. This is because measuring MSW diversion has been problematic given the variability between regional districts regarding the definition and measurement of diverted materials.

In 2013, the Ministry of Environment (ENV) developed the BC Waste Disposal Calculator to provide more reliable and consistent data on MSW disposal by regional districts, and to assist in determining the Province’s progress toward zero waste.

In 2017, the provincial average for waste disposal was 506 kg /person. The ENV has established a target to lower the provincial MSW disposal rate to 350 kilogram per person per year by 2020/2021.

2.4.1 RDEK Performance

Historically, the annual waste disposal rate in the RDEK has ranged from 983 kg/person in 2010 to 561 kg/person in 2016, as shown in Figure 2-2. The 2017 waste disposal rate is estimated to be 585 kg/person, based on reporting from the Ministry of Environment. It is important to note when reviewing historic data that the most recent projections from the BC Waste Disposal Calculator are considered to be the most accurate; additionally, the recent reporting factors in the seasonal population which reduces the per capita disposal rate.

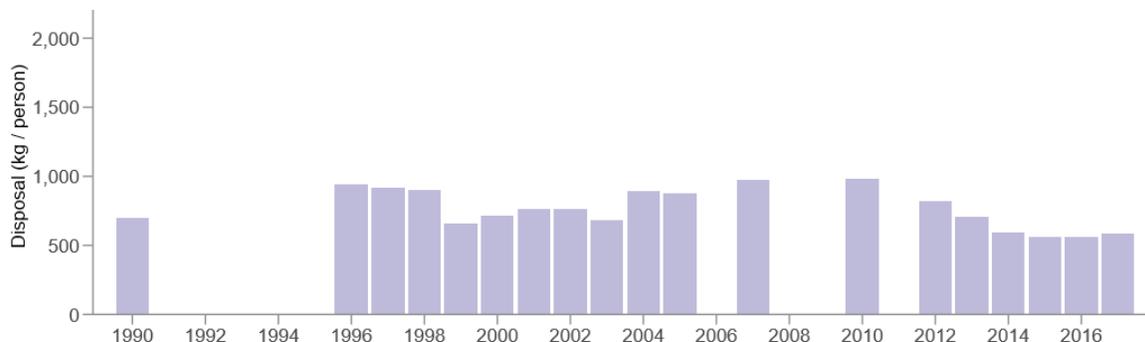


Figure 2-2: Waste disposal Rates in the RDEK

(<http://www.env.gov.bc.ca/soe/indicators/sustainability/municipal-solid-waste.html>)

Province-wide waste disposal rates are shown in Figure 2-3 below. As shown, the RDEK’s disposal rate is slightly higher than the provincial average; however, the RDEK is not out-of-line when compared to regional districts of similar size and geographic area (such as Kootenay Boundary, Columbia Shuswap, and Thompson-Nicola).

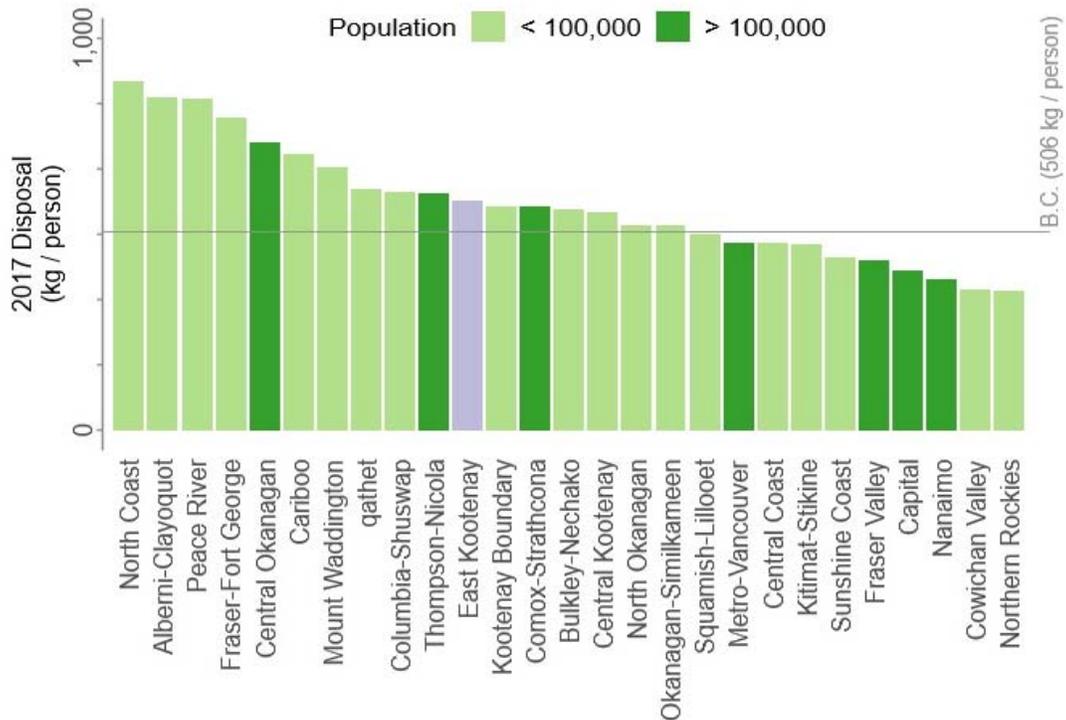


Figure 2-3: Waste disposal Rates in British Columbia

(<http://www.env.gov.bc.ca/soe/indicators/sustainability/municipal-solid-waste.html>)

2.5 Waste Composition

Based on available scale data and information from the Region’s transfer stations and landfills, it is estimated that approximately 55% of waste sent to landfill originates in the Central Subregion, 25% in the Columbia Valley Subregion and 20% in the Elk Valley Subregion. Of the overall waste disposed, it is estimated that 35% is made up of ICI waste, 30% is residential waste, 20% is sourced from rural transfer stations, and 15% is DLC.

A waste characterization study was completed for the region (by SHA) in July 2018 as part of this plan update. Figure 2-4 shows the overall waste composition for the RDEK. The results of the study indicated that the largest component of the waste stream is Compostable Organics (29%), followed by Plastics (14%), Paper and Paperboard (13%), Construction and Demolition (11%), Non-compostable Organics (8%), Textiles (5%), Household Hygiene (5%), Metals (4%), Glass (3%), Household Hazardous Waste (2%), Electronics (2%), Bulky Waste (2%) and Fines (2%).

