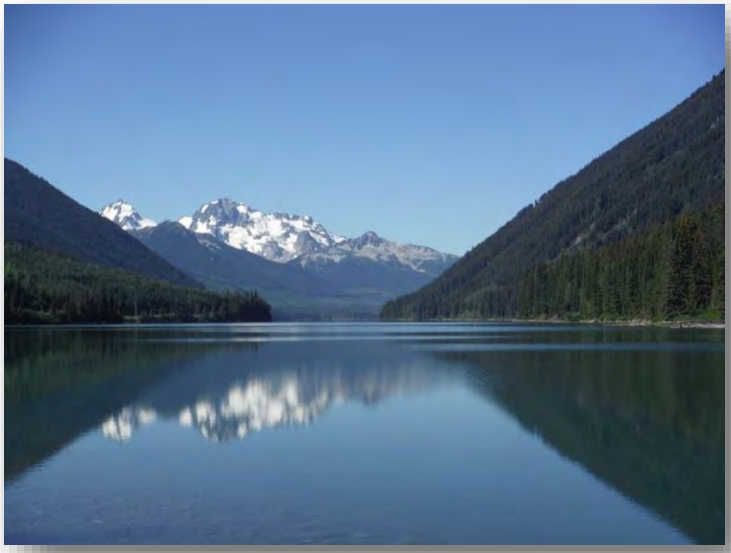
MORRISON HERSHFIELD

SLRD SOLID WASTE AND RESOURCE MANAGEMENT PLAN

SQUAMISH - LILLOOET REGIONAL DISTRICT



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GLOSSARY

C&D waste	Waste materials generated at construction, renovation and demolition projects
Disposal	Landfilling
Diversion	Activities that divert waste materials away from disposal as garbage to alternatives such as recycling or composting. Does not include combustion of garbage to product energy.
DOL	District of Lillooet
DOS	District of Squamish
Generation	The sum of all materials discarded that require management as solid waste, including garbage, recycling, and organic waste. Does not include organic waste composted at home.
ICI	Industrial, commercial and institutional (does not include heavy industry)
MOE	BC Ministry of Environment
organic waste/organics	kitchen scraps, food waste, yard and garden waste
RMOW	Resort Municipality of Whistler
SLRD	Squamish-Lillooet Regional District
SWRMP	Solid Waste and Resource Management Plan
Plan	Solid Waste and Resource Management Plan
SWRMP AC	Solid Waste and Resource Management Plan Advisory Committee
VOP	Village of Pemberton

EXECUTIVE SUMMARY

Over the past three years, Squamish-Lillooet Regional District (SLRD) has engaged in a process to update the 2007 Solid Waste and Resource Management Plan (SWRMP or the Plan) to reflect current and future waste management needs. The process to update the Plan was conducted in three stages. The first stage involved reviewing of the current solid waste management system. The second stage involved the assessment and selection of options to address the region's future solid waste management needs. The third and final stage involved community consultation to obtain input on the selected options. This document, the updated SWRMP, reflects the results of that consultation process.

As part of the planning process, a long term vision for solid waste management in the SLRD was established that encompasses the following:

1. The ultimate goal is zero waste – all of our discards are regarded as resources.
2. To the greatest extent possible, these resources are used locally, thereby moving the SLRD towards a closed-loop economy.
3. The system to manage discards is financially self-sustaining. Embedded in this goal is to have the cost to purchase a product include the cost of re-resourcing it at the end of its useful life.
4. Citizens are actively engaged in behaviours that reflect the waste management hierarchy (i.e. reduce before reuse before recycle…).
5. Until we have achieved zero waste, the infrastructure to manage residual waste meets or exceeds provincial guidelines and regulatory requirements.

Waste composition studies indicate that there is still a significant quantity of disposed waste that can be recycled or managed through composting or similar methods. It is estimated that up to 43% of the disposed waste stream is compostable organics, while plastic and paper make up an additional 25% of the landfilled waste stream. The initiatives described in this report target the recyclable and compostable components of the waste stream. Upon full implementation, these initiatives have the potential to reduce the amount of waste sent to landfill from the current estimate of 525 kg per person to 347 kg per person, a reduction of 34%.

The key diversion initiatives in this Plan are:

- a residential food scraps reduction campaign;
- ICI / multi-family communications strategy;
- tourist accommodation communication strategy;
- Re-Build It facilities in Pemberton and Lillooet; and
- curbside collection services in Pemberton and surrounding area.

The other key component of this planning process has been establishing long term residual waste disposal capacity. There is a lack of long term disposal capacity in the region. Whistler currently sends its waste to a privately-owned landfill in Washington State. The District of Squamish landfill is nearing capacity and expansion options are currently under consideration. In the short-term, the District intends to expand the landfill vertically to gain an additional 13-14 years of capacity. A long-term option is to expand the site horizontally; although this option has a number of technical hurdles to overcome. If the horizontal expansion becomes possible, the Squamish Landfill could be designated as a regional landfill and would be able to receive waste from all of the southern corridor communities. A working group of municipal, SLRD and First Nation representatives will be established to collectively consider long term residual waste management options.

The implementation schedule for this Plan is 2016 to 2020. The estimated additional annual operating costs to the SLRD range from $20,000 to $55,000, as shown in the table below. Capital expenditures are anticipated for the

establishment of two Re-Build It centres and the provision of new curbside collection services. The capital cost to expand the Squamish Landfill will be the responsibility of the District of Squamish.

Implementation of New Initiatives	2015	2016	2017	2018	2019	2020
Estimated new operating costs	**$ 55,000**	**$ 35,500**	**$ 50,000**	**$ 41,000**	**$ 37,000**	**$ 20,000**

The implementation of the new Plan will be overseen by the Plan Monitoring Advisory Committee. They will report to the SLRD Board on an annual basis on the Plan's progress and effectiveness.

1. INTRODUCTION

In British Columbia, each regional district is mandated by the Provincial Environmental Management Act to develop a Solid Waste and Resource Management Plan that provides a long term vision for solid waste management, including waste diversion and disposal activities. Plans are updated on a regular basis to ensure that the plan reflects the current needs of the regional district, as well as current market conditions, technologies and regulations.

Over the past two years, Squamish-Lillooet Regional District (SLRD) has engaged in a process to update the 2007 Plan to reflect current and future waste management needs. The process to update the Plan was conducted in three stages. The first stage involved reviewing of the current solid waste management system. The Stage 1 Report can be found on SLRD's website.[1]

The second stage involved reviewing options to address the region's future solid waste management needs and the selection of preferred management options. The preferred options were presented in a draft version of the Solid Waste and Resource Management Plan (SWRMP or Plan). The third and final stage involved community consultation to obtain input on the options presented in the draft SWRMP.

Two advisory committees, established for both the South (Furry Creek to Pemberton) and the North (Gold Bridge to Lillooet) areas of the region, provided input throughout the planning process. Both advisory committees have public, local government and technical representation and are collectively referred to as the Solid Waste and Resource Management Plan Advisory Committee (SWRMP AC).

As result of the effort provided by the members of the Solid Waste Management Plan Advisory Committee as well as the input received from the community on the draft Plan, this updated SWRMP was finalized. This document provides an update of the 2007 Plan and provides a path forward for the SLRD and member municipalities for managing solid waste.

The planning process and the development of this report have been undertaken in accordance with the BC Ministry of Environment (MoE) document entitled "Guide to the Preparation of Regional Solid Waste Management Plans by Regional District" (BC MoE, 1994) with consideration of the MOE's Solid Waste Management Planning Guideline Intentions Paper (September 2015).

1.1 LONG TERM VISION

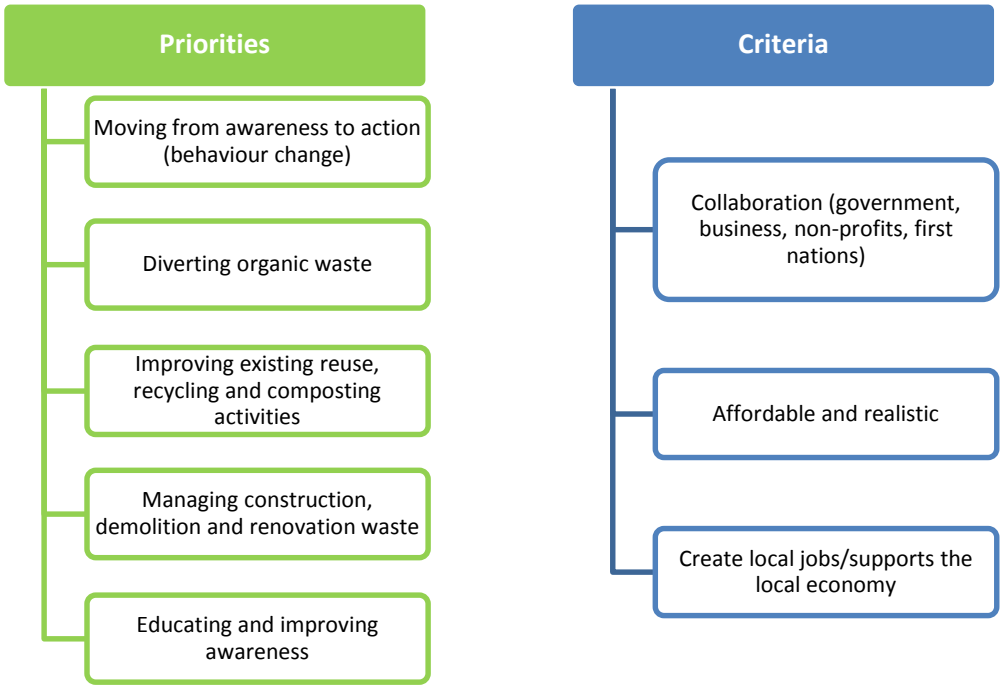
A long-term vision for the SWRMP was developed by the SWRMP AC during Stage 1 of the planning process. The initiatives described in this document are intended to move the SLRD towards this vision:

1. The ultimate goal is zero waste – all of our discards are regarded a resources.
2. To the greatest extent possible, these resources are used locally, thereby moving the SLRD towards a closed-loop economy.
3. The system to manage discards is financially self-sustaining. Embedded in this goal is to have the cost to purchase a product include the cost of managing it at the end of its useful life.
4. Citizens are actively engaged in behaviours that reflect the waste management hierarchy (i.e. reduce before reuse before recycle…).
5. Until we have achieved zero waste, the infrastructure to manage residual waste meets or exceeds provincial guidelines and regulatory requirements.

[1] http://www.slrd.bc.ca/inside-slrd/current-projects-initiatives/solid-waste-and-resource-management-plan

1.2 OBJECTIVES

At the initial meeting of the SWRMP AC, an exercise was conducted to help define the priorities (key issues) for the planning process. During this exercise, the committee also identified criteria that they felt are important to include in the consideration of options for managing solid waste. The priorities and criteria are:



2. PLAN AREA AND DEMOGRAPHICS

The plan area shown in Figure 2-1 includes four incorporated municipalities and four unincorporated electoral areas, including:

- District of Squamish (DOS);
- Resort Municipality of Whistler (RMOW);
- Village of Pemberton (VOP);
- District of Lillooet (DOL);
- Electoral Area A (Gold Bridge, Bralorne and area);
- Electoral Area B (Yalakom, Bridge River, Seton/ Tsal'álh, Texas Creek, Fountain Valley, Pavilion);
- Electoral Area C (Pemberton Meadows, Mt. Currie - D'Arcy corridor, Whistler-Pemberton Corridor (excluding municipalities);
- Electoral Area D (Furry Creek, Britannia, Upper Squamish, Upper Cheakamus, Ring Creek, Pinecrest/Black Tusk).

First Nations within in the SLRD include the Xwisten (Bridge River), Tsal'álh (Seton Lake), Sekw'elw'as (Cayoose Creek), T'itq'et (Lillooet), Ts'kw'aylaxw (Pavilion), Xaxli'p (Fountain), N'Quatqua, Lytton, Lil'wat (Mt. Currie), and Squamish peoples. Thirty-six reserves are located in the region, with a total on-reserve population of 3,275 persons in 2011[2]. Lil'wat Reserve 6 has the largest population, with over 1,300 people. Seven other reserves have populations of 100-300 persons. All other reserves have populations of under 100 persons, with the smallest having five or fewer residents.



[2] Statistics Canada, 2011 Census.



Figure 2-1: Plan Area

2.1 POPULATION

Table 2-1 provides a breakdown of the permanent population of the SLRD for 2011 (based on the 2011 Census) and estimated for 2012 to 2014.

Table 2-1: Population Data for the Service Areas within the SLRD

JURISDICTION	2011 POPULATION DATA	2012 POPULATION DATA	2013 POPULATION DATA	2014 POPULATION DATA
Lillooet	2,324	2,337	2,335	2,344
Pemberton	2,485	2,513	2,579	2,601
Squamish	17,727	18,377	18,789	19,294
Whistler	10,333	10,409	10,194	10,447
Unincorporated Areas	6,644	6,982	6,970	6,810
Squamish-Lillooet TOTAL	**39,513**	**40,618**	**40,867**	**41,496**

Source: British Columbia Regional District and Municipal Population Estimates
Prepared by: BC Stats, Ministry of Labour, Citizens' Services and Open Government
http://www.bcstats.gov.bc.ca/StatisticsBySubject/Demography/PopulationEstimates.aspx

Whistler receives over two million visitors every year with large seasonal variation in the resident population. Therefore the RMOW calculates an equivalent adjusted population figure to account for the impact of the visiting population on amenities and services. In 2011, the adjusted population number for Whistler was 26,132[3], which would increase the overall SLRD population to 55,312 for 2011 (an increase of 40%).

[3] Combination of BC Stats and Tourism Whistler equivalent population estimates.

3. CHARACTERIZATION OF THE CURRENT WASTE STREAM

This section provides estimates of the current composition of the SLRD's waste and the quantity of waste disposed and recycled. Additional information is presented in the Stage 1 report. The data presented in this section is from 2012 and represents the most recent data available when the Stage 1 report was prepared.

3.1 WASTE GENERATION, DIVERSION AND DISPOSAL ESTIMATES

The SLRD has tracked its waste disposal rate for many years. Figure 3-1 shows the per capita quantity of waste disposed in the SLRD from 2001 to 2012. The amount of waste disposed is typically driven by two factors: the range of diversion opportunities, such as recycling and composting, available to the population and the level of regional economic activity. In 2012, the disposal rate was 541 kg per capita.

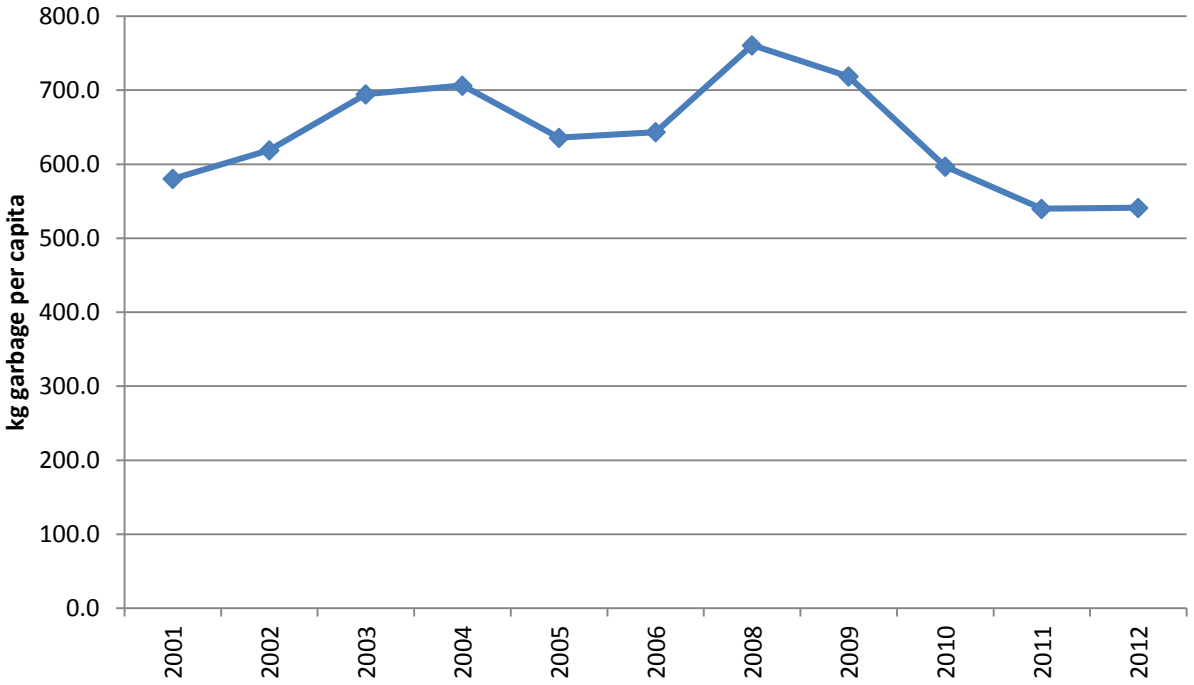


Figure 3-1: SLRD per Capita Waste Disposed (2001 – 2012)

Table 3-1 provides a summary of the estimated waste disposal and waste diversion quantities recorded at the different disposal facilities and for the various methods of diversion. The table presents disposal data for garbage disposed at landfills. The quantities exclude garbage disposed of in landfills on First Nations Reserves (believed to be a relatively small quantity) and biosolids because they are not considered solid waste.

Table 3-1: Disposal and Diversion Estimates (2012)

Disposal and Diversion	Estimated Tonnes (2012)
Disposal	
Squamish Landfill	11,692
Rabanco Regional Landfill via Whistler Transfer Station	12,795
Lillooet Landfill	2,479
Total disposal	**26,966**
Diversion	
Squamish curbside recycling program	936
Squamish other recycling + composting	5,525
Recycling at Whistler Transfer Station	1,698
Whistler other recycling	5,109
Whistler Composting Facility	2,510
Whistler Re-Use-It Center	309
Whistler Re-Build-It Centre	221
Pemberton Transfer Station Recycling	294
Lillooet Landfill Recycling (includes tonnes from Gold Bridge Transfer Station)	196
Devine Transfer Station Recycling	7
Extended Producer Responsibility Programs (estimated)	3,339
Total diversion	**20,144**
Total waste generation (disposal + diversion)	**47,110**
2012 Diversion rate (diversion/waste generation)	**43%**

The disposal data is based on scale data from SLRD and member municipality disposal facilities. Not all recycling and diversion activities have available data, so the estimated total diversion is considered to be conservative. Based on SLRD's estimated disposal and diversion quantities, the region achieved a diversion rate of 43% in 2012.

3.2 Composition Of Waste Disposed

The composition of the SLRD landfilled waste is estimated based upon several information sources including a regional waste composition study conducted by Dillon Consulting in 2012 as part of the Regional Composting Feasibility Study[4] and municipal data available for RMOW.

The purpose of the 2012 regional waste composition study was to estimate the proportion of potentially compostable organic materials in the garbage currently being landfilled. The study separated the garbage into 3 main categories: organics, recyclables, and residual waste. The organics waste stream was further broken down into: backyard compostable food, non-backyard compostable food, yard waste, and non-food organic. Table 3-2 shows the composition of the waste received at four different disposal locations separated by source. Figure 3-2 illustrates how the garbage is broken into the three primary categories (organics, recyclables, and residual waste).

Table 3-2: SLRD's Estimated Waste Composition at Four Disposal Locations shown as % by Weight (2012)

Location	Source	Food - Backyard Compostable	Food -Non Backyard Compostable	Yard Waste	Non Food Organic	Total Organics	Recyclables	Residuals
Squamish	Residential garbage	22	16	12	5	**56**	**13**	**32**
	Mixed Commercial garbage	11	26	0	8	**44**	**24**	**32**
Whistler	Residential garbage	16	14	5	4	**39**	**23**	**38**
	Commercial - Ski Resort Housing garbage	13	13	1	4	**31**	**39**	**30**
	Commercial - Grocery Store garbage	7	47	0	2	**56**	**21**	**23**
Lillooet	Residential garbage	10	11	9	3	**34**	**21**	**46**
	First Nations garbage	16	25	2	6	**49**	**25**	**25**
	Mixed Commercial garbage	11	10	1	5	**27**	**58**	**15**
Gold Bridge	Mixed Residential & Commercial garbage	16	26	2	7	**52**	**21**	**27**

[4] Dillon Consulting, Regional Composting Feasibility Study, Final Report, July, 2013.

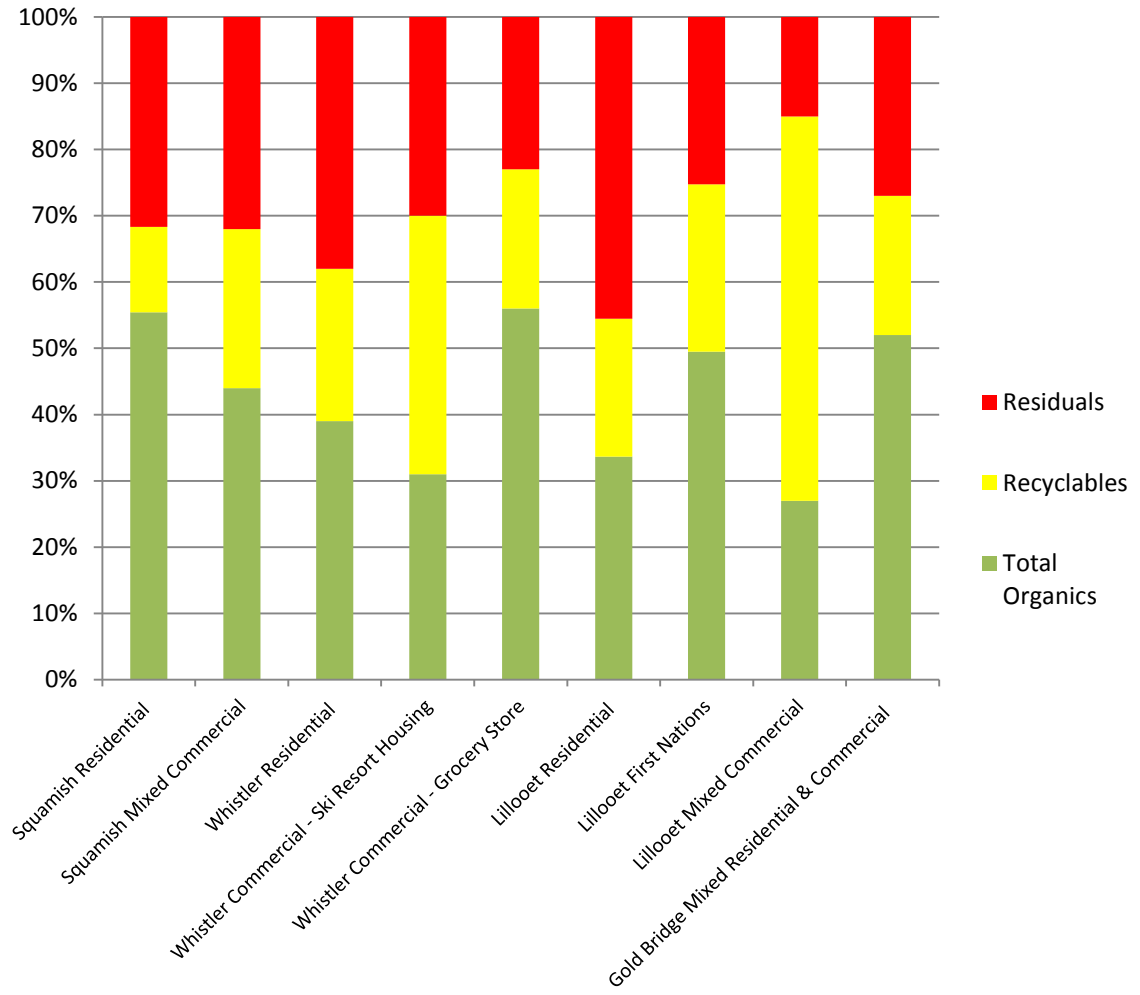


Figure 3-2: 2012 Estimated Waste Composition shown as the Proportion of Organics, Recyclables and Residual Waste (% by Weight)

The largest components disposed, by weight, are organic waste (average of 43% across sources), residual waste (30%) and recyclables (27%). The waste composition results were based on a one-week sort and do not represent seasonal variations in a waste stream.

To obtain additional insight into the potential composition of the waste currently sent to landfill, the results of a 2012 waste composition study conducted for the Regional District of North Okanagan (RDNO) were also considered. The RDNO is a combination of rural areas and smaller towns, similar to SLRD (with the exception of Whistler). As a result, the waste composition data from the RDNO is considered to have reasonable application for the SLRD's purpose. The RDNO's study provides a breakdown of the main waste composition categories, as shown in Figure 3-3. The RDNO study indicates that compostable organics constitute the highest percentage of waste landfilled (43%); and plastic and paper constituted the second highest percentage (13% and 12% respectively). Collectively, these three waste categories constituted at least 71 % of the residential waste stream[5].

[5] TRI Environmental Consulting Inc., 2012 Solid Waste Composition Study for Regional District of North Okanagan.

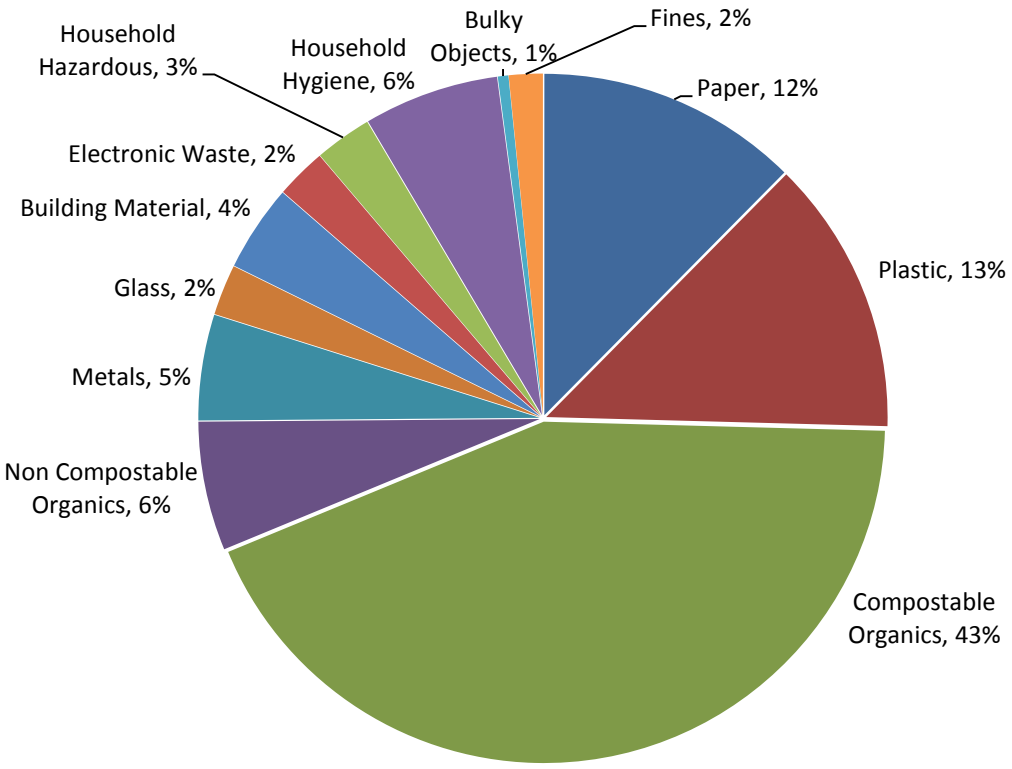


Figure 3-3: Waste Composition of Regional District Similar to the SLRD

3.2.1 RMOW Waste Composition

The RMOW has a unique demographic; it is a tourism community with a fluctuating population. The type and amount of waste produced in the municipality varies with number of visitors throughout the different seasons of the year. RMOW has conducted a variety of waste composition studies in 2004, 2010, 2011, and most recently in 2012. These studies indicated that the largest components of garbage disposed in Whistler are: compostables (25%), paper products (17%), wood waste (16%), plastics (8%) and metal (8%). The RMOW's 2013 Solid Waste Strategy states that 41% of Whistler's garbage could be diverted to the compost facility, and another 40% could be recycled[6].

[6] RMOW, Whistler Solid Waste Management Strategy, 2013.

4. EXISTING WASTE MANAGEMENT SYSTEM

The following sections provide a brief outline of the SLRD's existing solid waste management system. A detailed description of the system is included in the *Solid Waste and Resource Management Plan Stage 1 Report* available on the SLRD website.

Education and Promotion: The SLRD and member municipalities participate in educating residents and businesses about proper waste management. A range of waste management-related promotion and education programs are used to support all solid waste services. The SLRD provides financial support to the Recycling Council of BC (RCBC). RCBC provides a toll-free Recycling Hotline and an on-line searchable database called "Recyclepedia" that provides residents with information on waste management programs in the region.



In addition to the SLRD's initiatives, private and non-profit organizations in the region also engage in education and promotion activities to increase waste diversion.

Reduction and Reuse Programs: Across the SLRD communities there are several reduction efforts targeting edible unwanted food, the use of plastic bags, bottled water, and encouraging green purchasing and green building. Free stores are operated at the Pemberton, Gold Bridge and Devine transfer stations, as well as at the Lillooet landfill. There are also a number of commercial and non-profit stores in the region focused on reuse, repair or rental of equipment.

Extended Producer Responsibility Programs: The SLRD is a member of the BC Product Stewardship Council, a body that advocates on behalf of local government for effective product stewardship programs. SLRD staff has also engaged in consultation and discussions with stewardship programs in their plan development process. A wide range of EPR products are collected and recovered under the regulated programs. In addition, there are also voluntary programs operating in the SLRD, targeting things like bike tubes, obsolete agricultural pesticide, fridges, and old vehicles.

Back Yard Composting: The SLRD operated a residential composter distribution program, however this program ended due to lack of participation and the availability of composters at local retailers. Backyard composting is not widely encouraged in the SLRD due to concerns with attracting bears into residential areas. Some municipalities have addressed the issue in their bylaws.



Recyclables Collection: Curbside recycling collection is provided to single-family homes in Squamish, Furry Creek, Britannia Beach and on Squamish Nation's reserve lands. For residents in the rest of the SLRD, there are recycling, drop off facilities available in Squamish, Whistler, Pemberton, Lillooet, Devine and Gold Bridge.

In Squamish, Pemberton and Whistler, owners of multi-family buildings and industrial, commercial and

institutional (ICI) buildings can arrange for recycling collection via private collection service providers.

Compost Collection: Squamish residents receive seasonal curbside yard waste collection. Drop off facilities (available all year around) are available for yard waste in Squamish, Whistler, Pemberton and Lillooet. Britannia Beach and Furry Creek have seasonal drop off sites for yard waste. The ICI sector and multi-family buildings can arrange for their private collection service providers to collect organics in Squamish, Pemberton and Whistler.

Garbage collection: Curbside garbage collection is currently provided to residents in Squamish (municipal service), Lillooet (municipal service), Furry Creek and Britannia Beach (SLRD service), and on Squamish Nation reserve lands (Squamish Nation service). Private collection companies are available to provide residential garbage collection service on a subscription basis in Pemberton, Pinecrest and Whistler. Residents in other communities in the region and in rural areas self-haul their garbage to a transfer station, landfill or Whistler depot.

In Squamish, Pemberton, Whistler and Lillooet, multi-family and ICI buildings must hire a private garbage collection service.

Processing facilities for recyclables and compost: There are two Materials Recovery Facilities (MRFs) in the SLRD for sorting, processing and marketing of recyclables. The SLRD owns one at the Lillooet Landfill, which is operated by a private contractor. The other MRF is privately owned in Squamish.

There are two composting facilities located within the Region; a municipal facility in Whistler and a privately owned facility in Pemberton (Sea-to-Sky Soils). The SLRD recently established a yard waste composting capacity at the Lillooet Landfill.

Construction, demolition and land clearing waste management: Efforts have been made to encourage separation of the reusable and recyclable portions of construction and demolition (C&D) waste generated in the region. There are two C&D waste sorting and processing areas: one next to the Squamish Landfill, and the other at the Whistler Transfer Station. Source separation is encouraged through differential tipping fees charged at Squamish Landfill, Whistler Transfer Station, Lillooet Landfill and Gold Bridge Transfer Station.

Clean wood waste (i.e. untreated wood) is accepted at the Whistler Transfer Station, the Squamish Landfill and the Lillooet Landfill, where it is chipped for use in composting.



Source-separated scrap metal, cardboard and gypsum are collected and stored for recycling at all local government solid waste facilities in the SLRD (Lillooet, Pemberton, Squamish, and Whistler).

Land-clearing waste refers to tree waste, including trunks and stumps that are generated as a result of clearing land for development. In the SLRD, land-clearing waste is generally managed by grinding wood waste to incorporate into the soil, or for other uses such as composting or hog fuel.

Recovery and Residual Waste Management: Resource recovery means the extraction and utilization of materials and energy from the waste stream. None of the landfills within the Region are capturing landfill gas for energy recovery. Whistler's composting facility is recovering waste heat from the composting process and it is used to heat the compost operations building. Whistler is currently investigating the business case for producing biofuel from its current composting operation as a product for sale in addition, or as an alternative to, compost, which is the current saleable product.

Residual waste is the portion of the solid waste stream that is not managed through recycling, composting and/or recovery activities. It is commonly referred to as "garbage".

There are four publicly owned transfer stations operating in the region; the Whistler, Pemberton, Devine and Gold Bridge transfer stations. In addition, there are two depots located in Whistler, where residential garbage can be dropped off at no cost.

There are two operating landfills in the SLRD, the Squamish Landfill and the Lillooet Landfill. The planned closure date for the Squamish Landfill is 2018[7], however there is potential to expand the site to accommodate for waste disposal until 2059[8]. Since the closure of the Whistler Landfill, garbage from the Whistler transfer station and depots has been compacted and transported to Roosevelt Regional Landfill (also known as Rabanco) in Washington State, US.

First Nations are responsible for providing their own waste management systems, as regulated under the federal *Indian Reserve Waste Disposal Regulations*. In the SLRD, some communities have their own landfills, while others contract with commercially available collection and disposal services or they self-haul to SLRD or municipal facilities.

[7] Conestoga Rovers Associates, Lifespan Analysis Update - District of Squamish Landfill, 2013.
[8] Sperling Hansen Associates, Squamish Landfill Lifespan Analysis and Recommended Operational Improvements, 2011.

5. A NEW PLAN FOR THE SLRD

The components of the new plan focus on:

- Improving communication and collaboration. The new plan incorporates the recommendations of the SLRD Solid Waste and Resource Management Strategic Communications Plan that was approved by the SLRD Board in October 2014;
- Improving the use of existing recycling and composting services;
- Putting more emphasis on reduction (i.e. not creating waste that needs to be "managed"); and
- Identifying the process to establish long-term disposal capacity for District of Squamish, as well as the communities that use the DOS landfill for disposal.

The sections of the Plan are presented as follows:

- Communications
- Reduction and reuse
- Extended producer responsibility
- Waste diversion through policy
- Residential waste management
- Commercial and multi-family waste management
- Organic waste management
- Construction and demolition waste management
- Landclearing waste management
- Resource recovery
- Residual waste management
- Illegal dumping
- Wildlife and waste management
- Land use planning
- Monitoring of Greenhouse Gas Emissions
- Authority over waste management activities in the SLRD
- Plan Implementation
- Plan targets
- Monitoring and measurement
- Plan flexibility

A summary of the new initiatives is presented at the end of each section. For each new initiative, the summary table includes information under the following headings:

- Responsibility – indicating which organization(s) will be responsible to implement the initiative;
- Implementation – indicating the year(s) in which the initiative will be implemented;
- Estimated staffing requirements – indicating the estimated hours of SLRD staff time on an annual basis that the initiative will require;
- Estimated capital cost – referring to estimated SLRD capital expenditure requirements; and
- Estimated operating cost – referring to estimated SLRD operating expenditure requirements.

6. COMMUNICATIONS

During the first stage of this planning process, the top priorities for updating the Solid Waste and Resource Management Plan were identified. Some of these priorities relate to communications, specifically:

- Moving from awareness to action (behaviour change)
- Improving on existing reuse, recycling and composting activities
- Educating and improving awareness.

Consequently, many of the new initiatives in this plan are focused on communications. In October 2014, the Regional Board approved the Solid Waste and Resource Management Strategic Communications Plan prepared by Ecoinspire. The Strategic Communications Plan is intended to meet the waste reduction and diversion communications needs of the SLRD over the next five years by:

- Building on existing organizational objectives and strengths of the SLRD and partner organizations;
- Providing a unifying brand that harmonizes waste reduction efforts across the region;
- Focusing on proven audience-focused social marketing technique and behavioral change science;
- Identifying specific belief, behavior, and knowledge objectives, and a practical action plan to achieve them; and
- Creating an approach that can be replicated to solve other social, environmental or economic challenges.

The Strategic Communications Plan provides detailed information on the process and mechanisms for developing and implementing a successful communications plan and is included in Appendix A for reference. Implementing the Strategic Communications Plan will ensure that the waste reduction and diversion goals identified in the SLRD SWRMP (current and updated versions), as well as the waste reduction and diversion goals of member municipalities, are achieved sooner and with longer lasting effects.

Communication and education are critical support mechanisms to successful waste diversion. The SLRD already provides 20 workshops per year to schools throughout the SLRD and conducts an Earth Day event. Additionally, the SLRD has provided funding to AWARE's Zero Waste Station at the Whistler Farmers Market and there is on-line information provided by the SLRD, member municipalities, recycling collection companies and local environmental organizations.

To enhance current communication initiatives, improve on waste diversion programs and support new diversion actions, the following communications initiatives are planned:

1. The SLRD and member municipalities incorporate community based social marketing (CBSM) into solid waste management endeavors with a significant focus on behaviour change. CBSM is an approach to program promotion and education that encourages high rates of effective participation and long-term behavior change. As outlined in the Strategic Communications Plan, a CBSM plan should include 6 strategic phases (refer to Appendix A for details on each of these phases):
    - Analysis
    - Strategy development
    - Program and communication design
    - Pretesting
    - Implementation
    - Evaluation

2. Develop a Communications Strategy focused on reducing food scraps in waste from single-family homes. This will be the first communications strategy developed under the new SWRMP. The approach and tools used in this strategy are intended to be used for future strategies. It is anticipated that these campaigns could be a collaborative effort by SLRD, Squamish, Whistler, Pemberton, Lillooet, First Nations, and possibly other stakeholders.
3. Establish a mechanism for sharing, standardizing and coordinating communication and education efforts amongst organizations involved in providing waste management services, such as an annual strategic communications planning session. The SLRD would facilitate this collaboration of Squamish, Whistler, Pemberton, Lillooet, First Nations, and other stakeholders as appropriate. Through doing so, the desired outcomes can be harmonized and efficiencies improved.

Love this place. Reduce your waste.



4. Implement the logo and tagline "Love this place. Reduce your waste" developed for SLRD solid waste communications (part of the Communication Strategy).
5. Develop a communications strategy for ICI and multi-family properties to improve the performance of recycling and organic waste diversion.
6. Develop a communications strategy for tourist accommodations to improve the performance of recycling and organic waste diversion.
7. Coordinate local government efforts to establish internal zero waste programs, so that the SLRD and member municipalities can lead by example. See the ICI and Multi-family section for more information on this initiative.
8. Expand the SLRD's zero waste workshops beyond schools to other public venues.
9. Encourage and support "bear smart" backyard composting.
10. Increase public awareness of EPR take back programs available in the SLRD.
11. Promote construction and demolition waste reuse and recycling opportunities.

Table 6-1 below summarizes the new communication initiatives and resource requirements such as staffing and financial implications. An initiative not listed below indicates that there are no anticipated resource requirements.