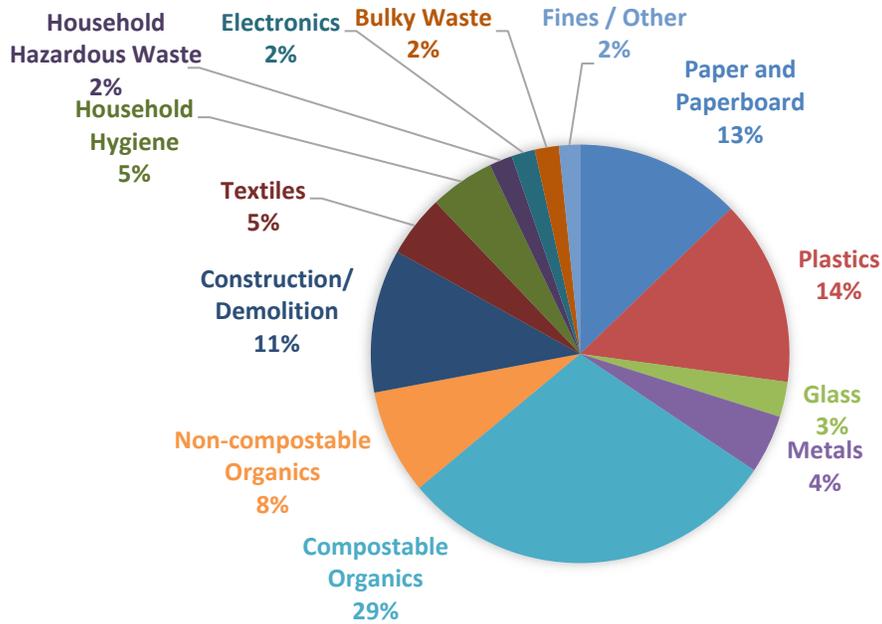


Figure 2-4: Overall Waste Composition in RDEK

A notable difference in the percentage of compostable organics was observed between the Elk Valley and the other two subregions; compostable organics were found to make up 20% of the waste stream for the Elk Valley, whereas in the Central and Columbia Valley subregions the composition was 31 and 33% respectively. This can be partially attributed to the low percentage of yard and garden waste observed in the Elk Valley waste stream (2% in the Elk Valley versus 11% and 10% for Central and Columbia Valley subregions, respectively). This is interesting to note as all of the transfer stations in the Elk Valley offer yard waste diversion opportunities.

Based on the samples sorted, the results show the amount of wood waste (clean and contaminated) in the MSW stream is three times greater at rural transfer stations than at urban transfer stations (16% compared to 5% sorted, respectively). This is possibly due to the opportunity to divert wood waste at most of the attended/urban transfer stations, and minimal opportunities to divert wood waste at rural transfer stations.

3. ACTIONS AND STRATEGIES

A number of actions and strategies have been discussed throughout the planning process. The action items are divided into the following categories:

- Strategies to reduce waste and increase recycling;
- Strategies to divert organic waste from the landfill;
- Strategies that enhance residual waste management services in the RDEK;
- Policies and Bylaws that support SWMP action items;
- Promotion and Education programs to support waste management initiatives.

Action items associated with the aforementioned categories are outlined in the following sections along with cost estimates for implementing each action item. The cost estimates do not include the cost of additional personnel; however, such requirements to implement the Plan's actions are outlined in detail in the financial implications memorandum included in Schedule A and are summarized in Section 4. The estimates are based on best available cost information and are shown in 2019 dollar-values.

An implementation schedule for each of the action items is outlined in Table 3-1 and included as Schedule B.

In addition to financial costs, the strategies included in this plan also consider environmental and social costs and benefits. For example, increased diversion of material from the waste stream will extend the lifespan of regional landfills; this is a high priority as new landfills are increasingly hard to site (socially and environmentally). Additionally, the 2016 Landfill Criteria requires that the expansion of existing landfills outside of the current operating footprint requires the installation advanced environmental control systems – which come at considerable capital and operating costs.

It is estimated that products and packaging account for 37 to 44% of greenhouse gas emissions in the United States (Stolaroff 2009). Reducing waste generation and improving recycling programs and infrastructure can help reduce greenhouse gas emissions.

The results of the Waste and Recycling Services Survey indicate that residents in the RDEK are generally satisfied with the existing services provided, however, there is a desire to: have more recycling options at transfer stations, find ways to reduce waste sent to landfill, create composting solutions, and receive more education on solid waste services available.

The following strategies and actions have been developed to assist the RDEK in increasing diversion and recycling throughout the region, extend the life of local landfills, and reduce the overall waste disposal rate. As discussed at the beginning of this report, implementation of these strategies over the plan's 10-year timeframe is expected to reduce the RDEK's disposal rate from 585 kg/person in 2017 to: 480 kg/person/year by 2025, and 400 kg/person/year by 2030.

3.1 Waste Reduction and Recycling

The following section describes strategies and initiatives that can help promote and increase waste reduction and recycling in the RDEK.

Actions	Cost Estimate
<p>1. Encourage initiatives that support reuse and recycling in the community</p> <p>The RDEK will continue to encourage initiatives that support reuse and recycling in the community. For example: the RDEK can encourage events such as the Columbia Valley Maker Space Society’s Repair Café where attendees learn how to repair household items instead of throwing them away.</p>	No New Cost
<p>2. Encourage municipalities to develop and administer policies and bylaws that promote waste reduction</p> <p>The RDEK will continue to encourage and support municipalities in developing policies and bylaws that promote waste reduction and prevent waste. This may include developing policies and enforcement mechanisms for bag limits at the curb or materials bans on organics, paper, plastic, etc. These policies should be updated as new diversion programs are introduced (such as future implementation of organic waste management facilities).</p> <p>The RDEK will support municipalities by taking on a “lobbyist” role.</p>	No New Cost
<p>3. Expand EPR product recycling at major transfer stations</p> <p>It is recommended that the RDEK look to expand the types of EPR product recycling offered at major transfer stations and expand the programs to smaller transfer stations where feasible. This will require the RDEK engaging with stewardship agencies to build relationships and establish agreements as well as capital investments in infrastructure upgrades as required.</p> <p>Additionally, the RDEK can lobby senior levels of government to expand EPR programs, such as expanding packaging and printed paper recycling for the ICI sector.</p>	<p>Capital Costs: \$ 50,000 to \$ 65,000 per site Annual Operating Costs: \$ 50,000/ site Annual Compensation (Revenue): \$ 15,000</p>
<p>4. Expand diversion opportunities for wood waste, yard waste, scrap metal etc.</p> <p>Currently, small rural transfer stations in the RDEK do not provide many opportunities for waste disposal and diversion beyond garbage and mixed recycling.</p>	<p>Capital Costs: \$ 140,000 to \$ 270,000 per site</p>