Table 6-1: Summary of Communications initiatives

New Initiative	Responsibility	Implementation	Estimated Staffing Requirements (hrs/yr)	Estimated Capital Cost	Estimated Operating Cost
Incorporate community-based social marketing into major campaigns	SLRD, municipalities	2015 onwards	included under individual initiatives	included under individual initiatives	included under individual initiatives
Residential food scraps reduction campaign	SLRD, municipalities	2015-2017	1000	$ -	$ 66,000 over 3 yrs
ICI and multi-family communication strategy	SLRD, municipalities	2017-2018	1000	$ -	$ 30,000 over 2 yrs
Tourist accommodation communication strategy	Whistler, Squamish	2019-2020	500	$ -	$ 20,000 over 2 yrs

New Initiative	Responsibility	Implementation	Estimated Staffing requirements (hrs/yr)	Estimated capital cost	Estimated operating cost
Construction & demolition communication strategy	SLRD, municipalities	2019-2020	500	$ -	$ 15,000 over 2 yrs
Coordination of local governments' internal zero waste initiatives	SLRD, municipalities	2015 -2016	40	$ 0	$ 1000 over 2 yrs
Expansion of zero waste workshops	SLRD, municipalities	2015 onwards	0	$ -	$ 5,000 annually
Bear Smart backyard composting	SLRD, municipalities	2015 onwards	20	$ -	$ 1,000 every 3rd year
EPR awareness	SLRD, municipalities	2015 onwards	20	$ -	$ 1,000 every 3rd year
Promote local construction and demolition waste reuse/recycling opportunities	SLRD, municipalities	2015 onwards	40	$ -	$ 1,000 every 3rd year

7. REDUCTION AND REUSE

Reduction and reuse initiatives prevent waste from entering the waste management system resulting in conservation of resources. Although reduction and reuse initiatives are at the top of the waste management hierarchy, historically solid waste management strategies have not focused on these initiatives. As noted in the previous sections, one of the priorities for this planning process is improving on existing reuse, recycling and composting activities.

Real change will ultimately have to be driven from the consumer level. This can be driven by consumer demand for more durable goods, and also through increased consciousness regarding what and how much we consume. The SLRD and member municipalities can support a change in mindset through encouraging the reuse of goods before they become waste. This is currently being done through:

- Whistler's Reuse It and Rebuild It Centres
- Squamish's Reuse It Fair
- Free stores at the all SLRD transfer stations (Pemberton, Gold Bridge, Devine) and the Lillooet Landfill

In addition, there are other reuse opportunities in the SLRD available through non-profit initiatives such as Squamish ReBuild and Pemberton Re-Use-It, consignment and thrift stores, on-line services such as Facebook, Craigslist and Kijiji, and many rental, repair and maintenance shops.

The SLRD and member municipalities will be able to promote the "reduce and reuse" mindset shift through undertaking the following activities:

1. Develop campaigns to encourage reduction and reuse behavior. These campaigns are discussed in the Communications section. The initial focus would be on reducing the amount of food scraps in residential waste.
2. Establish a Re-Build-It Centre type of facility in Pemberton where usable construction, demolition and renovation discards can be stored for reuse.
3. Establish a Re-Build-It Centre type of facility at Lillooet Landfill.
4. Encourage bear smart backyard composting.
5. Establish a fund to foster local zero waste initiatives that would be administered by the SLRD. It is anticipated that applications for funding would be received and reviewed on an annual basis by the Plan Monitoring Advisory Committee (see Section 23 for additional information on this committee). The committee would collaborate on establishing criteria for eligibility for funding.

Table 7-1 below summarizes the new reduction and reuse initiatives and their associated resource requirements such as staffing and finances. Resource requirements for bear smart composting have been included under Communications.

Table 7-1: Summary of new reduction and reuse initiatives

New Initiative	Responsibility	Implementation	Estimated Staffing Requirements (hrs/yr)	Estimated Capital Cost	Estimated Operating Cost
Campaigns to encourage reduction and reuse behavior	Incorporated into Communication Initiatives				
Re-Build-It Centre type of facility in Pemberton	SLRD, Pemberton	2017	40	$ -	to be determined
Re-Build-It Centre type of facility at Lillooet Landfill	SLRD	2018	60	$ 15,000	to be determined
Bear smart backyard composting	Incorporated into Communication Initiatives				
Fund for local zero waste initiatives	SLRD	2017	15	$ -	$ 5,000 annually

8. WASTE DIVERSION THROUGH POLICY

Two policy approaches to encouraging diversion were explored during this planning process: variable tipping fees and disposal bans.

Variable tipping fees refers to the application of different disposal rates for different types of waste at landfills and transfer stations. For example, in the SLRD, tipping fees on recyclable and compostable materials are generally lower than the tipping fee for garbage. Additionally, loads of garbage that contain an excessive amount of recyclables can be charged a tipping fee higher than the one for regular garbage. Variable tipping fees act as a financial incentive to source-separate these types of materials from the regular garbage. This is particularly effective for businesses and construction/demolition projects.

Although variable tipping fees are in effect throughout the SLRD, how they are applied varies from facility to facility. The SLRD and member municipalities aim to use variable tipping fees to target the same waste types for source-separation (based on the availability of local alternatives) so that the policy is more consistent throughout the region. Waste types that could be considered include:

- Cardboard
- Metal
- Yard waste
- Food waste
- Clean wood waste
- Drywall
- Products covered under an Extended Producer Responsibility (EPR) program

A similar policy approach involves banning specific materials from disposal. Disposal bans are typically implemented using a bylaw that specifies which waste materials must be collected separately from garbage for the purpose of recycling or composting. Bans are also used to prohibit hazardous materials from entering landfills. They are enforced at the point where garbage is deposited at a landfill or transfer station and non-compliance with the bylaw results in the deliverer of the garbage being ticketed or having a surcharge placed on the tipping fee.

Disposal bans, which are not currently a policy tool used by in the SLRD, will only be implemented if variable tipping fees are not as effective at achieving the desired diversion behaviours. Some exceptions are anticipated when a specific waste stream is determined to warrant the establishment of a disposal ban prior to determining if variable tipping fees would be effective. To this end, it is also planned that landfill bans on most EPR products be established when and where local collection services are available for those products. The specific list of EPR products to be banned from garbage will be determined through collaborative dialogue between SLRD and the municipalities of Squamish and Whistler. This initiative is discussed further in the next section on EPR (Section 9).

Creating greater consistency in terms of disposal policies throughout the southern part of the SLRD will require that local government representatives meet on a regular basis (at least annually) to review existing policies and consider opportunities to enhance the effectiveness of their policies. Table 8-1 lists the new policy initiatives and their implications.

Table 8-1: Summary of new waste diversion policy initiatives

NEW INITIATIVE	RESPONSIBILITY	IMPLEMENTATION	ESTIMATED STAFFING REQUIREMENTS (HRS/YR)	ESTIMATED CAPITAL COST	ESTIMATED OPERATING COST
Establish regionally consistent tipping fee categories	SLRD, Whistler, Squamish. Coordinated by SLRD.	2016	10 hrs annually for collaboration and revisions to tipping fee schedule	$ -	$ -

9. EXTENDED PRODUCER RESPONSIBILITY

Use of Extended Producer Responsibility (EPR) as a policy tool aims to shift the responsibility for end-of-life management of products (physically and economically) to the producer and away from municipalities to create an incentive for producers to include environmental considerations in design of products. EPR programs in BC are mandated by Recycling Regulation 449/2004, under the Environmental Management Act. The regulation requires producers of the designated products to develop a program for their collection and recovery of materials and to consult stakeholders (including local governments) when developing their plans. The Ministry of Environment, who is responsible for the regulation, requires the product stewards to file annual reports on the materials collected and recovered, and to breakdown collection volumes by regional district where possible.

Table 9-1 lists the current EPR programs in BC. Most of these programs operated "take back" programs where consumers can return the used product to a depot or to the retailers. In the SLRD, several EPR programs have arranged for municipal and SLRD landfills and transfer stations to operate as take-back depots. It is planned that local governments continue to provide EPR take-back services, as needed, to ensure local access to these programs by residents. Local government participation may be dependent on the level of cost recovery that is offered by the EPR program to the SLRD or member municipality to provide the service.

Table 9-1: Current EPR programs in BC

PRODUCT CATEGORY	PROGRAM(S)
Antifreeze, Used Lubricating Oil, Filters and Containers	BC Used Oil Management Association
Beverage Containers	Encorp (non-alcoholic and wine, spirits, coolers and import beer in non-refillable containers)
	Brewers Distributed Limited (fillable and canned beer)
Electronics and Electrical	Call2Recycle (batteries and cell phones)
	Canadian Wireless and Telecommunications Association (CWTA) (batteries and cell phones)
	Electronics Products Recycling Association (EPRA) (electronics: Computers, televisions, audio-visual, medical equipment, office equipment)
	LightRecycle (lamps and lighting equipment)
	Major Appliance Recycling Roundtable (MARR) (large appliances)
	Outdoor Power Equipment Institute (OPEI) (Outdoor Power Equipment)
	Canadian Electric Stewardship Association (CESA) (small appliances, power tools, sports and exercise equipment, hobby, craft)
	AlarmRecycle (smoke and carbon monoxide alarms)
	Switch the 'Stat (thermostats)
	Canadian Brandowner Residual Stewardship Corporation (toys –electric and electronic)
Lead Acid Batteries	Canadian Battery Association
	Interstate Battery System
Packaging and Printed Paper (residential)	Multi-Material BC
Paint and Solvents and Flammable Liquids, Gasoline and Pesticides	Product Care
Pharmaceuticals	Health Product Stewardship Association
Tires	Tire Stewardship BC

The SLRD is a member of the BC Product Stewardship Council (BCPSC), a body that advocates on behalf of local government for effective product stewardship programs. As a member of BCPSC, it is planned that SLRD:

- Liaise with member municipalities to share information on the outcomes of the BCPSC meetings and provide information on other EPR-related initiatives.
- Encourage BCPSC to invite First Nations to participate on the Council.

SLRD staff also engage in consultation with stewardship programs in their plan development process, and advocates that these programs provide reasonable service levels for the SLRD.

To reinforce that EPR products are a private sector responsibility and they should not be landfilled in the SLRD, specific EPR products should be added to the list of materials that are banned from disposal as garbage. This ban should be implemented at landfills and transfer stations only when a take-back program for the targeted EPR products is locally available. A list of EPR products that could be banned from landfilling includes:

- Lead-acid batteries
- Appliances
- Paints and solvents
- Pesticides
- Household batteries – single use and rechargeable
- Electronics
- Motor oil and filters
- Pharmaceuticals
- Tires

During the planning process, it was noted that more awareness of the breadth of EPR programs and drop off locations is needed. SLRD and municipal staff intend to work with the product stewardships organizations to support increased awareness throughout the SLRD as part of the overall Communications strategy discussed in Section 6.

Table 9-2 below summarizes the new EPR related initiatives and their associated resource requirements such as staffing and finances.

Table 9-2: Summary of the new EPR related initiatives

New Initiative	Responsibility	Implementation	Estimated Staffing requirements (hrs/yr)	Estimated capital cost	Estimated operating cost
Landfill bans on specified EPR materials/products	SLRD, Squamish, Whistler	2016	40 hrs for bylaw revision and communications	$ -	$ -
Increase awareness of EPR programs and services	Incorporated into Communication Initiatives				

10. RESIDENTIAL WASTE MANAGEMENT

This section describes collection services provided by local government to residents, including the collection of garbage, recyclables and compostable waste. Residential services *currently* provided in the SLRD include:

District of Squamish	Door-to-door collection of garbage, recycling and seasonal yard waste (curbside food waste to be collected with yard waste starting in 2015)
Resort Municipality of Whistler	Depot-based collection of garbage, recycling and food waste
District of Lillooet	Door-to-door collection of garbage
SLRD	Door-to-door collection of garbage and recycling in Britannia and Furry Creek
	Drop off facilities for seasonal collection of yard waste in Britannia and Furry Creek
	Depot-based collection of garbage, recycling and food waste in Pemberton
	Depot-based collection of garbage, recycling and yard waste in Lillooet
	Depot-based collection of garbage and recycling for Electoral Areas A, B and C

Note that the services above do not include collection services for multi-family buildings. For the purposes of waste collection, multi-family buildings are treated as commercial buildings. Refer to Section 11 for a list of actions related to commercial and multi-family buildings.

In addition to maintaining the current residential waste collection system, the following initiatives are planned:

- Implement curbside collection services in Pemberton and surrounding area. This process will begin with community consultation to determine the community's support for a collection service, the possible breadth of the service (garbage and/or recycling and/or organic waste collection) and the collection protocols (e.g. types of collection containers, frequency of collection). If there is support for a curbside service, it is expected that the service requirements for the Pemberton transfer station may be reduced and that there will be costs savings associated with operating the transfer station.
- Assess the provision of curbside recycling and yard waste collection services in Lillooet. District of Lillooet intends to undertake an assessment of the cost-benefit of adding curbside recycling and yard waste collection to their existing curbside collection service (currently for garbage only). One of the considerations for implementing this service may be the availability of funding for the recycling service through Multi-Material BC or other producer responsibility organization.

These initiatives are intended to achieve following objectives:

- To reduce the amount of residential garbage sent to landfill
- To provide services and incentives that encourage diversion of recyclable and compostable discards

Table 10-1 below summarizes the new residential waste initiatives and their associated resource requirements such as staffing and finances.

Table 10-1: Residential Waste Management Initiatives

New Residential Initiatives	Responsibility	Implementation	Estimated Staffing requirements (hrs/yr)	Estimated capital cost	Estimated operating cost
Curbside collection services in Pemberton and surrounding area					
a. Community consultation	SLRD and Pemberton	2015	80	$ -	$ 2,500
b. Implementation	SLRD or Pemberton	2016	150	$ -	$ 10,000
c. On-going collection service	SLRD or Pemberton	2017	40	to be determined	to be determined
Assess provision of curbside recycling and / or yard waste collection services in Lillooet	Lillooet	2016	20	$ -	$ -

11. COMMERCIAL AND MULTI-FAMILY WASTE MANAGEMENT

Throughout the SLRD, private collection companies are contracted to collect their garbage, recycling and organic waste from commercial, institutional and multi-family residential buildings. During Stage 1 of the planning process, it was noted that in communities where recycling and organic waste collection services are offered, not all businesses and multi-family buildings subscribe to these services. Waste composition data presented in the Stage 1 report indicates the 24% of Squamish's commercial garbage is recyclable, 39% of Whistler's ski resort accommodation garbage is recyclable, and 21% of commercial grocery store garbage is recyclable. This data indicates that there is a significant opportunity to increase diversion by improving the use of existing recycling services.

Current local government approaches to encouraging recycling and composting in commercial and multi-family settings include:

- Variable tipping fees at disposal facilities in Squamish, Whistler and the SLRD to encourage support source-separation and diversion (discussed in Section 8);
- Allowing small multi-family waste generators in Squamish to participate in the residential curbside collection service on a voluntary basis; and
- Implementing a bylaw in Whistler that makes recycling and organics collection from all multi-family and commercial buildings mandatory (the collection service will continue to be provided by private waste collection companies).

In addition to these approaches, the following initiatives are planned:

1. Develop a communications plan for the multi-family residential and commercial sectors to increase diversion of recyclable and compostable waste. This initiative is part of the Communication strategy described in Section 6. Possible initiatives to be considered include:
    - Implementation of a bylaw similar to Whistler's mandatory bylaw in other areas of the SLRD.
    - Like Squamish, allow small multi-family and commercial waste generators to participate in residential curbside recycling and organic waste collection service, where these services exist.
2. Improve recycling at tourist accommodations. This initiative would require the development of a communications strategy using community-based social marketing principles and is incorporated into the Communications initiatives described in Section 6.
3. Improve recycling and waste minimization at events. This initiative would include the development of common Event Guidelines that could be used as a template by local governments in the SLRD, as well as requiring the organizers of large events to submit a Solid Waste and Resource Management Plan for large events.
4. Require new multi-family and commercial developments (and significant re-developments and renovations) to design for 3 stream waste management (garbage, recycling, composting) storage and collection. The SLRD can coordinate the development of model bylaw language that could be used by the municipalities and would allow for greater consistency across the region.
5. Local governments should provide leadership to the ICI sector lead by working together to implement internal zero waste initiatives and procurement policies that support the waste minimization and diversion. This collaborative effort will be coordinated by the SLRD and is considered to be part of the broader communications strategy described in Section 6.

These initiatives are intended to meet the following objectives:

- Moving from awareness to action (behaviour change)
- Increasing the diversion of organic waste
- Improving on existing reuse, recycling and composting activities.

Table 11-1 below summarizes the new commercial and multi-family initiatives and resource requirements such as staffing and financial implications.

Table 11-1: New Commercial and Multi-Family Waste Management Initiatives

New Initiative	Responsibility	Implementation	Estimated Staffing Requirements (hrs/yr)	Estimated Capital Cost	Estimated Operating Cost
Commercial and multi-family communications plan	Incorporated into Communication Initiatives				
Improve recycling at tourist accommodations	Incorporated into Communication Initiatives				
Recycling and waste minimization at events	SLRD, municipalities. Coordinated by Whistler.	2016 - ongoing	20 to coordinate in Yr 1. 10 hrs/yr for each local government to implement and maintain	$ -	$ 1,000
Require new developments to design for 3 stream waste management	SLRD, municipalities. SLRD to coordinate.	2016 - ongoing	40 hrs to coordinate in Yr 1. 20 hrs for each local government to implement	$ -	$ 2,000
Local government leadership	Incorporated into Communication Initiatives				

12. ORGANIC WASTE MANAGEMENT

There has already been significant investment in organics processing facilities in Whistler (the Whistler composting facility), Pemberton (Sea to Sky Soils) and the yard waste composting facility at the Lillooet landfill. In addition, there are a range of collection services in place:

- Food waste drop offs in Whistler, Squamish and Pemberton.
- Seasonal curbside yard waste collection in Squamish.
- Yard waste drop offs in Squamish, Whistler, and Lillooet (Note: there is a private depot in Pemberton).
- Seasonal yard waste drop off in Britannia Beach and Furry Creek
- Curbside kitchen scraps collection in Squamish (starting in 2015).

However, the SLRD waste composition data presented in the Stage 1 report indicates that, by weight, organic waste (primarily food) remains a significant component of what is currently landfilled. Consequently, establishing mechanisms to capture organic waste for other purposes (e.g. compost, energy) has the greatest potential for waste diversion and has been identified as a priority for the updated SWRMP.

The following initiatives are intended to maximize the diversion of organic waste:

- Investigate the potential for curbside food scraps and yard waste collection for Pemberton and the surrounding area. See the Residential waste management chapter (Section 10) for more details on this planned initiative.
- Assess the potential for curbside yard waste collection for Lillooet. See the Residential waste management chapter (Section 10) for more details on this initiative.
- Consider the use of financial incentives (e.g. variable tipping fees) to encourage the diversion of yard waste to local yard waste depots and composting sites, help protect air quality and, at the same time, encourage residents to remove excess woody debris around their home. This initiative can be incorporated into the *variable tipping fee coordination* initiative described in the Policy section (Section 9).

Table 12-1 summarizes the new organic waste management initiatives and resource requirements such as staffing and financial implications.

Table 12-1: New Organic Waste Management Initiatives

NEW INITIATIVE	RESPONSIBILITY	IMPLEMENTATION	ESTIMATED STAFFING REQUIREMENTS (HRS/YR)	ESTIMATED CAPITAL COST	ESTIMATED OPERATING COST
Investigate organic waste collection in Pemberton	Incorporated into Residential Waste Management Initiatives				
Assess yard waste collection in Lillooet	Incorporated into Residential Waste Management Initiatives				
Financial incentives to encourage diversion of yard waste	Incorporated into Policy Initiatives				

13. CONSTRUCTION AND DEMOLITION WASTE MANAGEMENT

Waste generated by construction, demolition and renovation projects includes a wide variety of waste materials, including cardboard, plastic, metal and wood. A large portion of the waste is typically reusable, recyclable or can be used as hog fuel in accordance with MoE legislation, regulations and requirements, and therefore this waste stream represents a significant opportunity for waste diversion. The quantity of construction, demolition and renovation waste generated is quite variable compared to other waste streams as it tends to be directly linked with the level of local economic activity.

Local governments encourage separation of the reusable and recyclable portions of construction and demolition (C&D) waste generated in the region, including:

- Applying variable tipping fees;
- Supporting non-profit building material reuse centres in Whistler and Squamish; and
- Recovering of clean wood waste from mixed loads of C&D waste at the Whistler transfer station.

In addition to maintaining these activities, the following new initiatives are planned:

- Establish a Re-Build-It Centre type of facility in Pemberton and Lillooet. These initiatives are described under the Reduce & Reuse section
- Actively promote local C&D waste reuse and recycling opportunities
- Establish a communications plan targeting the construction, demolition and renovation industry that would reduce the amount of C&D waste sent to landfill. Coordinated by the SLRD, possible components of this plan could include:
    - Establishing a mechanism requiring large construction projects to commit to reusing and/or recycling their C&D waste materials as a condition of receiving a building/demolition/renovation permit;
    - Reviewing and revising permitting processes to reduce barriers to deconstruction and/or the complete re-use of a building at a different location (i.e. house moving); and
    - Establishing a 3Rs education and information program focused on construction, demolition and renovation contractors.

Table 13-1 summarizes the new C&D waste management initiatives.

Table 13-1: New C&D Management Initiatives

NEW INITIATIVE	RESPONSIBILITY	IMPLEMENTATION	ESTIMATED STAFFING REQUIREMENTS (HRS/YR)	ESTIMATED CAPITAL COST	ESTIMATED OPERATING COST
Establish a Re-Build-It Centre type of facility in Pemberton and Lillooet	Incorporated into Reduction and Reuse Initiatives				
Promote local C&D waste reuse and recycling opportunities	Incorporated into Communication Initiatives				
Establish a communications plan targeting the C&D industry	Incorporated into Communication Initiatives				

14. LANDCLEARING WASTE MANAGEMENT

Landclearing waste refers to tree waste, including trunks and stumps that are generated as a result of clearing land for development. In the SLRD, land-clearing waste is generally managed in one of the following manners:

- A grinder is brought to the site that was cleared and the ground wood waste is left on-site and incorporated into the soil;
- The wood waste is hauled to a wood waste management site that will grind the wood waste for a subsequent use (composting, hog fuel, etc.);
- At the Lillooet Landfill it is collected bi-annually – brush is chipped and large woody debris is burned or landfilled; and
- At the Gold Bridge Transfer Station it is accepted for fire reduction programs and burned by the Ministry of Forests, Lands and Natural Resources.

In recent years, there has been an emphasis on regularly clearing woody debris from around homes and other buildings to mitigate the risk and spread of forest fires. As a result, residents are encouraged to burn this debris or deliver it to a local facility. Information on burning safely and the Open Burning Smoke Control Regulation are promoted to the public.

There are no new initiatives associated with landclearing waste management planned.

15. RESIDUAL WASTE MANAGEMENT

Residual waste is the portion of municipal solid waste that remains after the diversion of materials destined for reuse, recycling, or composting. Residual waste can be managed through a combination of resource recovery and disposal technologies. Currently all residual waste in the SLRD is managed through landfilling.

15.1 RESOURCE RECOVERY

Resource recovery technologies involve the extraction and utilization of materials and/or energy from the residual waste stream prior to disposal and can provide an opportunity to maximize the use of the resources embedded in residual waste. Extraction of materials is typically done through mixed waste material recovery facilities (MRFs). Extraction of energy is typically done through thermal treatment of waste such as mass burn incineration, pyrolysis, or gasification.

These technologies were assessed for application to the SLRD's residual waste stream as part of the planning process. Specifically, mixed waste processing and waste-to-energy were considered. The assessment determined that: in order for these options to be economically feasible, both mixed waste processing and waste-to-energy require large volumes of waste, much greater than the tonnes available in the SLRD. Consequently, the consultants recommended the SLRD and member municipalities:

- Follow the developments in other regions (e.g. Metro Vancouver and Fraser Valley Regional District) that are exploring resource recovery options,
- Assess new opportunities as they arise or become cost-effective for lower tonnages, and
- Consider out-of-region resource recovery facilities as potential future solutions for managing a portion of the region's residual waste stream, as long as these options do not compromise local waste diversion initiatives.

During the community consultation phase of the planning processing, the Resort Municipality of Whistler and the District of Squamish both passed resolutions indicating that they do not support the thermal treatment of mixed waste as an option for future management of residual waste. Consequently, the above recommendations related to resource recovery will be pursued under this plan, but mixed waste thermal treatment will be excluded from further consideration. It is anticipated that the SLRD will act as a facilitator in the on-going exploration of resource recovery as a residual waste management option in the future.

15.2 DISPOSAL

The long-term vision for disposal in the SLRD is to establish infrastructure to manage residual waste that addresses the following issues:

- Establishing long term residual waste disposal capacity for Squamish,
- Developing strategies to meet the Regions' long term disposal needs for residual waste, and
- Continued regulatory compliance at all residual waste management facilities.

Residual waste is currently received at several transfer stations and landfills within the Region, as outlined in Table 15-1.

Table 15-1 - Summary of Garbage Receiving Facilities in the SLRD

LOCATION	SERVICES AREA(S)	DESTINATION OF RESIDUAL WASTE RECEIVED
Squamish Landfill	Squamish, Pemberton and Areas C,D	Squamish Landfill
Whistler Transfer Station	Whistler, Pemberton and Areas C,D	Rabanco Regional Landfill (Washington)
Whistler Function Junction Depot	Whistler, Pemberton and Areas C,D	Rabanco Regional Landfill via Whistler Transfer Station
Whistler Nester's Depot	Whistler, Pemberton and Areas C,D	Rabanco Regional Landfill via Whistler Transfer Station
Pemberton Transfer Station	Pemberton and Area C	Squamish Landfill
Lillooet Landfill	Lillooet and Area A,B	Lillooet Landfill
Devine Transfer Station	Area C	Squamish Landfill
Gold Bridge Transfer Station	Area A	Lillooet Landfill

Currently, all regional facilities meet provincial guidelines and regulatory requirements.

In order to ensure sustained landfill capacity and continued regulatory compliance at all residual waste management facilities, the following activities are planned:

1. Expand Squamish Landfill to increase the capacity of the landfill. Within the current disposal management operations, the DOS landfill will reach capacity in 2018. An expansion can include a number of steps:

    a) Expand the landfill laterally to the east. This expansion would provide Squamish with up to 46 years of additional landfill life. However, it may be several years before it is determined whether the lateral expansion is a viable option. For example Squamish needs to consult with Squamish First Nation. This option is also dependent on other expansion options, as described below.
    b) Expand the landfill vertically on their existing site by constructing retaining walls at the base of the existing landfill that allow the landfill to be built higher (i.e. a vertical expansion). This option has received approval-in-principle by Squamish Council. This could gain 13-14 years of additional capacity and would only accommodate the needs of current users (i.e. primarily Squamish). Whistler would continue to export their solid waste out of the region.
    c) If the Squamish Landfill receives approval to expand laterally, Squamish, with support from Whistler, Pemberton and SLRD should review the opportunity to designate the Squamish Landfill as a regional landfill. Whistler has indicated their intent to send their waste to the Squamish Landfill on the condition that the site meets BC Landfill Criteria guidelines and that the cost of using the disposal facility is cost competitive with out-of-region options.

2. Establish a working group made up of SLRD, Whistler and Squamish staff with the responsibility of evaluating residual waste management options and reporting to councils and the SLRD Board. This group would continually evaluate in and out of region options for shared disposal services including waste transfer. The group would work closely with First Nations communities and Aboriginal Affairs and Northern Development Canada to manage residual waste cooperatively. Objectives of the group would include lowering residual waste management costs for all and establishing secure long term options for the region.

    If a lateral expansion of the Squamish Landfill appears unlikely, SLRD, Whistler, Squamish and affected First Nations need to evaluate long term in and out of region options for shared services. In order to move waste

to an out-of-region waste management facility, a large-scale transfer station would need to be constructed either at the landfill or another location within Squamish.

3. Evaluate the requirements for the Lillooet Landfill to remain compliant with new BC Landfill Criteria, once the Criteria are finalized. This initiative would be conducted by a qualified consultant.

Table 15-2 details the implications of these recommendations.

Table 15-2: Residual Waste Initiatives

New Residual Waste Management Initiatives	Responsibility	Implementation	Estimated Staffing requirements (hrs/yr)	Estimated capital cost	Estimated operating cost
Expand Squamish Landfill	Squamish	To be determined if approvals are granted	0 (only DOS staffing required)	$ -	$ -
Establish a working group with the responsibility of evaluating residual waste management options	SLRD, and member municipalities	2016	20	$ -	$ -
Evaluate the requirements for the Lillooet Landfill to remain compliant with new BC Landfill Criteria	SLRD	To commence once the Criteria are finalized	20	$ -	$ 15,000 for assessment

16. ILLEGAL DUMPING

Illegal dumping is an issue in many areas of the SLRD, as it is across BC. Although quantities are not significant, illegally dumped waste in the bush and in alleyways is unsightly and can, on occasion, be an environmental hazard. Cleaning up illegal dump sites can also be a costly endeavor for both public and private landowners.

The SLRD and member municipalities regularly support organizations that undertake clean-ups of illegal dump sites or litter. There are bylaws in place throughout the SLRD prohibiting illegal dumping but enforcement is challenging. Consequently, a region-wide illegal dumping strategy will be developed that can better harness the collective resources available in the region. The development of this strategy could be led by the SLRD but it is anticipated that the following stakeholders may also get involved:

- Municipalities
- Forestry companies
- Back-country user groups (mountain bikers, fishermen, etc.)
- First Nations
- BC Hydro
- Ministry of Environment Conservation officers

This strategy may include the following actions:

a. Conduct a survey to determine the most common materials illegally discarded and the most frequent locations, providing a basis for types of materials and "hot spots" on which to build an education campaign and clean-up program;

b. Conduct targeted outreach campaigns if/when specific "problem" groups can be identified;

c. Establish a reporting mechanism where residents and outdoor groups can report dumping location, to be targeted for contracted / volunteer cleanup;

d. Post signs at frequent illegal dumping sites to educate about reporting and prosecuting dumpers; and

e. Establish enforcement capacity.

Table 16-1 outlines the estimated timing and resource requirements to establish and implement a regional illegal dumping strategy.

Table 16-1: New Initiatives to Prevent Illegal Dumping

NEW INITIATIVE	RESPONSIBILITY	IMPLEMENTATION	ESTIMATED STAFFING REQUIREMENTS (HRS/YR)	ESTIMATED CAPITAL COST	ESTIMATED OPERATING COST
Regional Illegal Dumping Strategy	SLRD, municipalities		200	$ 0	$ -
Survey		2017	20	$ 0	$ 10,000
Campaign		2018	100	$ 0	$ 10,000
Signage		2018	20	$ 0	$ 10,000
Enforcement		2018	to be determined	$ 0	to be determined

17. WILDLIFE AND WASTE MANAGEMENT

The SLRD is home to a large population of bears that are integral to the local ecosystem. Having a solid waste management system that minimizes the potential for human-bear conflict is a priority for all local governments and wildlife conservation groups in the area. Currently, local government have the following strategies and bylaws in place to mitigate the potential of wildlife-human conflict associated with solid waste:

- Support to local wildlife awareness groups that encourage citizens to be Bear Smart;
- Design and maintain all solid waste management facilities that receive food waste (e.g. landfills, transfer stations and composting facilities) such that they do not allow access by bears;
- Ensure that all litter containers are animal-proof; and
- Require commercial garbage and organic waste containers that contain bear attractants (e.g. food and grease) to be animal-proof. Note: this requirement is in place for all municipalities but not the SLRD.

It is anticipated that the SLRD will also mandate that commercial garbage and organic waste containers that contain bear attractants (e.g. food and grease) be animal-proof, so that all areas of the SLRD have the same requirement. It is also anticipated that each local government ensure that their bylaw is enforced in this regard.

Table 17-1 outlines the estimated timing and resource requirements for SLRD to establish or amend a bylaw to require commercial garbage and organic waste containers that contain bear attractants to be animal-proofed.

Table 17-1: New Wildlife Management Initiative

NEW WILDLIFE MANAGEMENT INITIATIVES	RESPONSIBILITY	IMPLEMENTATION	ESTIMATED STAFFING REQUIREMENTS (HRS/YR)	ESTIMATED CAPITAL COST	ESTIMATED OPERATING COST
Require commercial collection containers to be animal-proof in electoral areas	SLRD	2016	20	$ -	$ -
Enforce animal-proofing bylaw requirements	SLRD, municipalities	2016	to be determined	$ -	$ -

18. LAND USE PLANNING

Waste management facilities, including recycling, composting and disposal facilities are essential elements of a waste management system. The siting and operation of these facilities should be undertaken in conjunction with long-range community planning at the local government level to protect the environment and minimize the potential for future land use conflicts.

All of the municipal and electoral area Official Community Plans (OCPs) make specific reference to solid waste management and indicate an intention to reduce the amount of waste sent to landfill through the promotion of recycling and composting. Only the Whistler OCP makes specific reference to facilitating EPR facilities (take back depots) in land use decisions.

To ensure that there is a suitable land base available to support the solid waste related goals and initiatives laid out in this plan, as well as in other SLRD and municipal planning documents, it is anticipated that municipal and SLRD solid waste staff collaborate with their organization's planning staff to:

- Consider the need for dedicated zoning for waste management facilities;
- Ensure that land use planning decisions do not compromise the viability of existing or planned waste management facilities;
- Ensure that long-range planning tools like OCPs identify and preserve lands for *future* waste management facilities; and
- Recognize the need for an appropriate land base available to accommodate the shift to EPR take-back programs, which operate like reverse retail and require convenient access in order to be successful.

19. MONITORING OF GREENHOUSE GAS EMISSIONS

Activities relating to solid waste management have the potential to introduce significant quantities of greenhouse gas emissions into the atmosphere. These activities may represent an important proportion of the SLRD's contribution to climate change.

This SWRMP will contribute to reducing greenhouse gas emissions by facilitating waste reduction and treating solid waste as a resource to be reused or recycled. At present, the monitoring of greenhouse gas emissions from all activities within the SLRD is a component of the SLRD's Regional Growth Strategy.

Starting from the year of plan adoption the SLRD will conduct an annual review of greenhouse gas emissions from solid waste operations within the regional district. This review will serve as a starting point for identifying and assessing the feasibility of reducing our greenhouse gas emissions from the management of solid waste in the region, as well as assessing the effectiveness of the SWRMP initiatives in reducing greenhouse gas emissions.

Table 19-1 outlines the estimated timing and resource requirements for the SLRD to establish an annual review of the region's greenhouse gas emissions from solid waste operations.

Table 19-1: New Greenhouse Gas Monitoring Initiative

New Greenhouse Gas Monitoring Initiative	Responsibility	Implementation	Estimated Staffing Requirements (hrs/yr)	Estimated Capital Cost	Estimated Operating Cost
Monitor greenhouse gas emissions from solid waste operations on an annual basis; collect and compile data from available SLRD and Municipality Reports for solid waste operations	SLRD	2016	10 - 20	$ -	$ -

20. AUTHORITY OVER WASTE MANAGEMENT ACTIVITIES IN THE SLRD

For the purposes of implementing an approved SWRMP, Section 25 of the BC Environmental Management Act contains provisions for Regional Districts to assert authority over the establishment and operation of solid waste management facilities and haulers by regional districts.

The SLRD's current Plan includes a process to authorize new facilities that are not authorized within the Plan. This process is intended to ensure that new facilities in the SLRD support the objectives of the Plan and do not undermine the SLRD's or member municipalities' capacity to operate the programs and infrastructure described in the Plan.

During this planning process, other options to assert authority over facilities and haulers, such as licensing and codes of practice, were examined. It was concluded that these forms of regulatory control were not required at this time but may be required in the future. In the interim:

- As tipping fees in the region increase to cover capital and operating costs, the development of a waste stream management licensing system and/or flow control bylaw be considered to ensure that waste generated in the region is managed at authorized facilities; and
- The SLRD and member municipalities regularly monitor the level of waste export to determine if there is a need to establish a bylaw mechanism to regulate where waste generated in the SLRD can be delivered.

The current process to authorize new facilities, as presented in Appendix B, will be maintained and that all applicants for the development of waste management facilities within the boundaries of the SLRD (including within municipal boundaries) referred to the SLRD for consideration under the authorization process. This includes all facilities intending to handle municipal solid waste, including recycling and composting facilities. Facilities that will not be subject to this authorization process include:

- EPR facilities established by product stewardship organizations;
- Municipal solid waste management facilities; and
- Facilities established to refurbish and/or sell used goods, such as thrift stores and repair shops.

Currently authorized facilities include:

- District of Squamish Landfill;
- Lillooet Landfill;
- Lillooet Materials Recovery Facility (at the Lillooet Landfill);
- Resort Municipality of Whistler Transfer Station;
- Resort Municipality of Whistler Composting Facility (at the Whistler transfer station);
- Nesters and Function Junction Depots (Whistler);
- Gold Bridge Transfer Station;
- Devine Transfer Station;
- Pemberton Transfer Station;
- Carney's Materials Recovery Facility; and
- Sea to Sky Soils.

The SLRD anticipates reviewing the fee schedule associated with facility authorization to ensure that there is better cost recovery for the staff resources required to manage the authorization process.

21. PLAN IMPLEMENTATION

21.1 ESTIMATED DIVERSION

Table 21-1 shows the estimated diversion that can be achieved if all of the initiatives listed in this document are implemented. By diverting more waste materials to reuse, recycling and composting, the SLRD can reduce the amount of garbage sent to disposal from 526 kg per capita (2012) to 348 kg per capita. Accordingly, this would increase the diversion rate from 43% to 62%.

Table 21-1: Estimated Diversion

DISPOSAL AND DIVERSION	ESTIMATED TONNES (2012)	IMPACT OF NEW DIVERSION
Total disposal	26,966	17,833
Total diversion	20,144	29,276
Total waste generation (disposal + diversion)	47,110	47,110
Diversion rate (diversion/waste generation)	43%	62%
Per capita disposal rate	526 kg	348 kg

21.2 IMPLEMENTATION SCHEDULE AND COSTS

Table 21-2 shows the planned timing for implementation of the new initiatives described in the previous chapters as well as the estimated annual operating cost for each year, by initiative. The annual financial implications to the SLRD from 2015 to 2020 are provided on the bottom line of the table. All initiatives involving municipal costs will need to be defined and approved by each municipality. As shown, the annual cost of the new initiatives ranges from a high of $71,000 in 2018 to a low of $20,000 in 2020. It is possible that the cost of some initiatives may be mitigated through contributions from municipalities and First Nations as a result of collaboration efforts.

Table 21-2: Implementation Schedule and Estimated Costs

NEW INITIATIVES	2015	2016	2017	2018	2019	2020
Communications						
Residential Food Scraps Reduction Campaign	$ 46,000	$ 10,000	$ 10,000			
ICI and multi-family communication strategy			$ 20,000	$ 10,000		
Tourist accommodation communications strategy					$ 15,000	$ 5,000
Construction, demolition and renovation contractor communication strategy					$ 10,000	$ 5,000
Expansion of zero waste workshops	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000

NEW INITIATIVES	2015	2016	2017	2018	2019	2020
Coordination of local governments' internal zero waste initiatives	$ 500	$ 500				
Bear Smart backyard composting	$ 1,000			$ 1,000		
EPR awareness		$ 1,000			$ 1,000	
Promote local C&D waste diversion opportunities		$ 1,000			$ 1,000	
Reduction and Reuse						
Establish a Re-Build-It Centre type of facility in Pemberton			*cost to be determined*			
Establish a Re-Build-It Centre type of facility at Lillooet Landfill				*cost to be determined*		
Fund for local zero waste initiatives			$ 5,000	$ 5,000	$ 5,000	$ 5,000
Extended Producer Responsibility						
Landfill bans on specified EPR materials/products						
Policy Initiatives						
Establish more consistent tipping fee categories						
Residential Waste Services						
Curbside collection services in Pemberton area						
Community consultation	$ 2,500					
Implementation		*if approved*				
On-going collection service			*cost to be determined*			
Assess curbside recycling/yard waste collection in Lillooet						
Commercial and Multi-Family Waste Services						
Require recycling and waste minimization at events		$ 1,000				
Require new developments to design for 3 stream waste management		$ 2,000				
Residual Waste Management						
Assess Lillooet Landfill's compliance with new BC Landfill Criteria		$ 15,000				
Illegal Dumping						
Illegal Dumping Strategy						
Survey			$ 10,000			

NEW INITIATIVES	2015	2016	2017	2018	2019	2020
Campaign				$ 10,000		
Signage				$ 10,000		
Enforcement				*cost to be determined*		
Wildlife Management						
Mandatory animal-proof commercial collection containers						
Monitoring and Measurement						
Waste composition study				$ 30,000		
Estimated new operating costs	**$ 55,000**	**$ 35,500**	**$ 50,000**	**$ 71,000**	**$ 37,000**	**$ 20,000**

Capital costs associated with the initiatives are limited to the following:

- Establishing a Re-Build-It Centre at the Lillooet Landfill; estimated to be $15,000;
- Establishing a Re-Build-It Centre for Pemberton; the costs for this facility are to be determined and will be dependent on where the facility is located and who owns/operates it;
- Curbside collection containers for Pemberton; the costs to provide containers will be determined based on the extent of services provided (if collection services are implemented subsequent to community consultation);
- The expansion of the Squamish Landfill; these costs will be borne by the District of Squamish; and

Based on the evaluation of the requirements for the Lillooet Landfill to remain compliant with new BC Landfill Criteria, upgrades may be required (capital costs to be determined).