<p>The RDEK should look to expand diversion opportunities for materials such as wood waste, yard waste, scrap metal, and mattresses throughout the Region. The RDEK should explore opportunities to expand the services offered at the small transfer stations (by adding additional diversion areas and opportunities) in order to encourage waste diversion.</p>	<p>Operating Costs: \$ 53,000 to \$ 292,000 per site for staffing/supervision</p>
<p>5. Ensure consistent signage is used throughout the region to educate users on recycling</p> <p>The RDEK will ensure consistent signage is used at waste management facilities throughout the region, to educate users on recyclable/divertible materials as well as waste types. The RDEK will work with member municipalities and the private sector to ensure consistency at between facilities (RDEK managed or other).</p>	<p>Project Cost: \$10,000</p>
<p>6. Develop region-wide strategy for recycling access</p> <p>With the introduction of RecycleBC depots at staffed transfer stations in the RDEK, there may be some required changes to the regional recycling model. This means that the focus may shift from residents using the yellow-bin program to using centralized recycling depots (or possible curbside collection where applicable). It is recommended the RDEK complete a region-wide recycling study to determine the best strategy for providing access to mixed recycling throughout the RDEK. This should include a review of accessibility to current recycling depots, the feasibility of curbside recycling introduction, and considerations for the ICI sector.</p>	<p>Project Cost (Consultant Fees): \$ 35,000</p>
<p>7. Establish bylaw that mandates recycling programs in commercial sector</p> <p>The RDEK can enhance recycling in the commercial sector by establishing a bylaw that mandates all businesses generating recyclable materials have an in-house recycling program. This would mean generators would need to enlist a recycling service or self-haul their recyclables to the depot. This strategy could be considered if changes to the yellow-bin program are introduced in the commercial sector.</p>	<p>Project Cost: \$ 10,000</p>

3.2 Organics Diversion

In 2013, the province of B.C. set two targets for the year 2020: lower the municipal solid waste disposal rate to 350kg per person per year; and have 75% of BC’s population covered by organic waste disposal restrictions. Organic waste makes up the largest portion of the waste stream in the RDEK; overall, compostable organics make up nearly 30% of the total waste disposed by weight.

The following strategies can help the RDEK in reducing the amount of organic (and compostable) MSW sent to the landfill, which will in-turn reduce the landfill-related greenhouse gas emissions in the region, replenish topsoil, and assist the RDEK residents in reducing their waste disposal rate.

Actions	Cost Estimate
<p>1. Develop food-waste reduction education program</p> <p>The RDEK can develop a food-waste reduction education program. Love Food Hate Waste Canada estimates that 63% of food thrown away by Canadians could have been eaten. This results in approximately 140 kilograms of wasted food per household each year. Through their partnership with the BC Ministry of Environment and Climate Change Strategy (ENV), tools from Love Food Hate Waste Canada will be available to BC communities. Where possible, the RDEK should collaborate with member municipalities to incorporate the curriculum into existing education programs.</p>	<p>Project Cost: \$ 15,000 to develop materials</p> <p>Annual Costs: \$ 2,500 for workshops</p>
<p>2. Encourage community initiatives that focus on food waste reduction</p> <p>The RDEK will continue to encourage community initiatives that focus on food waste reduction; such as: community gardens, gleaning, xeriscaping etc. Another example of a community initiative is the Food Recovery Program in Kimberley which aims to reduce the amount of food sent to landfill by working with Save on Foods to make donated food available to community organizations, composting perishable items and exploring the possibility of diverting food to local farmers.</p>	<p>No New Cost</p>
<p>3. Continue to promote and provide education for at home food waste management</p> <p>The RDEK currently provides education programs related to backyard composting and sells back-yard composters at a low cost to residents. To encourage at-home food waste management and food waste diversion, the RDEK will continue to promote and provide composting-related education programs throughout the RDEK. The program should also include strategies to minimize wildlife interactions and suggestions for managing food waste at home in ways other than traditional composting (such as Bokashi composting and vermiculture).</p> <p>Additional opportunities for collaboration in education campaigns may be explored.</p>	<p>No New Cost for Education Program</p> <p>Composting “Blow Out” Sale: Neutral Costs</p>

<p>4. Explore opportunities to develop centralized or subregional organic waste management facilities</p> <p>The RDEK will continue to review options to establish organic waste management capacity within the region. This may be through a centralized composting facility that serves the whole region, or through sub-regional initiatives.</p> <p>The RDEK is currently working on an application through the province’s Organics Infrastructure Program which, if successful, would provide funding support to establish organics management facilities in the Region. The current vision for the proposal is to establish three facilities located in Columbia Valley, Central, and Elk Valley subregions. When established, the composting facilities should be supported by disposal bans on organic waste in the commercial sector.</p> <p>Diverting organic waste (such as yard and garden waste, green waste and food waste) from the landfill will have a large impact in reducing the RDEK’s disposal rate and utilization of landfill airspace.</p>	<p>Capital Costs: \$150,000 to \$200,000 per site</p> <p>Annual Operating Costs: \$ 150,000 per site</p>
<p>5. Provide additional capacity for yard waste diversion in the RDEK</p> <p>Currently, yard and garden waste can be diverted at attended transfer stations and landfills in the RDEK. Some of the green waste is chipped and mixed with wood waste that is sent to the Skookumchuck Pulp mill’s cogeneration facility, whereas other organic waste is composted and used as a topsoil medium in landfill reclamation.</p> <p>The RDEK could increase the accessibility of yard waste diversion in the RDEK by offering additional yard waste and wood waste drop-offs throughout the region. New drop-offs can be located at existing RDEK transfer stations, or, the RDEK can explore the feasibility of offering specific yard-waste only drop-offs in communities that are not currently serviced by attended transfer stations (such as the District of Invermere and the Village of Radium).</p>	<p>Site Specific Capital and Operating Costs</p>
<p>6. Continue to divert wood waste from landfill and expand where possible</p> <p>The RDEK will continue to divert wood waste from the landfill either through existing burn permits or through cogeneration at the Skookumchuck Pulp mill. Other options for wood waste diversion that may be available would be to use chipped wood waste as a bulking agent in composting operations (if implemented) as a higher use on the hierarchy.</p> <p>The RDEK recognizes that the Ktunaxa Nation has expressed concerns regarding air quality during open burning events in the Elk Valley. The RDEK will continue to explore new opportunities for wood waste management (including the phasing out of open burning) in the Region to help reduce their impact on the Region’s airsheds where possible. This may include working with natural resource industries (such as forestry) to develop pilot programs for organic waste diversion and recycling.</p>	<p>Operating Cost: \$25-\$35 per tonne</p>