21.3 STAFFING IMPLICATIONS

Table 21-3 shows the SLRD staffing implications by initiative and annually. All hours shown in the table below are associated with new initiatives and are expected to require staff resources in excess of the resources currently allocated to solid waste management. This table does not include staff resource implications for the municipalities or First Nations to undertake or collaborate in the initiatives presented in this plan.

Table 21-3: SLRD Staffing Implications by Initiative and Annually

NEW INITIATIVES	2015	2016	2017	2018	2019	2020
Communications						
Residential Food Scraps Reduction Campaign	500	1000	200			
ICI and multi-family communication strategy			1000	500		
Tourist accommodation communications strategy					500	250

NEW INITIATIVES	2015	2016	2017	2018	2019	2020
Construction, demolition and renovation contractor communication strategy					500	250
Expansion of zero waste workshops						
Coordination of local governments' internal zero waste initiatives	40	40				
Beat Smart backyard composting	20	20	20	20	20	20
EPR awareness	20	20	20	20	20	20
Promote local C&D waste diversion opportunities	40	20	20	20	20	20
Reduction and Reuse						
Establish a Re-Build-It Centre type of facility in Pemberton			40	40	20	20
Establish a Re-Build-It Centre type of facility at Lillooet Landfill				60	20	20
Fund for local zero waste initiatives			15	15	15	15
Policy Initiatives						
Establish more consistent tipping fee categories		10	10	10	10	10
Extended Producer Responsibility						
Landfill bans on specified EPR materials/products		40				
Residential Waste Services						
Curbside collection services in Pemberton area						
Community consultation	80					
Implementation						
On-going collection service			*to be determined*			
Assess curbside recycling/yard waste collection in Lillooet		20				
Commercial and Multi-Family Waste Services						
Require recycling and waste minimization at events		10	10	10	10	10
Require new developments to design for 3 stream waste management		40	40			

NEW INITIATIVES	2015	2016	2017	2018	2019	2020
Residual Waste Management						
Assess Lillooet Landfill's compliance with new BC Landfill Criteria		20				
Illegal Dumping						
Illegal Dumping Strategy						
Survey			20			
Campaign				100		
Signage				20		
Enforcement				to be determined		
Wildlife Management						
Mandatory animal-proof commercial collection containers		20				
Enforce animal-proofing requirements in bylaw		*to be determined*				
Monitoring and Measurement						
Waste composition study				20		
Estimated new operating costs	**700**	**1260**	**1395**	**835**	**1135**	**635**

21.4 COST RECOVERY

Cost recovery mechanisms that will be utilized to fund the Plan's implementation include:

- User rates,
- Tipping fees,
- Taxation,
- Sponsorship, and
- Grants.

In general, user-pay and market-based incentives, such as tipping fees and user fees for curbside collection services, will be applied to the provision of solid waste services wherever possible. Where an initiative provides a global benefit, such as campaigns to encourage waste reduction and diversion or the clean-up of illegal dump sites, cost recovery through taxation may be applied. As appropriate, opportunities for sponsorship and grants will be utilized to assist in the funding of programs.

22. PLAN TARGETS

The BC Ministry of Environment has established service plan targets for solid waste management that they can only achieve through the actions of BC regional district and municipalities that have direct responsibility for managing solid waste programs and infrastructure. It was recommended by the Advisory Committee that the targets for this plan align with the Ministry's[9]. As a result, the following two targets are presented. Progress towards these targets will be assessed on an annual basis and the on-going relevancy of the targets will be reviewed within a five year period, as proposed by the Ministry's Solid Waste Management Planning Guideline Intentions Paper (September 2015) .

1. **The SLRD achieve an average municipal solid waste disposal rate of 350 kilograms per capita by 2020.**

   As presented in Section 22, upon full implementation, the initiatives presented in this plan are expect to achieve a per capita disposal rate of 347 kg per capita (down from 525 kg in 2012), indicating that the target is achievable but that the work laid out in this plan needs to be undertaken in order for it to be achieved.

2. **That 75% of SLRD's population is actively engaged in organic waste diversion.**

   The Province has identified organics diversion as one of the largest opportunities to achieve a significant reduction in the amount of waste disposed (by weight). Organics diversion is also a priority in this Plan, with several initiatives focused on enhancing organic waste diversion, particularly in the southern corridor where there are two composting facilities in operation. Based on 2011 census data, this target could be achieved by ensuring that the communities of Squamish, Whistler and Pemberton are actively engaged in organic waste diversion – these communities alone represent 77% of the SLRD population, as shown in the table below.

Census Area	% of SLRD Population[10]	
Lillooet	6%	
Pemberton	6%	
Squamish	45%	**77%**
Whistler	26%	
First Nations Reserves	9%	
Squamish-Lillooet A	1%	
Squamish-Lillooet B	1%	
Squamish-Lillooet C	5%	
Squamish-Lillooet D	2%	
Squamish-Lillooet	**100%**	

[9] The MOE's service plan targets are: Per capita municipal solid waste disposal of 350 kg per person) and 75% of BC's population covered by an organics disposal ban by 2020. Because disposal bans are not part of the planned initiatives in the updated plan, the target related to organic waste has been modified to achieve the same objective (organic waste diversion).

[10] http://www.bcstats.gov.bc.ca/StatisticsBySubject/Census/2011Census/PopulationHousing/MunicipalitiesByRegionalDistrict.aspx

23. MONITORING AND MEASUREMENT

Upon completion of this updated solid waste management plan, the Plan Monitoring Advisory Committee (PMAC) will resume. PMAC monitors the implementation of the Solid Waste and Resource Management Plan and reports directly to the Regional Board.

Plan Monitoring Advisory Committee members:

- Review and become familiar with the Solid Waste Management Plan;
- Review and become familiar with the existing solid waste management system in the SLRD;
- Identify methodologies to be employed in the monitoring and evaluation of the Plan's implementation;
- Monitor the implementation of the Plan and annually report to the Board on the effectiveness of the SWRMP at achieving its objectives; and
- Make recommendations to increase the effectiveness of the Plan or the solid waste management system.

The committee membership strives to have a broad representation of interests including the following:

- Local government/public works representatives from municipalities within the SLRD (4 members)
- SLRD staff (2 members)
- First Nations representatives within the SLRD (4 members)
- Members at Large - Interested members of the public, including local environmental groups and recycling organizations, owners and operators of private waste facilities, commercial and institutional solid waste generators, haulers and operators. (6 members, representing at least 3 electoral areas).

The Committee consists of a minimum of 7 and a maximum of 16 members. Terms of reference for PMAC are provided in Appendix C.

23.1 MEASURING PROGRESS

Progress towards the targets presented in Section 21 will be assessed on an annual basis.

Per capita disposal will be measured using the aggregate quantity of municipal solid waste sent to disposal at SLRD and municipal disposal facilities for landfilling. This quantity (in tonnes) will be divided by the estimated or known population as defined by BC Stats Census data and population projections.

To measure the percentage of population actively engaged in organic waste diversion, the Plan Monitoring Advisory Committee will assess which communities have implemented initiatives to support full organics diversion (yard waste and food waste diversion from the ICI and residential sectors), which may include some or all of the following:

- Implementing variable tipping fees that act as an incentive to source-separate organic waste;
- Implementing bylaws that require source-separation of organic waste at businesses;
- Providing collection services (curbside or depot) for residential organic waste;
- Ensuring the availability of commercial organic waste collection services; and
- Providing or supporting organic waste processing infrastructure.

Using BC Stats Census data and population projections for each municipality and electoral area, the percent of the SLRD actively engaged in organic waste diversion can be estimated.

23.2 On-Going Monitoring And Evaluation

A significant focus of this plan is on using community-based social marketing to help achieve a significant and sustained reduction in the amount of waste sent to landfill. Using a CBSM approach includes on-going measurement and evaluation of the communication initiatives to ensure that they are meeting their intended objectives. As each communication strategy is implemented, a combination of qualitative and quantitative evaluation criteria will be established to measure the effectiveness of the program and identify if there is a need to modify or enhance the program based on results.

In 2018, a waste composition study will be conducted to assess the types of materials that continue to be landfilled and their relative quantity. This study will identify how much of what is being landfilled in 2018 could be composted, recycled or managed through an EPR program.

24. PLAN FLEXIBILITY

Costs provided in this plan are estimated in 2015 dollars and may not reflect actual costs at the time of implementation. In addition, the initiatives described in this plan are based upon knowledge of the waste management system and regulations in place in 2015 that may or may not be in place in the future. As a result, initiatives described in this report may undergo further assessment, including an assessment of costs and continued community support, by the Plan Monitoring Advisory Committee and/or the SLRD Board prior to implementation.

The Plan's implementation schedule is intended to be flexible to allow for changes in priorities and available funding. Notwithstanding, the contents of this Plan are subject to legal requirements and, as a result, guidance and the direction from the Ministry of Environment will be sought in regards to the level of flexibility, as appropriate.

25. APPROVAL BY THE BOARD

This Plan was approved by the Board of Directors by the following resolution on March 16, 2016:

It was moved and seconded:

THAT the Squamish-Lillooet Regional District Board adopt the Solid Waste and Resource Management Plan (SWRMP), including Section 19 Greenhouse Gas Emission Monitoring, and approve its submission to member municipal Councils for their support and to the Ministry of Environment.

CARRIED

APPENDIX A:

Solid Waste and Resource Management Strategic Communications Plan

Squamish-Lillooet Regional District

Solid Waste & Resource Management Strategic Communications Plan

Prepared by: Sue Maxwell
Principal, Ecoinspire Planning

In collaboration with:

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August 2014



Ecoinspire

EXECUTIVE SUMMARY

The Squamish-Lillooet Regional District (SLRD) has committed to updating solid waste reduction goals and implementing an action plan to achieve them. This requires a strategic communications plan to assist in achieving these goals. Apart from the moral imperative of reducing and diverting waste, provincial waste reduction targets, significant landfill management costs, and growing resident and visitor populations are additional factors driving the urgent need for regional leadership.

The SLRD is unique with both concentrated and dispersed populations, urban and rural cultures, and small-town service and international tourism industries. To ensure lasting support for the waste reduction communications strategy outlined in this document, the design process was inclusive and collaborative, and has in many ways prepared a strong foundation for ongoing strategic partnerships. In addition to the SLRD itself, many stakeholders play a role in communicating about solid waste, from member municipalities like Lillooet, Squamish, Pemberton and Whistler, to First Nations communities, service providers, and non-profit groups like AWARE, Squamish CAN and Whistler Community Services Society.

Before developing new materials or creating a communications strategy, a detailed analysis of existing SLRD and partner organization waste reduction communications materials was conducted. Nearly all of the existing resources were focused on raising general public awareness, and communications messages were inconsistent in design and delivery. The final strategy provides logical, research-based online and print communications tools, recognizing and supporting different audiences at different stages of change. Most importantly, the strategy is not about raising awareness; it is designed to remove specific barriers to targeted waste reduction goals, and provides creative and dynamic promotional materials to motivate action.

This strategy will meet the waste reduction and diversion communications needs of the SLRD over the next five years by:

- Building on existing organizational objectives and strengths of the SLRD and partner organizations;
- Providing a unifying brand that harmonizes waste reduction efforts across the region;
- Focusing on proven audience-focused social marketing technique and behavioral change science;
- Identifying specific belief, behavior, and knowledge objectives, and a practical action plan to achieve them;
- Creating an approach that can be replicated to solve other social, environmental or economic challenges.

Implementation of the strategy will require ongoing organizational leadership and commitment to regional partner collaboration. A modest implementation budget is included in the plan which includes both ongoing management costs as well as one-time investments to modernize outdated communications infrastructure, such as consistent signage and effective print materials. Success metrics and evaluation tools are also included, and partnership roles are suggested.

Significant progress on waste reduction in the SLRD requires a combination of organizational structural change and grassroots public engagement. The communications strategy provides a detailed outline of how to begin, progress, and assess progress in both realms. By combining best practices in solid waste reduction, governance, public engagement, and behaviour change, the final strategy has prepared the SLRD to become a role model for regional governments across North America. Implementing an approach that is innovative and visionary requires political courage, but there are meaningful rewards: reduced waste, fostering a culture of conservation, lasting public support, and continuous improvement in sustainable waste management.

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List of Acronyms

ENGO –Environmental Non-Governmental Organization

EPR –Extended Producer Responsibility

FAQ –Frequently Asked Questions

ICI –Institutional, Commercial and Industrial, a sector used to categorize sources of municipal solid waste

MMBC –Multi Material BC, a new stewardship program for packaging and printed paper

PEST –Political, Economic, Social and Technological

PSA –Public Service Announcement

Q & A –Question and Answer document

RCBC –Recycling Council of BC

RMOW –Resort Municipality of Whistler

SLRD –Squamish-Lillooet Regional District

SWMP –Solid Waste Management Plan

SWOT –Strengths, Weaknesses, Opportunities and Threats

SWRMP –Solid Waste and Resource Management Plan

ZW –Zero Waste

Glossary

Audience: the part of the general public interested in a source of information. This can be further segmented into primary and secondary target audiences as well as intermediaries (people or groups that can act as a conduit for information) and influencers (people or groups that are perceived as trusted sources of information).

Brand: a brand consists of a name, logo, slogan, term, design or any combination of these elements used to identify a product, service or organization.

Branding: is a marketing strategy that can be used to create a readily recognizable image that is associated with a product, service or organization through consistent and repetitive use in all elements of advertising and promotion including: logos, slogans, colour schemes, advertising, print materials, web sites, correspondence tools (email signatures, letterhead, voice mail), signage, messaging and spokespersons.

Collateral Material: visual materials used to support a program or service, such as brochures, signs, websites and displays.

Communications Channels: ways to disseminate information, used primarily in this plan to describe ways to reach the target audiences such as through the media or personal contact.

Communication Tools: specific, proven communication tactics that can be used to communicate, such as an e-newsletter (sent via email) or paid newspaper advertising.

Social Marketing: A research-based marketing system in the social sciences that demonstrates behaviour change is most effectively achieved through initiatives delivered at the community level focusing on removing barriers to an activity while simultaneously enhancing the activities' benefits. It emphasizes direct contact among community members and uses a set of approaches which have been identified as being particularly effective in fostering behavioural change.

Media Release: used to announce newsworthy items to the media, a media release (also known as a news or press release) consists of one or two pages that are emailed to media outlets potentially resulting in a news or feature story. Media releases are written to cover the 5W's (who, what, when, where, why) plus, 'why is this important. Timely, well-written news releases can also serve to strengthen relationships with local media and increase positive media coverage.

Public Service Announcement (PSA): similar to media releases, a "PSA" is typically shorter, about one paragraph, and consists of a brief and timely announcement sent to local media. PSAs can result in free publicity provided by radio stations, newspapers, and local television stations to promote current events in the community.

1 PLAN GOALS AND OBJECTIVES

1.1 Introduction

The purpose of this document is to provide the Squamish-Lillooet Regional District (SLRD) with a practical road map to improve regional communications capacity for sustainable resource management of solid waste and materials. This document will provide the rationale behind the recommendations. Research from the resource management and social marketing fields was reviewed and combined to develop an action plan that takes into consideration current opportunities and constraints and should be updated and refreshed by the SLRD as the first programs and projects are completed and new behaviours are targeted.

The plan is intended to:

- **Base recommendations** for the campaign on a review of existing research to ensure the best approach
- **Incorporate best practices** in communications and social marketing
- **Identify future research requirements**
- **Provide a detailed Implementation Plan** that identifies tasks and timelines for an initial program and that can be used as a template for future campaigns
- **Design strategies** to meet the intent of the SLRD solid waste management plans and budget for communications.

The plan provides direction in key areas that include:

- **Building public awareness** about the SLRDs waste reduction programs and strengthening stakeholder relationships
- **Undertaking communication and community-based social marketing strategies and tactics** for the launch of new programs and ongoing communication for the reduction of SLRD's solid waste.

The plan should be considered a "living document" to be updated as necessary by the SLRD, with aspects that may change to include new information gleaned from research and program evaluations. Changes can be made to better inform program strategies and tactics. As a living document, it is flexible and can be adjusted to meet changing conditions and availability of resources and help provide direction for decisions about future programs.

1.2 Goals & Objectives

There are overarching waste reduction and diversion goals flowing from the SLRD SWRMP update process. While specific targets are yet to be determined, the communications strategy will advance their progress. The communications strategy is grounded on the following mix of knowledge, belief, and behaviour objectives, and an overall vision for the SLRD to be seen as a key source of information, inspiration, and integration of resources that help the region and all its stakeholders to achieve Zero Waste.

Social transformation is a long-term process that requires persistence and commitment. Behaviour change is challenging to measure, and we caution the tendency to draw correlations between planned interventions and observed changes in public behaviour. Most social marketing programs target a 5% rate change within 2-3 years based on focused and consistent communications programming. To ensure that we engage the target audiences at

various stages along the behaviour change spectrum, the communications strategy incorporates tactics that meet all of the following objectives:

Knowledge Objectives

What do our target audiences need to learn?

- Waste reduction and diversion options and services in their community
- Community waste reduction targets and progress towards them
- Social, environmental, ecological and economic impacts of inappropriate resource management
- How to improve their participation in waste reduction and diversion
- Personalized benefits of reducing household waste

Belief Objectives

What do our target audiences need to feel?

- Inspired to help achieve the community waste reduction and diversion goals
- Convinced that other people "just like them" are already reducing waste
- Impacts of resource management on their values (i.e. community economic benefit, environmental health, peer belonging)
- It is easy to find out what they need to know
- Their actions make a difference

Behaviour Objectives

What do our target audiences need to do?

- Initiate and sustain waste reduction and diversion systems
- Reduce the amount of materials that flow through households and businesses
- Put the correct materials in the correct bins
- Motivate and inspire others to improve their waste reduction, material reuse, and waste diversion efforts

These objectives have been applied to all sections of the communications strategy, and have corresponding evaluation metrics suggested in Implementation and Evaluation Section 7.

2 ANALYSIS OF CURRENT SITUATION

2.1 Overview

The first step of any strategic communications plan is to evaluate existing communications materials which may be leveraged for future value. The methodology included compiling and assessing SLRD print and online materials, and interviews with key SLRD stakeholders. Best practices in social marketing were applied to the research materials to determine which tools and messages predispose (inform), enable (support behaviour change) and reinforce (reward) behaviour change. The purposes of the SLRD communications tools used to date were also identified, and suggestions made as to where the information gaps may have been in the past (see Table 2.1). Communications materials were also evaluated to determine the intended target audience.

This initial research identified a number of areas for increased efficiency in the delivery of waste reduction and diversion communications across the SLRD. The background analysis has indicated that nearly all resources are focused on raising awareness, or providing information, and that the intended audience is primarily residential. These findings indicate that there is a need for future online and print communications tools to recognize and support different audiences at different stages of change. For example, target audience segments may include: rural/urban communities, small private sector, large public sector, etc. By segmenting audiences, the SLRD can more effectively remove barriers to change and include relevant motivating messaging. Behavioural change science demonstrates greater results will emerge from a coordinated and strategic approach, where all stakeholders work collaboratively to shift current unsustainable waste management norms (Weinreich, Nedra: Hands-On Social Marketing second edition, 2011).

Beyond coordination of communications, the SLRD is poised to provide a stronger leadership role while also delivering practical support for municipal waste reduction services as required. The member municipalities have indicated that there is a strong willingness to collaborate on regional Zero Waste programs and they would welcome greater consistency in both structure (public policy) and communication (public engagement). Most municipalities appear to have similar priorities and specific requests for regional government leadership. Further, the SLRD Solid Waste & Resource Management Plan (SWRMP) Advisory Committee process has created an expectation that the SLRD is already moving towards an expanded waste reduction and diversion leadership role. In addition, at the provincial level, the new Multi Material BC[1] program has generated a "teachable moment" for the public, and created a deeper need for collaboration across the region. Finally, there is a move towards greater collaboration with First Nations in this next version of the SWRMP which could allow for stronger communications on solid waste reduction with all residents and businesses within the SLRD boundaries.

Analysis of current communications tools both within the SLRD and stakeholder organizations, combined with key stakeholder interviews, have revealed a number of practical opportunities. The following list of recommendations will be outlined in detail throughout this report.