3.3 Residual Waste Management

The residual waste management system in the RDEK consists of a large transfer station network and three landfills. Many of the transfer stations are small, unattended sites that offer limited diversion opportunities to users. Throughout the plan update process, public feedback has indicated that additional diversion services are desired by site users. This could include additional opportunities to divert organic (compostable) waste, scrap metal, and EPR materials. Providing additional diversion services to users would likely require some capital upgrades as well as the addition of an attendant to ensure the site operates safely and efficiently; the addition of a site attendant and controlled access would subsequently meet the requirements of a RecycleBC Depot, allowing the RDEK to receive financial support for providing recycling services.

Through site upgrades and providing additional diversion opportunities at small sites the RDEK can continue to strive to reduce their waste disposal rate.

Actions	Cost Estimate
<p>1. Complete Detailed Rural Transfer Station Optimization Study for Columbia Valley and Central Subregion</p> <p>The RDEK should complete a detailed rural transfer station optimization study for the Columbia Valley and Central Subregions. This could include identifying service gaps in rural regions, establishing criteria for travel distances between transfer stations and communities, considering seasonal or full-time staffing of sites, and prioritizing diversion services. Capital costs include consultant fees to complete the analysis and to host additional stakeholder meetings.</p>	<p>Project Cost: \$ 70,000 for Consultant Fees</p> <p>\$ 40,000 for consultation with stakeholders.</p>
<p>2. Consider Feasibility of Implementing Recommended Transfer Station Upgrades</p> <p>Following completion of the transfer station optimization study, the RDEK will consider the feasibility of upgrading rural transfer stations to provide increased level of service to all users.</p> <p>The capital and operating costs of this recommendation are not known at this point, however the detailed costs for transfer station capital and operating costs are outlined in the Technical Report on Transfer Stations & Residual Management.</p> <p>Due to the capital and operating costs associated with providing additional waste diversion services, the RDEK may consider cost-management strategies such as amalgamation of sites, or, reduced operating hours.</p>	<p>Capital Costs: \$ 140,000 to \$ 2,460,000 per site</p> <p>Annual Operating Costs: \$ 53,000 to \$ 292,000 per site</p>

<p>3. Complete Landfill Criteria Conformance Review & Upgrading Plan for 3 Subregional Landfills</p> <p>As outlined in the Criteria, the RDEK should complete Landfill Criteria Conformance Reviews and Upgrading Plans for the regions three (3) subregional landfills. The reviews will be completed to evaluate the RDEK’s compliance with Criteria guidelines and will identify any site-specific upgrades that are required. The Criteria recommends that Conformance Reviews be completed during the SWMP update process or within 5 years of the issuance of the Criteria (whichever is sooner)</p>	<p>Capital Costs: \$5,000 per Landfill (\$15,000 Total)</p>
<p>4. Legacy Landfill Closure Considerations</p> <p>The RDEK should prepare a list of “legacy landfills” in the region and determine the closure status of each. The RDEK should engage with ENV and Qualified Professionals to develop effective strategies for completing closure of these sites and minimizing environmental risks and liabilities. RDEK Staff will work to prepare a priority list and schedule for completing closure works in accordance with ENV requirements and QP recommendations. Funding for capital / closure works will be from the RDEK’s closure fund reserve.</p>	<p>Planning Costs: \$30,000</p>

3.4 Policies and Bylaws

The RDEK can support the implementation of the aforementioned strategies and initiatives through the development of solid waste management policies and bylaws. Examples of these include an illegal dumping prevention strategy and reviewing existing user-fee schedules.

Actions	Cost Estimate
<p>1. Review user-fee structure and update to encourage MSW diversion</p> <p>RDEK Landfills and attended transfer stations currently follow a user-fee schedule. Under this fee schedule, most residential and commercial wastes can be disposed at no charge, however, hard to manage wastes (such as asbestos or vehicle tires) are subject to a fee.</p> <p>The RDEK will continue to review and update the fee schedule to encourage proper waste management; this includes continuing to implement variable tipping-fees and encouraging source-separation of recyclable materials. The schedule should be updated as new diversion opportunities are added and implemented. The review and update should also consider the fee structure and how this relates to the seasonal population, to ensure that fees for waste management are fairly distributed throughout the region.</p> <p>Disposal bans on recyclable materials should be implemented in the commercial sector to support diversion initiatives. Assuming organics processing capacity is developed in the RDEK, disposal bans on organics in the waste stream (in regions serviced by the future facilities) will incentivize and maximize diversion. Stakeholders (including generators and haulers) should be engaged prior to the development and implementation of these material bans.</p> <p>The RDEK will strive to maintain compatibility and uniformity of user-fee structures between the three subregions for fairness and consistency.</p> <p>Implementation of broad-based user fees is not being contemplated at this time.</p>	<p>Project Cost: \$ 20,000 for Consultant Review if Required. May be able to complete some works in-house</p> <p>Follow-up Cost: \$ 10,000 for second review after 5 years</p>
<p>2. Develop region-wide illegal dumping prevention strategy</p> <p>The Conservation Officer Service is relied upon by many regional districts to manage environmental violations such as illegal dumping. Residents are encouraged to use the RAPP line (Report All Poachers and Polluters) or the BCWILDLIFE FEDERATION Conservation App to report violations. In other cases, Regional Districts and municipalities have established bylaws and/or strategies to combat illegal dumping.</p>	<p>Strategy Development: \$ 15,000</p>