- Successful waste reduction programs are simple to understand, and the benefits of participation are easily visible and meaningful to the target public audience. Similarly, specific and time-sensitive calls-to-action are most effective.
- Consistent messaging across the SLRD, whilst respecting the diverse range of audiences, will create greater public awareness and engagement opportunities. Connecting more deeply to existing complementary waste reduction campaigns promoted across BC will help to build a new waste reduction norm.
- Communications tools needs to serve a clear purpose along the behaviour change spectrum, and should be intended to reach a specified target audience (i.e. introduce a service and identify benefits to audience; remove barriers to action and provide incentives; reward participation).
- Zero Waste values are an important foundation to any communications efforts, however, the messaging that may be most effective with target audiences needs to be tailored to meet their needs; "Zero Waste" may be best incorporated into the guiding sustainable resource management public policies.

[1] Multi Material BC or MMBC is a new extended producer responsibility programs in BC responsible for reducing and recycling packaging and printed paper.

2.2 Support for Solid Waste Reduction Communications within the SLRD

The SLRD's focus on waste reduction and minimization is supported by many regional and municipal strategies and studies. Some of these also note communications-related aspects. Details on these guiding policy and program documents are provided below.

The SLRD Regional Growth Strategy encourages Zero Waste, reuse and recycling, living within the limits imposed by natural systems and reducing our dependence on non-renewable resources. Directions are to strive towards Zero Waste by implementing a strategy to reduce solid waste and to promote public education on various environmental topics. The SLRD Integrated Sustainability Plan also "encourages Zero Waste, reuse and recycling." Key waste communications-related actions include developing a Zero Waste Communications Plan, encouraging reduction and diversion, reuse it stores and EPR, and supporting composting in a manner that reduces bear conflicts. The SLRD Energy Task Force report also advocates for becoming a Zero Waste community and the need for providing clear information on waste reduction as well as feedback on waste.

Some community-specific plans also match the SLRD solid waste vision. The Whistler 2020 sustainability plan included significant community involvement in its development and Whistler committed to a Zero Waste goal. Descriptions of Success included advocating for Zero Waste and providing education. For Lillooet, the OCP notes the need to work with the SLRD and provincial governments on waste reduction, reuse, recycling and education initiatives and most OCPs in the region refer to waste reduction as a goal. In the 2010 Squamish Solid Waste Strategy, goals for Squamish include engaging the community in solid waste decision-making and reducing waste. The Whistler Solid Waste Strategy recommended embedding Zero Waste in the plans, actions and culture of Whistler; providing promotion and education for existing systems, prevention and compost options as well as for special events; and using Zero Waste stations. The Lil'Wat Nation community land use plan of September 2009 identified the goals of maximising disposal site life through the 3Rs diversion, and increasing environmental awareness throughout the community to achieve these goals.

The existing SLRD Solid Waste Management Plan (SWMP) also has some recommendations relating to communications: developing a communications plan, updating the website, designing and updating SLRD print media, community and events outreach, delivering a school program, and supporting the Recycling Council of BC's hotline and promotion. There are also specific tasks that require promotion or work with a specific sector to change certain behaviours. Through the update process for the SWMP, new actions, target sectors and specified behaviours will be identified.

2.3 Existing SLRD Communication Materials for Waste Reduction and Diversion

A review was conducted of all known SLRD samples of print material and online promotion. The materials reviewed are described below in Table 2-1. Each item was reviewed for intended target audience, material purpose, and the stage of behaviour change desired. In general, the resources seemed intended to reach broad public audiences who were already likely to engage in waste reduction activities. Ideally, resources support various stages of change from early contemplation (inform and predispose), to preparation (enable and remove barriers to action) to reinforcement (maintenance of desired new behaviours) (Savelson et al., 2007).

Table 2-1 SLRD Communications Resources Reviewed

Material	Target Audience	Purpose of Material	Stage of Change	Recommended Action
The Smart Gardener Brochure (2011)	Residents across SLRD	Enable gardening without chemicals	Enable	Make available as a download from backyard composting section of SLRD website
The Dirt on Indoor Composting Brochure (2011)	Residents across SLRD	Start and maintain vermicomposter	Enable	Make available as a download from backyard composting section of SLRD website. Check aspects on Whistler with the RMOW.
The Dirt on Compost –Home Composting (2011)	Residents across SLRD	Start and maintain back yard composter	Enable	Discontinue as information on Whistler incorrect. Can use other content on website
Compost Your Food Waste & Support Local Food Brochure (2013?)	Residents across the SLRD, likely mainly Pemberton	Increase organic waste diversion to Pemberton Transfer Station	Enable	Discontinue
5 Simple Steps in Making Compost in Bear Country (2011)	Residents in Squamish	Start and maintain backyard composter	Enable	Make available as a download from backyard composting section of SLRD website
Asbestos Control Program Brochure (2011)	Residents across SLRD	Safe handling of asbestos	Predispose	Adapt and integrate content into hazardous waste section of SLRD website
Devine Recycling Brochure (2011)	Residents in Devine	Promote recycling	Predispose	Adapt content to fit in updated SLRD brochure template
Pemberton Recycling Brochure (2014)	Residents in Pemberton	Promote recycling	Predispose	Adapt content to fit in updated SLRD brochure template
Lillooet Recycling Brochure (2011)	Residents in Lillooet	Promote recycling	Predispose	Adapt content to fit in updated SLRD brochure template
RMOW Recycling Info Online	Residents in Whistler	Promote recycling	Predispose	RMOW to integrate new SLRD branding. Provide link to RMOW website from SLRD website
RMOW Composting Info Online	Residents in Whistler	Promote composting	Predispose	RMOW to integrate new SLRD branding. Provide link to RMOW website from SLRD website

Whistler2020 Metrics Online and iCitizen 2013 Online	Residents in Whistler	Update on waste reduction progress	Reinforce	Do not provide link unless updated
Sea to Sky Eco Guide	Residents in Squamish	Broad waste reduction ideas and resources	Enable	Make available as a download from the Reduce page of the SLRD website
Squamish CAN recycling info	Residents of Squamish	Promote recycling	Enable	Request that CAN incorporate updated info from Carney's
Carney's Recycling and Composting info online	Residents across SLRD, mainly Squamish and Whistler	Promote recycling and composting	Enable	Carney's to integrate new SLRD branding. Provide link
Got Hazardous Waste? flyer	Residents of Lillooet	Responsible disposal of hazards	Enable	Adapt and integrate content into hazardous waste section of SLRD website
Food Scraps Drop Spot flyer	Residents of Pemberton	Participation in community composting	Predispose	Adapt and integrate into future waste diversion theme campaign
Pumpkin Drop flyers	Residents in Pemberton and Whistler (and beyond?)	Responsible disposal of organic waste	Enable	Adapt and integrate into future waste diversion theme campaign
Creating a cleaner Lil'Wat	Lil'Wat community members	Promote recycling and inform of waste services	Enable	Adapt content to fit in updated SLRD brochure template

2.4 Stakeholder Interviews

To further inform our understanding of the current context for the SLRD, interviews were conducted with waste reduction leaders in member municipalities to gather insights into their current and future programs. Table 2-2 outlines the details of the interviews, including a topline summary of identified collaboration opportunities.

Table 2-2 Waste Reduction Stakeholders Interviewed

Name	Organization	Future Waste Projects	Collaboration Opportunity
Rod Macleod	Director of Engineering, District of Squamish	Curbside organic pick up	Improve public education programming
James Hallisey	Solid Waste Services Manager, Resort Municipality of Whistler	Multi-resident organic pick up	Provide consistency in tipping fees, PR campaigns
Steve Hohner	Manager of Public Works, District of Lillooet	*Numerous attempts to interview: recommend follow up by SLRD*	*TBD*

Linda Kelly-Smith	Chair, Zero Waste at Squamish Climate Action Network	Curbside organic pick up	Provide consistent branding of waste reduction signage/bins
Caroline Lamont	Development, Village of Pemberton	Improve public understanding of local reduction services	Improve collaboration on local communications projects
Pat Taylor	Operations Manager, Carney's Waste	Construction waste and organic waste diversion	Share costs/benefits of waste reduction with municipal leaders
Claire Ruddy	Executive Director, AWARE	Increase composting	Share broader provincial resources to increase efficiency
Graham Haywood	Lil'wat Nation	Waste diversion education: improved compliance with diversion	Share best practices in public education + by law enforcement + collaboration on communication
Heidi Lessman	SLRD Zero Waste Educator	Waste reduction and diversion education in SLRD schools	Start Zero Waste volunteer team for schools and workplaces
Kara Sockett	Gold Bridge Transfer Station operator	Expanded EPR program to collect more electronics + other recyclables	Increase funding to support better infrastructure + staff

2.5 Communications Material and Interview Analysis

Strategic themes:

- Most materials are designed to support single-family residences with their own transportation within individual SLRD member municipalities, though some were relevant to all municipalities in the SLRD. This distinction was not always clear, and this often made the message confusing.
- Most composting materials enable behaviour: they work well for audiences who are already motivated and informed. At least half the resources reviewed promote backyard composting which assumes an existing strong commitment to waste reduction. The stage of change for the intended audience of these materials is assumed to already be active; the value of the material is unclear.
- Most recycling materials predispose behaviour: they are more focused on informing a broad audience, but don't resolve barriers that a particular segment may be facing. The stage of change for the intended audience of these materials is primarily preparation, awareness and information.
- Most materials reference 5-10 external organizations for additional information: this is overwhelming from an audience perspective and challenging to ensure all are accurate (in fact, a quick review of RCBC information pertinent to the SLRD found broken links back to the municipal websites.)

Communications material gaps:

- Develop playful introductory material: consistent with social marketing best practices, include resources that predispose an audience to learn more (as necessary). The current introductory material isn't particularly captivating (unusual, funny, or special that inspire people to learn more or share with their social networks).

- Create interactive online resources: comment boards, themed regional campaigns, and engaged citizen support. Dynamic online materials will reinforce new positive social norms because they can actively help to remove barriers to change.
- Recognize success: develop communications that celebrate progress and community leadership on the journey to Zero Waste. Find opportunities to demonstrate the "new normal" of waste reduction.
- Provide feedback on progress: increase transparency of waste reduction targets and provide public updates on improvements and regression. Whistler2020 may serve as an example.
- Include materials for different types of audiences: multi-family residences, institutional, or commercial settings. This requires further investigation into potential barriers to change for specific target audiences.

Print materials:

- Design, including graphics and taglines, vary between materials which decreases their impact
- Not clear where print materials are meant to be displayed or who they are targeting
- Uneven degree of information detail for both recycling and composting
- Some included a "neighboring community" alternative, some did not
- Some included motivating information (such as waste reduction benefits), some did not

2.6 PEST and SWOT

At this stage of the communications strategy process, it is useful to consider external influences, including current Political, Economic, Social and Technological (PEST) issues, as well as internal factors related to organizational Strengths, Weaknesses, Opportunities and Threats (SWOT). Our analysis finds the following factors relevant to communications strategy design:

Political:

- Multi-Material British Columbia (MMBC) current changes: may result in some public confusion
- Unclear about when and how the province will advance commercial waste reduction (such as through ensuring extended producer responsibility for packaging and printed paper in the institutional, commercial and industrial sector)
- Timeline also not clearly defined for roll out of other new EPR programs such as carpet, textiles etc.
- Fall election with new four year term
- Potential change in Board members which may change the level of support for regional communications waste reduction and division strategies
- Challenges facing the roles and responsibilities between First Nations, the Aboriginal Affairs and Northern Development Canada (AANDC) and Provincial agencies.

Economic:

- Seasonality/weather issues: waste reduction issues vary over the calendar year in the SLRD. Likely more difficult to get as much public participation in waste reduction over the winter months
- Limitations for curbside collection programs given sparse or intermittent population, snow fall, and wildlife issues; requires more active use of depots which require added personal responsibility for supporting diversion efforts
- Huge variability in economic trends across the region
- Additional costs to provide consistent level of service across the region
- Recycling Council of BC support for SLRD: potential opportunity for increased collaboration

Social:

- Mainly small towns, close communities: both within mainstream communities and First Nations land
- Outdoor/connected to nature culture
- New commitment to collaboration across member municipalities
- First Nations more engaged in solid waste planning
- Young demographic across the SLRD, and often transient in some member municipalities

Technological:

- New interactivity of SLRD site
- Variety of trucking and composting bin options
- Social media channels are already well used in some member municipalities

Strengths

- Networks of member municipalities and citizen advisory committees
- Local community champions + strong NGO leaders
- Committed SLRD staff
- Strong CAO support
- Strong SLRD support
- New and improved website
- Progress by member municipalities on waste reduction

Weaknesses

- Time: no allocated staff person to implement communications strategy
- Municipal waste reduction work is happening independently and not leveraging the potential of collaboration
- Currently no staff person dedicated to leading the solid waste communications in partnership with stakeholders
- Not sure what kinds of information and media people across the region access

Opportunities and Threats are represented in the PEST Analysis above.

2.7 Literature Review

2.7.1 Social Marketing

For the SLRD to communicate effectively there are certain elements that will be required as tools with which to base the programs. These include a brand for solid waste, a website for residents and businesses to find information, a clear structure and mandate, and staff and resources to implement the recommendations. Once these key aspects have been arranged, then the SLRD will be ready to start implementing focused social marketing

programs. These programs can also use the existing resources that the SLRD has developed such as the partnerships for Zero Waste stations at events and the school program (note that these programs should incorporate new SLRD waste reduction branding). Further, participation in community events will be important in communities that are less engaged online (i.e. more northern areas of the SLRD). Offline engagement (face-to-face marketing) is an important way to make the message more meaningful and memorable (see Appendix J for a list of potential events).

A key component of social marketing is to conduct audience research to gain a clear understanding of how the target audience perceives the program or services available. Specifically, social marketing seeks to research what barriers people may have to take action, and what benefits may motivate them to action. The shift from associating discarded materials with garbage requires thinking of these discards as a resource that needs consideration and allocation. The messaging and its delivery must be deliberate in the way it frames the resource management issue; how people think about materials and waste is as important as how they manage it in their homes and communities.

The messaging and tactics will incorporate emerging best practices in behaviour change science, including:

- Social currency: an opportunity to look good with peers
- Triggers: something that is top of mind
- Story: an idea that is worth sharing

The target audience is crucial in providing direction on the perceived barriers and benefits that key stakeholders have with respect to the desired behaviours, such as collecting food scraps at home for deposit at a depot. Barrier identification helped to develop mitigation strategies, including specific messaging recommendations. The communications tools identified in the implementation plan help to reinforce the desired behaviour we seek to foster, creating new “norms” of what is socially acceptable waste management. Testimonials are effective in creating these new norms of behaviour (McKenzie-Mohr, 2011) and the focus group conducted in the development of this plan also indicated the desire to hear stories of how people reduced their waste or managed their own food scraps collection or composting system (the results of the focus group are outlined in Appendix G). Highlighting that the desired behaviour is already being done by a majority of the audience can help build norms and support communications (Goldstein et al. 2008), as fear of acting alone can be a key barrier to behaviour change (Hoggan and Associates, 2006).

Developing visual cues, or “prompts” for the desirable behaviour, will help to develop a positive automatic response or “trigger” for action. Prompts work best when close in space and time to the desired behaviour, such as a sign in a parking lot to reminding people to bring in their reusable bags. Commitment is another important aspect, where asking for a visible public and durable commitment, such as a person’s pledge or agreement to carry out the action that you are promoting, has shown to increase the likelihood of this behaviour occurring (McKenzie-Mohr, 2011). Developing positive waste reduction behaviour requires the communication of relevant benefits, or incentives to take action. Incentives can be used when motivation for the behaviour is low. They should be positive, visible and paired with the behaviour but as the behaviour can stop when incentives are removed, they are best used for short-term behaviour change. Finally, feedback is important and another aspect requested by the focus group. A successful education program needs goal setting and sharing the information with stakeholders (Sheely & Dingle, 2003). It is best to combine feedback with positive approval (McKenzie-Mohr, 2011).

Personal contact is a key way to communicate messages and overcome barriers (Mackenzie-Mohr, 2011). Deeper forms of engagement can occur when waste reduction staff engages with participants as well as with each other. Home visits, workshops, or booths at events can all be ways of engaging the audience in discussions. Campaigns that have a wide range of interventions and approaches tend to be more successful than information alone (Mackenzie-Mohr, 2011).

2.7.2 Communications Channels

With regard to making use of the best communication channels, there are some parallels that can be drawn from other programs with similar goals to change attitudes, increase knowledge and create new behavioural patterns.

A study on how household actions can reduce carbon emissions in the US indicated that a multi-faceted approach was most effective in influencing behaviour change. The report cites interventions that combine a variety of tactics including policy, appeals, mass media, information and informal social influences among others which were felt to be most effective. It was reported that this varied approach could potentially account for a 20% decrease in household direct emissions (Dietz et al, 2009). This finding, to use a variety of communication materials and channels, is not unique in communication planning and will be incorporated into the strategy.

In the 2009 Ipsos Reid survey on awareness of stewardship programs, two key information sources included the Internet, particularly in the Lower Mainland and on Vancouver Island, and local governments. For rural BC, some studies suggest that media habits are slightly different. Statistics Canada and the Canadian Internet Project indicate that while Internet use in rural Canada, including BC, is on the increase, it is still markedly less than more urban areas. Taking this into account, other channels and media will be considered. For example, the 2009 ComBase survey of community newspaper use shows 75% of British Columbians are reading their community newspapers on a regular basis (read the last four issues).

While Internet use has been high among the younger age bracket for some time (Statistics Canada, 2003), Internet use is on the increase across all age brackets including seniors: according to the Canadian Internet Project, more than half of Canadians over 60 use the Internet on a regular basis. Ipsos Reid data shows that Canadians are spending more time online that watching TV: 18.1 hours per week online compared with 16.9 hours watching television.

With the ever-increasing use of the Internet comes the opportunity to leverage social media sites, such as Facebook, used by 65% of British Columbians (Zinc and Dufferin, 2009). The same survey reports that this represents 83% of those aged 18-34, 59% of those 35-54, and 49% of those 55 and up. Interestingly, the fastest growing segment on Facebook is 55-65 year-old females (InsideFacebook.com). What's important about including social media, not just for advertising purposes, is also the opportunity to leverage "friends and family" communications as more trusted sources of information on social media sites, like Facebook (Gupta, 2009). In a 2008 Pollara survey, 80% reported they were more likely to consider buying products recommended by friends, and "word-of-mouth", continues to be a strong and persuasive communication channel (Ketchum, 2009). While most of the SLRD has mobile coverage and access to the Internet, some more rural areas still do not have service.

In addition, good news stories in one media are often picked up by others, expanding audience reach. In addition, working collaboratively with other organizations, such as AWARE, Squamish CAN and RCBC, offers opportunities to use their promotional channels to spread the word. Member municipalities will play a key role in spreading the word through their channels as a known source for recycling and solid waste information. Service providers like

Carney's, Sea to Sky Soils and others also have their own communications channels in addition to the numerous Extender Producer Responsibility (EPR) programs.

The recommended strategy identifies various online tools to leverage partner resources. The plan also provides offline tactics, recognizing that not all community members across the SLRD access resources online. Further, sustainable waste reduction habits will be most effectively replicated if they are publically modelled; public and private sector spaces in communities across the region offer ongoing public education opportunities.

2.8 SLRD Context

The SLRD SWMP targets served as the guide for developing the recommended approach in this strategy. It also takes into account the new Multi Material BC program for packaging and printed paper, the update process for the Solid Waste and Resource management Plan, and the development of a communications plan for the SLRD as a whole. Ultimately, the communications design and promotional distribution are intended to encourage critical thinking when accessing or obtaining material goods (i.e. "Do I really need this?"), but to reduce number of assumptions required by the end user at the point of discarding materials (i.e. "Where do I put this can? What does this sign mean?").

Effective programs help to develop an automatic response to communications prompts because the target audience can easily shift behaviour without needing to pause and reflect on which choice is most appropriate. Further, social marketing research indicates that creating a new social norm requires a multi-faceted suite of objectives, identifying meaningful behavioural, knowledge, and belief targets to achieve change. These are outlined in detail in the Goals and Objectives Section.

Many communications programs focus mainly on providing information as opposed to developing a social marketing strategy, as evident with past SLRD and member municipality efforts. While this communications strategy identifies numerous public education tools, it also incorporates tools that enable change by removing barriers and increasing motivation, and rewards change by providing feedback and recognition. Most important, the entire strategy – including the messaging, illustration, and promotional tactics – was tested in a focus group (results in Appendix G), and the communications materials were adjusted to meet their expressed needs.