<p>In 2017, the Recycling Council of British Columbia, surveyed BC’s regional districts on illegal dumping (RCBC 2017). The survey suggests that the regional districts surveyed spend between \$2,000 - \$1,500,000 per year to clean-up illegally dumped waste; the average cost was found to be \$132,035 and the median cost was found to be \$13,500.</p> <p>The RDEK may establish a region-wide illegal dumping prevention strategy. Development of this strategy should include collaborating with interested stakeholders such as First Nations, naturalist groups, back-country user-groups, fish and game clubs etc.</p> <p>The RDEK will continue to support clean-up efforts by waiving user-fees. Other strategies may include identifying illegal dumping “hot spots” and completing targeted outreach campaigns.</p>	<p>Project Costs: \$ 20,000 per year to support clean-up efforts</p>
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3.5 Promotion and Education

The RDEK will support MSW management initiatives through promotion and education (P&E). This is currently facilitated by the RDEK’s communication department with assistance from seasonal personnel (summer students). The RDEK will continue to provide education to all age groups (in schools and at public events) and continue to promote proper MSW management through different media outlets and mailing groups. The existing program can be enhanced by the following strategies:

Actions	Cost Estimate
<p>1. Increase promotion and education efforts for EPR programs</p> <p>The RDEK can increase promotion and education efforts for EPR programs to raise awareness of proper end-of life management for materials (such as medications, oil, paint, and pesticides) managed by stewardship agencies, and, the locations of EPR drop-off’s available to RDEK residents. This can be done by updating and distributing the subregional recycling guides.</p>	<p>Project Costs: \$ 5,000 to update materials</p>
<p>2. Promote household hazardous waste drop-off in Cranbrook</p> <p>The RDEK has recently developed a year-round household hazardous waste drop-off at the Cranbrook transfer station. This facility will operate all year in place of the previous annual round-up events that were held once per year throughout the region. The RDEK has already begun increasing promotional efforts for this facility. This plan includes an additional allowance to prepare communication materials to promote the year-round disposal options for household hazardous waste. The operating costs for the facility have already been included in existing operating costs for the transfer station.</p>	<p>Communication & Outreach: \$ 5,000</p>

3. Increase Promotion and education for organics diversion

The RDEK can also increase promotion and education efforts for organic waste diversion. As discussed above, this includes continuing to promote and provide education on backyard composting as well as developing a food-waste reduction education programs.

If and when centralized composting facilities are introduced in the RDEK, additional effort will be required to promote the new facilities and provide instructions to users throughout the region.

Project Costs:
\$45,000 split over three years to develop and distribute materials, as well as advertising efforts.

3.6 Monitoring and Measurement

As per the ENV Guidelines for Solid Waste Management Planning, it's recommended that the RDEK maintain a Plan Monitoring Advisory Committee (PMAC) with a mandate to monitor implementation, evaluate its effectiveness, and advise the RDEK regarding the SWMP's on-going implementation. On an annual basis, RDEK personnel would compile data and prepare an annual report to the Board that reflects the status of its implementation and progress toward waste reduction targets as well as determining greenhouse gas reductions.

In addition, it is recommended that RDEK continue to compile data annually on all of the residual disposal activities in the RDEK, including residual waste handled by the public sector and the private sector for reporting to the ENV on-line disposal calculator.

As per the ENV Guidelines for Solid Waste Management Planning, five years into the implementation of the Plan (in 2025), the RDEK should carry out a review of the plan's implementation and effectiveness. This review will include:

- Overview of all programs or actions undertaken in first five years to support the plan goals and targets, including status and implementation costs for each.
- Description and forecasted budget for programs or actions not yet started and status, including explanations for delays or cancellations of plan components.
- Five-year trend information for waste disposal per person.
- Five-year trend of greenhouse gases emitted and avoided, if available.
- Any significant changes that might impact the solid waste management system over the next five years.

The RDEK will repeat a waste composition study on the residual waste management stream to assess the success of waste diversion programs that have been implemented, prior to the SWMP update.

- **Project Cost: \$ 20,000 for Plan Effectiveness Review
\$ 40,000 for follow-up waste composition study**

4. FINANCE AND ADMINISTRATION

The financial implications of the proposed SWMP action items are summarized in Table 3-1, attached. Also shown, is the current revenue and expenditures as per the 2019-2023 RDEK Financial Plan. The budget for 2024-2029 has been estimated based on a 1.5% annual increase.

As shown, the RDEK's existing revenue (from tax requisition, payments, grants, fees and charges, and others) is approximately \$ 9,500,000 between 2020-2023. Planned annual expenditures are approximately \$ 8,500,000.

As discussed in Section 3, the costs presented in this report and in Table 3-1 are in 2019-dollar values. In total, the new proposed expenditures over the 10-year plan, including capital costs, are estimated to be \$ 13,281,500, with an average additional expenditure of \$ 1,328,150 per year.

If a 2% interest rate is assumed, the future value of the proposed expenditures ranges from \$ 57,630 - \$ 4,719,945 per year, with the average additional expenditure adjusted to be \$1,505,274 and the overall 10-year expenditure adjusted to be \$15,052,736.

A large portion of the proposed expenditures come from the estimated operating costs for the proposed composting facilities, as well as estimated operating costs (highlighted peach) for controlled/attended transfer stations. Capital costs are highlighted dark orange and consist of approximately \$ 3,600,000 for proposed transfer station upgrades and \$ 600,000 for composting facility infrastructure.

Also included are staffing costs for the estimated additional effort to administer the strategies outlined in this plan. As shown in Table 3-1, the average additional annual staffing requirement is estimated to be 1 Full Time Equivalent (FTE) or \$ 90,000 per year.

Including existing expenditures and the proposed plan expenditures, the new operating costs are expected to range from \$ 8,503,022 to \$ 13,596,580 per year, with an average annual cost of \$ 10,470,236 (presented as future values).

Funding to implement the actions identified in this plan is expected to continue to be provided by residents and businesses through municipal taxes and user-fees and charges. It is possible that the user-fee structure may be expanded throughout this plan, based on recommendations from the user-fee structure review and update.

5. PLAN IMPLEMENTATION

5.1 Implementation schedule

A timeframe for implementing each plan strategy and action is outlined in the budget table (Table 3-1) and is described in Schedule B.

5.2 Plan monitoring

The PMAC will monitor the implementation of the plan and make recommendations to increase its effectiveness. A description of the PMAC tasks and make up are included in the terms of reference which can be found in Schedule C.

5.3 Annual reporting

Reporting is important because it helps keep the plan current, and focuses attention on whether the plan is achieving its goals and targets.

The RDEK will provide annual reporting to the ministry of waste disposal information via the ministry's municipal solid waste disposal calculator.

In addition, the RDEK will prepare an annual report to the Board and provide links on the RDEK website to reports provided in relation to the plan. Topics that will be included in the report include:

- Programs delivered each year and how they support the waste management hierarchy, especially the first three Rs (reduce, reuse, recycle)
- Challenges or opportunities identified by the PMAC
- Monitoring data for closed sites
- Landfill gas capture and reuse

5.4 Five-year effectiveness review

The RDEK will carry out a review and report on the plan's implementation and effectiveness five years into the plan (in 2025). A link to the report will be provided on the RDEK's website. The review will include the following:

- Overview of all programs or actions undertaken in first five years to support the plan goals and targets, including status and implementation costs for each.
- Description and forecasted budget for programs or actions not yet started and status, including explanations for delays or cancellations of plan components.

- Five-year trend information for waste disposal per person.
- Five-year trend of greenhouse gases emitted and avoided, if available.
- Any significant changes that might impact the solid waste management system over the next five years.

The RDEK will repeat a waste composition study on the residual waste management stream to assess the success of waste diversion programs that have been implemented, prior to the next SWMP update (10 years).

5.5 Plan amendments

This plan represents the current understanding and approach to the solid waste management challenges being faced by the RDEK. The plan is a “living document” that may be amended to reflect new considerations, technologies and issues as they arise in order to bring efficiencies into the plan.

Due to changing circumstances and priorities that may evolve over time, and with the input of the PMAC and stakeholders, all major actions will be reviewed for appropriateness before implementation. This will generally occur on an annual basis. The plan’s implementation schedule will be flexible enough to reflect the availability of technologies that may arise over time, as well as the potential changes in regional issues and priorities. In addition, it will also take into account the financial priorities of the RDEK, its member municipalities and other partners, the availability of funding to undertake plan activities, and the availability of contractors and service providers.

The plan amendment procedure applies to major changes to the solid waste management system which would include:

- a) The opening (or changes to the location or status) of a site or facility:
 - That is included in this regional district’s solid waste management plan and requires an authorization under the EMA;
- b) or any other facility that could have an adverse impact to human health or the environment
- c) Waste import / export options which would significantly impact the regional district’s or neighbouring solid waste systems, or not conform to provincial legislation, goals and / or targets
- d) Changing disposal targets or reductions in programs supporting the first three Rs in the pollution prevention hierarchy
- e) 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
- f) The addition, deletion or revision of policies or strategies related to the conditions outlined in the minister’s approval letter
- g) Major financial changes that warrant seeking elector assent

When a plan amendment becomes necessary, the RDEK will review the related aspects to develop options and through a public consultation process as endorsed by the ENV personnel, to determine the specifics of each amendment. When sufficient consensus has been reached, the RDEK Board will endorse the amendment and submit an amended SWMP to the Minister of the ENV for approval, along with a detailed consultation report.

6. PLAN SCHEDULES

6.1 Schedule A: Planning Documents

Planning documents can be accessed at the following link: <https://engage.rdek.bc.ca/>

6.2 Schedule B: Implementation schedule

Proposed implementation dates will be contingent upon the timing of the plan’s approval by the ENV and the available RDEK resources. The schedule will also be reviewed during the RDEK’s annual budget cycle. The PMAC will provide input into any amendments to this schedule.

2020-2021	<p>Waste Reduction and Recycling</p> <ul style="list-style-type: none"> • Encourage initiatives that support reuse and recycling • Encourage municipalities to develop policies and bylaws that promote waste reduction <p>Residual Waste Management</p> <ul style="list-style-type: none"> • Complete Landfill Criteria Conformance Reviews <p>Promotion and Education</p> <ul style="list-style-type: none"> • Increase promotion and education for EPR programs • Promote new HHW Drop-off in Cranbrook
2021-2022	<p>Waste Reduction and Recycling</p> <ul style="list-style-type: none"> • Complete Region-wide strategy for recycling access <p>Residual Waste Management</p> <ul style="list-style-type: none"> • Legacy Landfill Closure Considerations <p>Organics Diversion</p> <ul style="list-style-type: none"> • Develop food waste reduction education program • Explore opportunities to develop Centralized Compost Facility
2022-2023	<p>Policies and Bylaws</p> <ul style="list-style-type: none"> • Establish Bylaw to mandate recycling programs in the commercial sector <p>Promotion and Education</p> <ul style="list-style-type: none"> • Increase promotion and education for Organics Diversion
2023-2024	<p>Waste Reduction and Recycling</p> <ul style="list-style-type: none"> • Expand EPR recycling at major transfer stations • Ensure consistent signage is used throughout the region to educate users on recycling <p>Residual Waste Management</p> <ul style="list-style-type: none"> • Complete Detailed Rural Transfer Station Optimization Study • Public and Stakeholder Consultation <p>Policies and Bylaws</p> <ul style="list-style-type: none"> • Develop Region-wide illegal dumping prevention strategy
2024-2025	<p>Waste Reduction and Recycling</p> <ul style="list-style-type: none"> • Expand Diversion Opportunities for wood waste, yard waste and scrap metal <p>Residual Waste Management</p> <ul style="list-style-type: none"> • Consider feasibility of upgrading rural transfer station network, as per recommendations of optimization study <p>Policies and Bylaws</p> <ul style="list-style-type: none"> • Review user-fee structure and update to encourage waste diversion

6.3 Schedule C: PMAC terms of reference

1. Purpose

1.1

The Plan Monitoring Advisory Committee ("the PMAC") is an advisory committee of the Regional District of East Kootenay ("the RDEK"). The establishment of the PMAC is required by the BC Ministry of Environment in accordance with Section 35 of the Guide to the Preparation of Regional Solid Waste Management Plans by Regional Districts, 1994 ("the Guidelines").