3 TARGET AUDIENCE AND STAKEHOLDER IDENTIFICATION

Considering the wide variety of existing communications messages and platforms currently in place in communities across the SLRD, this approach recognizes the unique assets of stakeholders across the region and integrates existing messaging as much as possible. Creating a unifying look-and-feel as well as a source for information for waste reduction and diversion in the SLRD will advance the regional, municipal, and local NGO objectives as well as possibly those of some EPR programs and some local First Nations. The proposed communications messages, partner organizational structure, and collaborative implementation will simplify reaching waste reduction and diversion targets, developing promotional tactics, and administering the logistics for everyone involved. Simplification is critical from an audience perspective, and it will also unlock limited resources now tied up in inefficient systems.

Audiences and stakeholders are those critical to the success of the SLRD's Solid Waste reduction programs. Stakeholders will have an interest in or concern with a given initiative. They may be integral to the program, such

as decision-makers targeted to ensure effective support or residents or businesses targeted in order to influence behaviour, or they may be secondary. Audiences will be a subset of stakeholders. A list of potential stakeholders is listed in Appendix D but additional ones may be included depending on the focus of a program.

Audiences are described as internal and external depending on their relationship to the SLRD, and as primary and secondary audiences or influencers, depending on their level of importance with respect to message delivery. Each audience may have its own set of specific objectives, strategies, tactics, and key messages designed to ensure the message delivered is pertinent to that audience.

It is important to note that there are additional audiences who were consulted throughout the planning process but who have not yet been assigned a formal role in the collaborative implementation of the strategy. First Nations communities across the SLRD are critical stakeholders, and encouraging their active engagement in waste reduction and diversion efforts will help to identify unique barriers and motivating factors. Insights into the challenges and opportunities for waste reduction and diversion in First Nations communities have emerged through the SLRD SWMP Advisory Committee process, such as peer-to-peer influence available through the small and tightly woven communities and emerging sustainability leadership from First Nations youth.

3.1 Segmentation Process

Determining the target audience requires careful analysis of a number of criteria. The ultimate goal is to determine "targets of risk", those people who are most likely to engage in the problem behaviour, and "targets of opportunity", those people who are easier to reach or influence. The goal is to prioritize high risk and high opportunity segments, and to define them as narrowly as possible within the available resources. For the purpose of the first phase of this plan, an evaluation of numerous public segments was conducted using the tool shown in Appendix C to identify the target audience. This resulted in selecting mainly urban, single-family home residents as the priority group within the SLRD to reach with updated messaging and communications tools to assist them in reducing and diverting food scraps. The Target Audience Segmentation tool in Appendix C should be used in developing each new reduction/diversion theme program to prioritize the target audience, which could include businesses, institutions, multifamily homes, and others.

3.2 Insight into Audiences and Waste Reduction

In addition to the demographic information presented in Appendix E, some other research shows insight into waste reduction behaviours:

Composting Information from Statistics Canada (2011)

- 61% of Canadian households had participated in some form of composting by 2011 (up 38% since 1994), 45% composted kitchen waste
- Of the those composting kitchen waste, 60% used a curbside collection system, 41% composted at home and 5% had taken it to a depot or some other practice (some people report more than one system)
- Over 50% of households in single or detached dwellings and 22% of those in apartments composted kitchen waste
- Reasons not to compost include: not having a bin, no access to municipal program, concern attracting wildlife to compost bin, takes too much time, takes too much space, not sure what to compost, inconvenient and pickup too infrequent.

- There is a clear correlation between educational attainment, household income and composting of kitchen and/or yard waste
- When all other factors were held constant, percentages of households involved in curbside composting far outweighed those who composted at a depot or a compost pile

McAllister Opinion Research (McAllister, personal communication based on research conducted in BC and Canada)

- In 2011 82% of BC residents were personally concerned about environmental problems and this was reflected in both rural and small cities as well as urban areas. The highest rates were for women under 35 (91%), then women over 35 and men over 35 and the lowest rates for men under 35 (75%).
- When asked to rank environmental issues, resource depletion ranked 47/100, global warming at 45 and waste disposal as 41/100 (the three highest ranked issues were water quality- 62, then air quality -53, then toxic chemicals at 48).
- When ranking the environmental performance in 2011, municipal governments were ranked positively and were seen as superior to provincial governments, federal government and private industry, though less positively than their peak in the mid-90s
- The majority of Canadians buy green saying they had organic food, environmentally friendly products and energy efficient devices in their house or planned to buy them in the next year.
- In a 2011 online survey of BC residents, women were more likely to be the most motivated to recycle (56% versus 41% for men)
- Recyclers that were keener tended to be connected to their community, vote, own a vehicle, have higher income, not worry about money, be aged 45-64, live in detached or semi-detached homes, were often asked for advice, disliked shopping and to some degree were in smaller 2-person households.
- Those least likely to recycle are men under 25, those who like shopping and those not connected to the community.
- When asked about how much effort groups were putting into recycling, people felt they were putting in the right amount of effort themselves (52%; 34% said more than enough) but felt consumers generally (48%), governments (54%) and manufacturers (64%) were not doing enough (and were doing the right amount at 42%, 36% and 29% respectively).
- When asked about what they wanted to know about recycling, they noted knowing where to bring items, what happens to them, benefits (similar to the focus group results for this project)
- Recycling program features that mattered to people a lot were that depots take other kinds of material at the same location (71%) (i.e. one stop dropping) and that it was convenient.
- The top ranked benefits of recycling were reducing toxics to landfill, soil and groundwater (75%), needing less energy when recycled materials are used (62%), reduction in air and water pollutants (58%) and reducing greenhouse gas emissions (55%).
- When presented with facts about the benefits of recycling, women preferred facts on the savings of waste, energy, GHGs and raw materials where men looked at the financial and economic benefits (including job facts) Women also liked ones that were easy to visualize, appealed to their values around good quality of life, improving human health, reducing toxicity, and protecting the environment. Waste diversion from landfill resonated for both men and women.

3.3 Single Family Residence Profile

The audience segmentation exercise conducted with the SLRD prioritized single-family homes as the initial target audience to influence with the first reduction/diversion theme (compostable organics). There are 14,995 households in the SLRD as of the 2011 census (see Appendix E for more details), 31.7% of which are multifamily buildings (apartments and row houses) and 68.3% are single-family homes (including duplexes, mobile homes and

other forms). English is nearly universally spoken so there is no need to translate communications materials into other languages. Further, people who identify as actively recycling materials may be most likely to begin collecting food scraps. This could be useful for future communications efforts from transfer station staff (see Appendix H).

3.4 Future Recommended Target Audiences

The target audience segmentation revealed that the next two top segments were urban multi-family residences and the institutional, commercial and industrial sector (ICI). These two target audience segments will require a different approach than the one developed for the urban single family resident target audience, because they experience different barriers and motivations. While the overall branding should be retained, the reduction/diversion theme messaging will need to be adapted to meet their communications needs.

At the focus group, these two target audiences also emerged as the groups with the greatest behaviour risk and influence opportunity. It may be especially beneficial to pursue the ICI segment in the near future because of the added promotional opportunities available through meaningful partnerships. Providing SLRD waste reduction materials at relevant point-of-sale retail environments (i.e. at grocery stores and/or restaurants during a targeted organics waste reduction/diversion campaign) could significantly increase its impact. However, without genuine support from those private sector partners, including active participation in the communications campaign, the residential target audience would likely overlook the print collateral.

3.4.1 ICI

Across the SLRD, most local residents also work in their home community or within a neighboring community. This expanded connection to the region offers a tremendous opportunity to influence a broader cross section of the community. It also provides a practical avenue for those who are already actively engaged in waste reduction at home to act as leaders and behaviour change role models when they go to work.

Further segmentation of this sector would be recommended, such as: public education institutions; public health institutions; light industry/building and manufacturing; small/medium sized private sector businesses in the service industry; small/medium sized private sector businesses in the retail industry; foodservices, accommodations, etc.

3.4.2 Multi-Family

Across the SLRD, the number of multi-family residences has grown from 13.7% of occupied dwellings in 2006 to 16.0% in 2011 (Statistics Canada census 2006 & 2011). While many strata complexes have rudimentary recycling systems in place, very few have incorporated a holistic approach to waste reduction. At the same time, the demographic profile of multi-family residents includes people who are often younger and likely more connected to environmental stewardship messaging.

3.5 Marketing Mix

While the communication needs of this group will vary across the region due to cultural differences and the availability of waste diversion services, the following marketing mix outlines the foundation underlying the dynamic engagement details in the Section 6 Promotional Tools further below. Social marketing is grounded on an

audience-focused communications strategy, where the product (core benefits) and price (critical barriers) are well understood and are taken into consideration in every aspect of the promotion.

The following list of "P's" has been developed with organic waste reduction and diversion as the theme; this template could be applied to all future waste reduction/diversion themes to ensure the final promotional tools are audience-focused.

Profile

Snapshot of the target audience demographic:

- Women over 35
- Connected to their community; more likely to vote
- Own a vehicle
- Have higher income
- Live in detached or semi-detached homes
- Were often asked for advice
- Disliked shopping
- To some degree were in smaller 2-person households
- Actively use English language social media tools
- Access to organics diversion options through transfer station drop off
- Often report "time" as major barrier to changing behaviour
- Feel connected to nature and the land, enjoy time recreating outside

Product

Motivators for primary public audience to reduce waste:

- Feeling of being in line with values
- Meeting their personal responsibility
- Sense that this is "doable"
- Saving money (personally if reduced tipping fees and through taxes if extended life of landfills)
- Social norms –seeing that others are doing this too
- Feeling positive reward from contributing to community waste goals
- Behaviour becoming a habit

Price

Barriers to primary public audience to reduce waste:

- Lack of obvious connection to personal values
- Time investment in establishing new reduction/diversion systems at home
- Initial disconnect to new position of waste as a resource, rather than garbage
- Discomfort with handling of household waste; yuck factor; concern over potential for smell
- Higher costs or no direct cost savings to most users
- Inconvenience
- Time constraints due to hours of operation for drop off depots, or time to drive the distance
- Challenges for those without vehicles
- Consumer culture and advertising to buy new

Place

Location of promotional tools:

- SLRD website, with links from municipal and service provider websites
- Transfer Stations signage across the SLRD
- Transfer Stations, Landfill distribution of flyers
- Community streetscape waste diversion bins across the SLRD
- Member municipality and service provider social media channels
- Point of sale/decision locations such as grocery stores, restaurants, garden centres, etc.

4 RECOMMENDED STRATEGY

4.1 Communications Strategy Phases

For ease of organization, the strategy has been divided into six strategic phases described below. Each phase identifies measurable objectives and outcomes. Objectives are SMART: specific, measurable, achievable, realistic and timely. The purpose and outcomes associated with each phase identify the key behaviours targeted (e.g. going to a depot to bring collected food scraps) and specific desired outcomes (e.g. decrease in total waste, decrease in percentage of food scraps in waste). The program phases reflect the order of expected work during the process.

This strategy will outline details for a specific reduction/diversion theme and target audience, which has been selected as the first one to implement based on input from the SWRMP update process and an audience segmentation exercise. However, the intention is that once this program has been implemented, evaluated, and has reached a maintenance stage, staff resources can then be directed to developing the next reduction/diversion theme program or incorporating additional audience segments, such as the ICI as recommended. This next program could include initiatives identified by the SLRD and regional partners, depending on the greatest needs and opportunities. Numerous suggestions have been identified through the SLRD Solid Waste and Resource Management Plan update process. Suggestions are outlined in Appendix B.

The first specific program that will be outlined in the strategy, and which can be used as an example for future programs, is to reduce food scraps in waste from urban single-family home residents. However the basic tools, messaging, visuals, and suggested campaigns will be flexible enough to meet other target audience needs (i.e. institutional, commercial, multi-family residential, etc.). Implementing the communications strategy will ensure that the waste reduction and diversion goals identified in the SLRD SWMP (current and updated versions), as well as the waste reduction and diversion goals of member municipalities, are achieved sooner and with longer lasting effects. By leveraging existing resources, the SLRD can harmonize desired outcomes and improve efficiencies. Perhaps most important, increasing collaboration will produce a more positive user experience.

The Implementation Plan and Evaluation in Section 7 and Action Plan in Appendix H outline recommendations on how best to execute the plan, including a timeline, budget estimates, and objective evaluation criteria.

4.1.1 Phase 1: Develop the Social Marketing Plan

Social marketing usually consists of six stages, each of which involves several different types of activities. The social marketing method will serve as the foundation for the phases that follow, and the method stages are outlined here:

Stage 1 Purpose: **Analysis**

- Prioritize the problem behaviour: choose one of the waste reduction and diversion options identified in the SWMP background research through a collaborative stakeholder-driven process (i.e. involve member municipalities, service providers, and key partners from the beginning).
- Identify priority target audience to reduce problem behaviour using a structured segmentation process (see Appendix C), and supported through primary and secondary research (i.e. existing materials, focus groups, surveys, etc.).
- Determine what the barriers and benefits to performing the behaviour would be for the audience.

Stage 2 Purpose: **Strategy Development**

- Develop a social marketing strategy that forms the foundation on which the rest of the communication program is built to influence the target audience. The strategy is developed to address the barriers and benefits identified in Stage 1.
- Incorporate existing organizational assets and begin to establish necessary resources, such as funding sources and strategic partnerships.

Stage 3 Purpose: **Program and Communication Design**

- Develop messaging based on key program objectives.
- Create any new promotional communications materials necessary and establish new partnerships.

Stage 4 Purpose: **Pretesting**

- Understand target audience barriers and motivations for reducing problem behaviour. This can be done by holding a focus group with the target audience in conjunction with using existing research.
- Pilot strategy in two or three locations and adjust as necessary.

Stage 5 Purpose: **Implementation**

- Roll out across the region and measure effectiveness.
- Monitor program to allow for adaptation as necessary.

Stage 6 Purpose: **Evaluation**

- Report against progress in achieving identified objectives with all stakeholders, including target audience to increase transparency and long-term engagement in the process.
- Use a combination of qualitative and quantitative evaluation criteria.

4.1.2 Phase 2: Develop Tools

This phase involves developing tools that will be needed to implement a program; building on Stage 3 (program & communication design) recommendations in Phase 1 above (developing the social marketing plan). Initially, it will

also include the development of standard tools that can be used for all SLRD programs which partners should use wherever possible. This includes a website, standards for signage, standards for bin colours and labels, a brand and logo, distribution lists for sending information to different stakeholder groups, and standard messaging. In some cases, these tools may also include ones that are not directly communications-related but address a barrier noted by the target audience (for example, the need to change hours of operation or provide kitchen catchers).

Purpose: All internal and external decision makers and opinion leaders are made aware of the new tools. Where suitable, they are encouraged to link their websites to SLRD website for solid waste reduction and diversion information. Opportunities for co-branding can be explored.

Outcome: Internal and external decision makers are prepared for the solid waste information requests.

Outcome: Member municipalities, service providers and ENGOs website link to the SLRD Solid Waste webpages.

Outcome: SLRD communications for solid waste use the brand and standard messaging.

4.1.3 Phase 3: Program Notification

Purpose: All internal and external decision makers and opinion leaders are notified of the program's progress and launch date by (insert date).

Outcome: Internal and external decision makers and opinion leaders are prepared for program information requests they may receive or know who to contact for more information.

Outcome: SLRD strengthens relationships with internal and external decision makers and opinion leaders.

Purpose: All external program partners are notified of the program's progress and launch date by (insert date).

Outcome: Service delivery is coordinated between existing service providers and the SLRD.

Outcome: Program partners / service providers are prepared for program information requests they may receive or know who to contact for more information.

Outcome: SLRD strengthens relationships with external program partners / service providers.

4.1.4 Phase 4: Program Announcement

The program is launched during this phase. Stages 4 and 5 of Phase 1 Social Marketing strategy above are expressed in Phases 4 and 5.

Purpose: Notify all stakeholders of program commencement including messages about how to "find depot near you", smart storage, and transport. (The purpose will be tailored to the specific program.)

Outcome: Stakeholders are aware of program commencement and know where to find information about the program.

Purpose: Prepare internal audiences and external program partners for public information requests prior to program announcement.

Outcome: Program partners provide consistent and correct information to potential program users.

4.1.5 Phase 5: Program Promotion

Purpose: Increase public participation in the priority waste diversion or reduction project.

Outcome: Target audience actively uses the SLRD waste diversion services available or adopts the desired behaviours.

Outcome: SLRD waste volumes decrease.

4.1.6 Phase 6: Evaluation and Ongoing Communication

Purpose: This phase focuses on measuring the effectiveness of the program and the development of ways to improve it as well as strategies for ongoing communication and evaluation. Phase 6 corresponds with Stage 6 of Phase 1 Social Marketing strategy above.

Outcome: Meet SLRD waste reduction or diversion goals determined by the SLRD SWMP process or a sub-goal developed in the program development process.

Outcome: Identify if there is a need to modify or enhance the program based on results.

5 BRANDING & MESSAGING

The brand developed for SLRD solid waste communications includes an umbrella graphic and tag line. While we explored integrating Zero Waste messaging, the focus group research clearly recommended use of the term “Zero Waste” for policy and direction but not for primary public messaging until there is a higher level of acceptance and understanding of the term.

The final icon can be found in Appendix L, which has tremendous application potential in various public spaces across the region. The final tagline, “Love this place. Reduce your waste” can be incorporated into waste reduction/diversion theme messaging (see below).

5.1 Guidelines for Developing Reduction/Diversion Theme Messaging

Advancing waste reduction in the SLRD will be most successful if the waste reduction communications efforts can be narrowed to a single diversion theme at a time, targeting a single (or narrowly defined) target audience. Allowing each waste diversion theme to have its own “flavour” will help to keep the original brand fresh and interesting for target audiences. Specific messaging will be most effective if it includes the following elements:

- Easy to remember: Short, clear, concise and without jargon or technical language
- Proof of impact: tangible feedback shared often

- Congruence with love of place: the way we take care of our community needs to align with what we tell other people about where we live
- Explain the need: what's the connection to the bigger impact
- Make it personal: what's in it for me
- Create a local analogy or story: something we do here because we believe in the long term benefit
- Empowering to do the right thing: my actions make a difference
- Something unexpected: catch and hold attention
- Positive norm: It's what most people here do already; include public opinion statistics
- Local environmental benefit (i.e. habitat protection), and global environmental benefit (i.e. climate change)

5.2 Food Scraps Reduction Messaging – A Working Example

The focus group research indicated that people perceive food scraps collection as much more challenging and time consuming than recycling. Participants also indicated that food scraps collection is a behaviour taken by individuals who are already highly successful in other aspects of waste reduction.

Messaging will be most successful it dispels some myths about food scraps collection that have become barriers to action; if it provides communication that affirms existing environmentally aware identity; and if it shares motivating information that is emotional and surprising.

A sample design is shown below.



Some facts that may reinforce messaging are:

- The majority of Canadian households already participate in composting activities (up 38% since 1994); collecting food scraps and bringing them to the depot means that you're on the winning team
- Canadians throw away 90kg of food per person per year (Chapman, 2011) which is 40% of our food supply, 51% of which comes from homes (CBC, 2012)
- Wasted food represents wasted resources that went into producing the food: land clearing, energy, fertilizer, pesticides, fuel for transport and equipment and water
- Key reasons for wasting food are buying too much food, buying more perishable products, not eating food based on what needs to be used first, cleaning out cupboards, food hygiene reasons and dates on food labels, making too much food and dislike of the taste of food (especially by children) (Brook Lyndhurst, 2007)
- Organics in the landfill produce methane, a powerful greenhouse gas

6 PROMOTIONAL TOOLS

There are a variety of promotional communications tools and channels that can be used to advance waste reduction goals. These may be standard ones used as a base for multiple programs or ones only used for specific programs. Some will be created and then remain relatively static, while others may be more dynamic and change frequently or be one-time events.

It is important to note that using tools developed and tested by other local governments can save resources. There is a website, www.3Rs.ca, developed by Metro Vancouver and others promoting waste reduction that allows users to take the tools that have been developed and brand them with their own information as well as share their own. There are also some standardized signs that they are encouraging communities across Canada to use so that it becomes easier for all residents to recognize them.

Common tools are noted below as well as dynamic ones that engage the audience more directly:

Depots

Signage for materials should be standardized. For packaging and printed paper, it is meant to complement new MMBC signs; intended to "translate" service provider and provincial program details with an over-arching simple call to action. (Consider attendant training and approach, may wish to start with fun and educational, recommend clear bags, make them be seen as a way to fast track to Zero Waste rather than police).