2.1 Mandate

The mandate of the PMAC is to:

- (a) Review the current status of the Plan initiatives based on reports and presentations provided by RDEK staff.
- (b) Review all information presented related to implementation of the Plan, including waste quantities, populations, diversion rates and costs for each Plan component.
- (c) Recommend strategies to increase diversion rates taking into consideration cost effectiveness.
- (d) Act in an advisory role during each major review of the Plan which should occur every five years.
- (e) Recommend to the Board concerning public consultation and amendments to the Plan.
- (f) Annually review of the following components of the Plan and recommend updates if necessary:
 - materials banned from disposal
 - tipping/user fee schedule
 - effectiveness of educational and promotional efforts
 - availability of Provincial grants to assist in funding components of the Plan
 - five-year financial plan with respect to implementation of the Plan
 - effectiveness of user pay systems at the collection and disposal levels

This review will be documented in an annual report which will be reviewed by the PMAC and then submitted to the Board. The review will then be submitted to the appropriate Ministry of Environment offices for information.

- (g) Review operational or closure plans of waste management facilities.
- (h) Participate in and ensure adequate public consultation on matters affecting the public, such as landfill closures, siting of facilities, amendments to the Plan, etc.

2.2

The PMAC may form sub-committees or request the assistance of appropriate persons to assist with fulfilling their mandate.

2.3

The PMAC may receive and consider in their recommendations, correspondence that pertains to the issues being reviewed at that time. Correspondence not pertaining to the PMAC Terms of Reference will be forwarded to the RDEK for response.

3.1 Membership

In accordance with the Guidelines, the PMAC membership should, if possible, reflect:

- the geography, demography and political organization of the RDEK;
- a balance between technical and non-technical interests;
- rural and urban municipal waste management issues;
- industrial, residential and academic representation;
- First Nations participation in the Plan; and
- the subregional components of the Plan.

3.2

Membership will consist of:

- a minimum of one (1) representative from each subregion;
- one (1) representative of the Ktunaxa Nation;
- one (1) representative of the Shuswap First Nation;
- a maximum total of nine (9) members.

RDEK staff will serve the PMAC in a resource and advisory capacity.

Selection of Members

4.1

An open call for members to serve on the PMAC will be advertised throughout the RDEK through one or more newspapers circulating in the region and by placement of the notice on the RDEK website and public bulletin boards at RDEK offices. The final selection of members will be made by the Board at a regularly constituted Board meeting.

4.2

Applicants for PMAC membership will be considered on the basis of the following criteria:

- ability to commit time;
- general knowledge of solid waste issues;
- interests (i.e. not weighted to any one issue);
- diversity and balance of interests.

4.3

Persons providing solid waste services to the RDEK or persons employed by or otherwise involved with organizations or companies providing solid waste services to the RDEK are not eligible to serve as members of the PMAC.

Membership Vacancy

5.1

Should there be a membership vacancy on the PMAC, the RDEK will endeavour to fill such a vacancy within 90 days from the time such vacancy occurred.

5.2

To fill a vacancy on the PMAC, an advertisement will be placed in a newspaper circulating in the region or in the appropriate subregion and on the RDEK website and public bulletin boards at RDEK offices. The final selection of a person to fill a vacancy will be made by the Board at a regularly constituted Board meeting.

5.3

In the event of a membership vacancy, the PMAC may continue with fulfilling their mandate despite such vacancy.

Term of Membership

6.1

The PMAC shall remain in existence for the duration of the Plan. Members will not be assigned a specific term and may resign at any time upon submission of a written resignation to the Board. The Board may, at any time and at its discretion, revoke the membership of any member.

Meetings

7.1 Open Meetings and Public Notification

In accordance with RDEK Procedure Bylaw No. 2020, except where provisions of the *Local Government Act* and *Community Charter* apply, all meetings of the PMAC must be open to the public. Public notification of the meetings shall be by posting on the RDEK website and the public bulletin boards located at RDEK offices and by publication in the monthly Board newsletter.

7.2 Chair and Vice Chair

- a) At its first meeting each year, the PMAC shall appoint a Chair and a Vice Chair from among its members.
- b) The Chair, and in that person's absence, the Vice Chair shall call and preside over meetings;
ensure that proper meeting procedure is followed and order is maintained;

- (iii) ensure active participation by all members, prevent individual members from dominating the debate, ensure that discussion and debate focus on the matter at hand, and require respect and courtesy;
- (iv) maintain decorum and civility which includes not tolerating abusive speech, foul language, nor vocal expressions of approval or disapproval from members or any other persons in attendance at meetings;
- (v) review agendas and minutes provided by RDEK staff and lead the preparation of reports and presentations to the Board; and
- (vi) review the mandate of the PMAC and ensure the work plan is realistic and current.

7.3 Frequency and Location

The PMAC will meet once per year, with additional meetings being at the call of the Chair or as recommended by RDEK staff. Generally, meetings will be held at the RDEK office in Cranbrook; however, the location may be changed at the call of the Chair.

7.4 Remote Participation

Members unable to attend a meeting may participate by telephone or other electronic means provided such means is available and in working order at the meeting location. The lack of remote access to a meeting does not constitute a reason to adjourn the meeting. The Chair or Vice Chair must be physically present at the meeting.

7.5 Voting

Meetings of the PMAC will be conducted on a semi-formal basis in a manner determined by the Chair. Agreement among the PMAC members shall be sought whenever an agenda item is advanced as a specific recommendation to the Board.

In general, the PMAC will attempt to operate on a consensus basis. The Chair will have discretion in determining when a consensus has been reached. Consensus will be formally recorded in the minutes of the meeting. If consensus cannot be reached, the recommendation by a simple majority of the PMAC members in attendance at the meeting shall be forwarded to the Board.

7.6 Quorum

Quorum is defined as sixty percent (60%) of voting members. The PMAC may hold a meeting to discuss matters without a quorum being present; however, to make a decision on any matter, including advancing a recommendation to the Board, requires such a quorum to be present.

7.7 Agenda and Minutes

RDEK staff shall prepare a formal agenda for each meeting of the PMAC. At least one week in advance of the meeting, the agenda shall be circulated to members and posted on the RDEK website.

The Recording Secretary, provided by the RDEK, shall record minutes of all meetings of the PMAC. Minutes must be approved and signed by the Chair. A copy of the approved minutes shall be provided to the Board for information and posted on the RDEK website.

7.8 Delegations

The PMAC may only receive delegations to present information on matters within the mandate of the PMAC.

Any person, persons or organizations wishing to appear as a delegation at a meeting must submit a written request to the Environmental Services Manager. The request shall be reviewed with the Chair who shall make the decision on whether or not to accept the delegation.

7.9 Recommendations to the Board

Recommendations from the PMAC shall be submitted by the Environmental Services Manager to the Board in written form and shall be considered by the Board at their next regular meeting or, if deemed appropriate, at a subsequent meeting.

The PMAC shall be advised of the Board's decisions related to their recommendations.

7.10 Remuneration and Expenses

Members of the PMAC shall serve without remuneration; however, members are eligible to claim expenses for use of a personal vehicle to travel to meetings of the PMAC and to attend to other business of the PMAC and for meals where such meals are not otherwise provided. The kilometer rate for use of a personal vehicle and the meal rates to be paid shall be as set by Board policy for Directors of the Board.

Conflict of Interest

8.1

If a member attending a meeting considers that he or she is not entitled to participate in the discussion of a matter, or to vote on a question in respect of a matter, because the member has a direct or indirect financial interest in the matter, or another interest in the matter that constitutes a conflict of interest, the member must declare this and state in general terms the reason why the member considers this to be the case. The member's declaration or statement, the reasons given for it, and the time of their departure from and return to the meeting room, shall be recorded in the minutes.

8.2

After making a declaration under Section 8.1, the member must not:

- remain or attend at any part of a meeting during which the matter with which they have a conflict is under consideration,
- participate in any discussion of the matter,
- vote on a question in respect of the matter, or
- attempt in any way to influence the voting on any question in respect of the matter.

8.3

A member must not, directly or indirectly, accept a fee, gift or personal benefit that is connected with the member's performance of the duties of their position as a member of the PMAC.

8.4

A member must not use information or a record that was obtained in the performance of the duties of their position as a member of the PMAC, and is not available to the general public, for the purpose of gaining or furthering a direct or indirect financial interest.

8.5

A member who contravenes the conflict of interest provisions shall be removed from the PMAC, unless the contravention was done inadvertently or because of an error in judgment made in good faith.

Duty to Respect Confidentiality

9.1

A member or former member of the PMAC must, unless specifically authorized otherwise by the PMAC,

- keep in confidence any record pertaining to the PMAC's work and held in confidence by the PMAC or the RDEK, until the record is released to the public as lawfully authorized or required, and
- keep in confidence information considered in any part of a meeting of the PMAC that was lawfully closed to the public, until the PMAC discusses the information at a meeting that is open to the public or releases the information to the public.

9.2

A member who contravenes Section 9.1 shall be removed from the PMAC, unless the contravention was inadvertent.

ADOPTED BY THE RDEK BOARD.

6.4 Schedule D: Plan dispute resolution procedures

The parties will make all reasonable efforts to attempt to resolve the dispute in an amicable manner without outside intervention. The ENV 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 RDEK personnel
- ♦ Interpretation of a statement, bylaw, policy or provision in the plan
- ♦ The manner in which the plan or an OC is implemented
- ♦ Any other matter not related to a proposed change to the wording of the plan or an OC

Collaborative Decision Making and Dispute Resolution

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 the PMAC ♦ Committee will review, consider and provide recommendations to the RDEK Board
RDEK Board of Directors	<ul style="list-style-type: none"> ♦ Parties involved in the dispute will have an opportunity to speak to the Board through a Committee of the Whole likely in-camera. ♦ Board will receive recommendations from the Committee 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 <i>Local Government Act</i> or <i>BC Commercial Arbitration Act</i> ♦ The arbitrator shall make a final, binding decision ♦ Costs for arbitration shall be apportioned at the discretion of the arbitrator

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Sperling Hansen Associates. 2019. Policies and Bylaws for Enhancing Solid Waste Management in the RDEK.

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Table 2-3: Waste Management Facilities in the RDEK

Facility Name / Location	Facility Type	Historic Landfill	Location / Address
Brisco	Rural Transfer Station		2044 Hwy 95, Brisco BC
Radium-Edgewater	Rural Transfer Station		6001 Edgewater South Approach Rd, Edgewater BC
Fairmont	Rural Transfer Station	Y	4651 Hwy 93/95, Fairmont BC
Canal Flats	Rural Transfer Station + Marshalling Area	Y	306 Green Road, Canal Flats
Windemere Landfill	Landfill		1884 Windemere Loop Road, Windemere BC
Sheep Creek	Rural Transfer Station	Y	4300 Sheep Creek Rd
Wasa	Rural Transfer Station + Marshalling Area	Y	7310 Prairie Rd, Wasa BC
Fort Steele	Rural Transfer Station	Y	9351 Holmes Rd, Fort Steele BC
Kimberley	Attended Transfer Station	Y	800 Jim Ogilvie Way, Kimberley BC
Cranbrook	Attended Transfer Station		2405 22nd St N, Cranbrook BC
Green Bay	Rural Transfer Station	Y	7625 Green Bay Dump Rd, Moyie BC
Moyie	Rural Transfer Station	Y	9900 Sunrise Rd, Moyie BC
Wardner	Rural Transfer Station	Y	6294 Wardner-Kikomun Rd, Wardner BC
Tie Lake	Rural Transfer Station + Marshalling Area		6820 Old Tie Lake Rd, Tie Lake BC
Baynes Lake	Rural Transfer Station		3810 Baynes Lake Dump Rd, Baynes Lake BC
Elko	Rural Transfer Station	Y	5120 Caven Rd, Elko BC
Grasmere	Rural Transfer Station		2101 Hwy #93, Grasmere
Newgate	Rural Transfer Station		3700 Kikomun-Newgate Rd, Newgate BC
Elkford	Attended Transfer Station		# 6 Inkaneep Road, Elkford BC
Sparwood	Attended Transfer Station	Y	1001 Highway 3, Sparwood BC
Fernie	Attended Transfer Station		6000 Highway 3, Fernie BC
Central Subregion Landfill	Landfill	Y	600 Eager Hill Rd, Fort Steele BC
Sparwood Landfill	Landfill	Y	1001 Highway 3, Sparwood BC
Cranbrook Landfill	Closed Landfill	Y	Highway 95A, Cranbrook BC
Fernie Landfill	Closed Landfill	Y	Coal Creek Rd, Fernie BC
Kimberley Landfill	Inactive	Y	Fertilizer Road, Kimberley BC
South Sky Recycling Ltd.	Materials Recovery Facility		1100 Industrial Road 3, Cranbrook BC