Streetscape Bins

New decals will help simplify what-goes-where when people are in the community[2]. The long-term recommendation is to use similar-shaped lid-openings and colour-coded bins across the region. Existing bins could be repainted to align material types with specific colours. Efforts should be made to use slot shapes that indicate what type of material should be discarded in the bins.

Curbside Decals

Service providers can distribute decals for residents to place on the appropriate curbside bins where residents provide their own bins or to be affixed to bins when they are delivered to the resident where the service provider provides the bins. Where there are details on what kinds of materials go in the bin or not, these details could be included on an additional sticker on the lid. Best practices for signage for these first three tools are outlined in Appendix F.

Web

The website should have a fun and friendly tone that reinforces the existing new norm of Zero Waste. Social marketing science is clear about the need for communication to create the impression that most people are already engaged in the desired behaviour. In addition, with the SLRD's role as an information hub, the website will need to provide the information for residents and businesses to assist them in reducing and diverting waste. This will include the basics of what, when, where and how. For more keen users, it may include more details in

[2] Signage graphics could be made available to local organizations as some already are making their own unique signs (which can add to the confusion). The SLRD could provide something like San Francisco's sign maker - http://www.sfenvironment.org/signmaker.

additional links. First Nation Communities may wish to use the co-branding opportunities mentioned above to relate information within their communities.

Print Media

There is an opportunity to share feedback with the target audience on their progress towards achieving waste reduction and diversion targets, and to profile community Zero Waste leaders. There are some robust local papers that focus group participants noted they read and would appreciate some stories providing feedback on community progress towards Zero Waste, tips on what to do and stories about local waste reduction champions or people who are making an effort to reduce waste and what they learned. Some story ideas are listed in Appendix K. In addition, earned media can be a great way to convey key messages in a cost effective manner. Earned media are journal articles that reinforce the desired message. An example would be a feature story about how a local resident started actively reducing waste through food scraps collection, and how she has benefited.

Radio

Radio can also be an effective medium for some groups. For both print media and radio, there may be opportunities to provide information for public service announcements which can keep costs low if they meet specific criteria as well as opportunities to leverage earned media.

Printed Materials

For some audiences printed materials can be useful. In some cases, they can be used for larger groups or be small in size but provide a way to remember a website or can be a reference guide for information pertaining to reducing waste. Utilising existing community newspapers and newsletters can be an effective way to reach large audiences and specific communities.

6.1 Dynamic Engagement

Creative promotions

Recognition of positive waste reduction and diversion behaviours will help to reinforce an emerging Zero Waste norm in the SLRD. Research shows that recognition efforts are most effective when in close proximity to the time and place of the desired behaviour. Empowering local service providers at transfer stations to reward waste diversion efforts (see Role of Stakeholders Section 7.1 for details) will help to build a “customer service” culture among service provider staff, and reframe the transfer station experience as a place to learn about community stewardship.

Social Media

Municipal partners, local NGOs, and service providers actively use a variety of social media tools that will assist the SLRD in reaching the key target audience, such as Twitter, Facebook, and YouTube. The most common issue facing public organizations who initiate social media campaigns is how to effectively maintain them. For this reason, the most efficient and strategic choice for the SLRD is to support existing stakeholder tools. Rather than developing SLRD branded channels, develop a weekly story, tip, or update on regional waste reduction and diversion goals for partnering organizations to post as well as on their own pages/sites. In this way, existing resources can be leveraged and the public can be more effectively engaged.

Special Events

Integrating communications tactics with existing community events across the region will support the SLRD in a number of ways, including:

- Increasing relevance of SLRD message to local community members
- Building stronger relationships with local community leaders
- Providing access to new target audiences
- Improving efficiency of SLRD resources, related to both staff time and marketing costs

Engaging in face-to-face marketing is an important way to build relationships with the target audience(s) and better understand their communications needs. Talking directly with the people whose behaviour you wish to influence helps to reinforce the importance of the message, and provides greater word-of-mouth marketing opportunities.

Waste diversion is already promoted through interactive displays during the Farmer's Market season (approximately June through October) in Squamish, Whistler and Pemberton. The music concerts, children's festivals, and other major events would all benefit from a coordinated and consistent waste diversion and reduction program, which could reduce waste at the event but also teach participants about waste diversion options.

See Appendix J for listings of events, how to select which events to participate in and the event toolkit. Utilising already established community events and collaborating with local event planners will provide the most efficient integration. Appendix M has a sample pledge card that could be used to get commitment at events as well as to build the social norms by making these public.

School Programs

Stakeholders across the region supported the continuity of the intermediate elementary school program. This communications approach may be especially effective in reaching the single family and multifamily residence target audiences.

Seasonal Campaign

Interactive communications efforts that allow for face-to-face conversation, games, and rewards have the greatest potential to create word-of-mouth marketing. Social marketing research indicates that people share information through stories, and that they are most likely to act on the information shared by people closest to them. By selecting one key reduction/diversion theme that involves interactive communications to focus on once a year, the SLRD and regional partners can concentrate resources and continue to drive change and leverage earned media.

Background research for this strategy indicated that regional partners would like to coordinate communications efforts around the organic waste reduction/diversion. The SLRD has the opportunity to harmonize organic waste reduction and diversion communications, and future reduction/diversion efforts could follow this kind of format.

Implementing an annual campaign to increase target audience participation in organic waste reduction and diversion will require strong partnerships with key stakeholders (see next section for details on how to foster stronger collaboration). More public engagement is possible because there are now attendants at all transfers and landfill sites run by SLRD and municipalities within the SLRD, and these staff can talk with the public about their personal waste management choices. The role of the people at the "front lines" of waste management – those

who work at transfer station and landfills – has the potential to be expanded and their new "green job" status is likely to become a source of pride.

We recommend building capacity with the municipal partnerships by co-leading one prototype pilot project before the end of 2014, such as the existing Pumpkin Drop campaign. There are at least two reasons for this recommendation. First, it will provide an opportunity for partner collaboration on a project, where the upfront investment of time is low because communications materials are already designed in member municipalities in many cases. In this way, the partner organizations have an opportunity to enjoy early success working together. Second, it will help to identify any organizational issues that need to be resolved before the launch of future communications campaigns.

7 IMPLEMENTATION PLAN & EVALUATION

The implementation plan noted here discusses who will implement the plan, the budget and how to evaluate its effectiveness. The more detailed Action Plan for each of the 6 communication strategy phases is in Appendix H. It looks at the tactics, the specific timeline and how to evaluate it. Where applicable for some tactics, the objective it addresses (knowledge, belief or behaviour) is also noted.

7.1 Role of Stakeholders

7.1.1 SLRD Role

The communities within the SLRD have diverse demographics and geography. While this variability poses a communications challenge on many levels, the SLRD staff and political leaders are positioned to identify and promote regional collaboration opportunities. In addition, it is most practical for SLRD staff to actively participate in provincial waste reduction/diversion programs, including processes to develop new resource management targets, EPR consultations, carbon off-set strategies, and any other Zero Waste initiatives. The SLRD can share relevant information on new initiatives and research with their member municipalities and stakeholders.

Policy Initiatives

There is a clear need for more sharing of resource management bylaw design and other structural regulatory tools to assist with improved waste reduction/diversion. While the focus of this communications strategy is on reaching the large residential target audience, a variety of mechanisms are available to influence additional segments, such as:

- Specify diversion language throughout SLRD, including transfer station and streetscape containers
- Change collection services for ICI, multi-residence dwelling units, and tourist accommodation buildings to require recycling and compost options in addition to garbage services. In some municipalities, these organizations could qualify for waiving of fees (such as those in utility fees or property taxes).
- Work with service providers to actively enforce the disposal bans and strengthen penalties for loads with divertible materials
- Encourage the use of clear bags to make it simpler for waste attendants to provide coaching
- Develop a simplified special events check list and require specific waste reduction parameters for municipally-sponsored events

- Show leadership by developing policies and implementing them internally (such as waste reduction systems or sustainable purchasing policies).
- Encourage larger ICI organizations to adopt or adapt sustainable purchasing policies, and develop sustainable purchasing toolkits
- Require new real estate developments to provide space for proper separation/collection of recycling and organics for ICI and multifamily
- Add resources to more actively enforce existing bylaws and guiding policies; this could also include positive reinforcement options, identified in this strategy

Organizational Structure

The SLRD is a small regional government compared with some others in BC, and continues to face the challenge of managing numerous social, environmental and economic projects with limited resources. Assuming a more strategic role in the region must be balanced with hands-on coordination of services in smaller member communities.

To assist in developing a balance between oversight and implementation, the following actions are recommended:

- Establish clear division of SLRD staff responsibility for operations management and regional strategic planning so strategic advances and actions can be made without delays due to urgent operational needs. This can be achieved by having one position dedicated to solid waste communications, reporting to the Director of Utilities and Environmental Services and collaborating with the rest of the solid waste team.
- Host annual waste reduction/diversion communications planning workshop with regional communications and waste management staff to ensure coordinated timelines, goals and campaign tactics.
- Secure communications strategy implementation commitment from both municipal partners, First Nations, and service providers. This can be best achieved through the current Advisory Council process.
- Develop a program–specific working group to plan and actively support implementation of specific programs.

It is recommended that the SLRD create a position to coordinate solid waste communications for the region and to work with partners to implement this plan. This position would be responsible for implementing the action plan, potentially in collaboration with or combined with the current scope of the Zero Waste Educator. However, as there is increasing work with partners, future reduction/diversion themes may see larger roles taken by partners depending on the projects.

7.1.2 Municipal Role

Municipalities also have control over how hauling, processing and other service provider contracts are developed, and can specify communications and outreach messages and actions that connect them to reduction/diversion programs and targets. Municipal leaders will also be most effective in advancing a distributed leadership model of citizen engagement that capitalizes on municipal communications tools and local citizen engagement. Distributed leadership is about grassroots, citizen-led programs where local and regional government leaders support the existing social capital in their communities (such as distributing branded public awards for waste reduction efforts). Further, social marketing strategies are most effective when they include peer-to-peer influence. By working in partnership with local NGO waste organizations, member municipality resource managers can reinforce the growing new norm of improved waste reduction and diversion in their communities.

In the development of this plan and in the ongoing work of implementing the SWMP and the process of updating the SWRMP, the groundwork has been laid for closer collaboration. Member municipalities already participate in the Solid Waste Plan Monitoring Committee and now in the update process of the SWRMP. These meetings have built a relationship between the SLRD and the municipalities which can be enhanced by further partnership. It makes sure all partners are aware of new proposals and programs and that ensures local conditions are taken into account in program and education development.

7.1.3 First Nations Role

While not under the jurisdiction of the SLRD and not municipalities, First Nations communities also need to plan for and provide services for solid waste. They may use SLRD solid waste services (such as landfills) and have a common interest in reducing waste and diverting resources from landfill. As such, the SLRD can work towards stronger partnerships with local First Nations in a similar fashion as with the member municipalities (working together on common communications, inclusion in planning meetings, sharing of resources, etc.).

7.1.4 Service Provider Role

Critical to the success of this strategy is support from private sector agencies providing both curbside pick-up and transfer station management. These agencies are often the main conduit for public engagement and as such have a special role to play in reinforcing positive behaviour. Opportunities for public engagement include: asking for public commitment to waste reduction on branded postcards and then having an interactive display at transfer stations. Each month the service provider company could choose one recipient to profile on social media channels. Random draws for prizes are encouraged from the pool of submissions. In some cases, local NGOs may also play a similar role.

7.1.5 Shared Responsibility

Recognizing the value of region-wide consistency in messaging, the SLRD, member municipalities, First Nations communities, service providers, and community NGO's are recommended to commit to the following:

- Provide input on and adopt one signage design, then replace or update existing signage throughout one calendar year
- Re-locate diversion containers at transfer stations and depots to make them the most convenient choice; move mixed waste bins to the back of the properties
- Recommend all streetscape, business and multi-family collection bins to be grouped, and placed in consistent ordering as much as possible (e.g. no solo garbage or recycling containers)
- Share SLRD promotional messages on social media channels regularly
- Actively participate in annual strategic planning sessions
- Simplify bylaw process through developing standardized language and sample bylaws that can more easily adopted by councils (i.e. space requirements for recycling containers in strata buildings, requirements for front and back of house at businesses, requirements for deconstructing buildings)
- Pilot programs in different communities to gain lessons learned and inform broad scale regional program development and implementation
- Orient and train attendants and front line staff on current situation, and encourage them to actively promote new programs

7.2 Food Scraps Reduction Campaign Snapshot

Building on the knowledge, belief and behaviour objectives identified for the program, a two-part campaign to promote food scraps collection has been developed. While this timeline would be best followed in sequence, it would be possible to begin in Part 2 if necessary due to budget and hiring restrictions. Working through the Action Plan outlined in Appendix H will help to identify a logical starting point that is sensitive to the current context.

Part 1: Pilot -September/October: Integrate the newly branded SLRD waste reduction messaging into existing initiatives by:

- Reinforcing food waste avoidance and organics diversion messaging by incorporating it into existing Halloween pumpkin drop promotions in one or two partner municipalities. By priming the target audience with this food scraps messaging in the fall, the larger spring campaign can build on existing positive behaviour. This will be a pilot activity.

Part 2: Roll out starting April/May: Actively promote food scraps reduction/diversion by:

- Featuring food scraps-focused information that builds on implementation of guiding SLRD branded communication (providing food scraps collection tips online to introduce behaviour change). Tips should include bin recommendations, meal planning tools, how-to videos, etc.
- Coordinate with transfer station staff to focus feedback and support on food scraps diversion: special training provided in advance of campaign. Critical to include before and after feedback about food scraps diversion, and the results of the increased public participation in waste reduction, both at the transfer stations and through online channels.
- Providing branded food scraps bins (removing barriers to enable behaviour change) in exchange for public commitment to experiment with food scraps collection (post public commitments at transfer stations “wall of fame”. Potential to partner with local ice cream businesses to give away bins, and provide gift certificates to receive ice cream to all “waste reduction heroes”. Emphasize a “wrap your scraps” with newspaper to overcome collection and transfer challenges.
- Hosting a weekly “waste reduction hero” contest (providing rewarding communications to reinforce behaviour change). To participate, people nominate a “waste reduction hero” with a photo and story and post it on SLRD Facebook site. Winning waste reduction story featured in the News section of SLRD website, and winner awarded donated prize (potentially ice cream). Ideally nominations would include both regular citizens as well as higher profile community members including but not limited to politicians and other community leaders, professional athletes who live in or use training facilities in the area.
- Campaign promotion: through municipal partner online channels; with transfer station staff; through earned media; through targeted bought ads in local newspapers; and most effectively, through word of mouth generated by free ice cream.

Further details about how to implement this campaign are included in Appendix H which includes the preparation, announcement, launch and evaluation phases.

7.3 Resources Required

Waste reduction and diversion will continue to be a major challenge and opportunity for the SLRD. Investing in the implementation of this communications strategy is critical to achieving the SLRD SWMP. The minimum level of investment to ensure the successful implementation of this strategy requires a dedicated part time staff person for three days per week. It may be beneficial to subcontract some of the tasks, such as the more tactical actions like

coordinating the production of updated signage. This will ensure that the SLRD can continue to provide a single point of contact for municipal stakeholders, assume senior level responsibility for coordinating regional waste reduction/diversion programs, and have the staff resources to leverage partnerships with municipalities, ENGOs, service providers, and other potential partners over time. The actual activities to be performed by this dedicated staff person are outlined in the Action Plan in Appendix H (with some time requirements noted but additional time will be needed for all the small detailed actions not included as well as for the work with partners which will vary based on the number of partners and their availability). Planning level resource requirement examples are outlined in the table below.

Table 7-1 Budget for Resources

Resource	Estimated First Year Budget
SLRD Solid Waste Communications Coordinator (plus additional benefits and overhead)[3]	$33,000
Ambassador stipends for special events (10 events per year, average 2 ambassadors per event, $100 stipend each including training (in-kind entrance fee or other may be possible depending on the event)	$2,000
Printing for wallet cards ($1,125 for 2,500 but cost per card lower if more) –changes to template may be possible by printer with no additional fee. Considered runs for Pemberton, Lillooet, Gold Bridge and Devine; could partner with Squamish and Whistler to have consistent look for those communities also but costs for these communities are not included.	$4,000
Printing of pledge cards (for 5,000 in postcard format)	$1,300
Print banner for displays (2 at $250 each)	$500
Branded tent for events (10’ x 10’ aluminum)	$1,300
Kitchen catchers for food scraps diversion (note there may be different needs for future themes) (3,800 containers to reach 10% of SLRD population at an average of $6.50 each, offset cost by donation of reusable containers, introduced across recycle depots)	$24,700
Home container recycling and food scraps decals (5,000 quantity, 50 cents per sticker)	$2,500
Sign production for SLRD waste locations (4 sites, 8 signs per site, weatherproof and durable)	$2,000
Newspaper ads ($400 per ¼ page ad in 5 local papers, twice per year)	$4,400
Total	**$75,700**

The cost Solid Waste Communications Coordinator depends on the staffing capacity of the member municipalities to assist with this campaign.

7.4 Expected Outcomes

Evaluation creates credibility and will help to improve communications as well as the programs and services offered. By identifying what works and what doesn’t work, resources can be focused on the most effective communication channels and tools and eliminate or reduce other components. Evaluation typically consists of monitoring, process and program evaluation and links back to the communication objectives.

Evaluation needs to be planned and have resources to conduct it. Deciding in advance what can be tracked and what resources (staff and/or financial) are required will help ensure the information can be collected and in turn

[3] Note this rate is the industry standard, verified by contacting organizations with similar positions.

used for continuous improvements. As well, using the information gained will help avoid problems, identify opportunities and create more targeted and effective communications.

Social transformation is a long-term process that requires persistence. Committing to the strategy, including the messaging and the implementation recommendations, will yield the best results. Behaviour change is challenging to measure, and we caution the tendency to draw correlations between planned interventions and observed changes in public behaviour. Most social marketing programs target a 5% rate change within 2-3 years based on focused and consistent communications programming (Kujawski, M. 2009).

7.4.1 Process Evaluation

Before implementation begins, monitoring mechanisms are put in place to retrieve feedback on the program and to catch any problems in their early stages. Although it's unlikely to anticipate every type of problem, a monitoring system will help to identify problems as they may arise during implementation. Most problems can be resolved if detected early enough, but left unchecked, can mean the difference between success and failure of the program. Effective monitoring of public and key stakeholder response involves staying on top of trends in the program's activities and ensuring that implementation is on the right track toward accomplishing program goals.

Process evaluation should include tracking questions and feedback to the SLRD, member municipalities, program partners and RCBC by type of inquiry and by location. RCBC can be asked to provide hotline call and website tracking. Surveys could be conducted to ask how a person heard about the program. Monitoring should also include feedback from the waste attendants. Internally, maintaining open lines of communication between departments will also assist in identifying and responding to issues as they arise.

A key aspect of process evaluation also includes ensuring the plan is being implemented on time and on budget, and making adjustments as necessary. See Appendix H for action plan details.

7.4.2 Qualitative Success Measures

Identifying key milestones along the social transformation journey is critical to maintaining momentum and partner support.

These success measures should include:

- Increased regional capacity to collaborate in solving other sustainability issues (i.e. habitat restoration economic recovery planning, affordable housing, etc.)
- Improved efficiency in SLRD Utilities and Communications Departments: active stakeholder participation in SLRD-led strategic planning events
- Feedback from partners and public (including verbal comments, feedback forms at workshops)
- Phone calls and inquiries to the SLRD and partners
- Online surveys
- Future focus groups

7.4.3 Quantitative Success Measures

The communications plan should assist the SLRD in reaching its waste reduction and diversion targets. These targets will be finalized in the SWRMP update process.

These success measures should include:

- Number of transfer station, streetscape, and curbside infrastructure across the SLRD with updated unifying branding
- Number of times standard signage is downloaded from website
- Amount of public engagement in social media waste reduction/diversion stories
- Number of media stories on waste reduction/diversion (i.e. growing public interest in resource management)
- Greater use of organics diversion services at the transfer stations reported by staff
- Reduction in waste (total waste, per capita disposal rate; ideal if data can be disaggregated to show impact of a specific program on a population – be it event or municipality)
- Actions completed in the Action Plan
- Hits to website or social media (both SLRD and key partners)
- Number of participants at events
- Number of wallet cards given out
- Number of pledges signed
- Number of committed partners
- RCBC hotline and Recyclepedia statistics from SLRD region users

7.4.4 Providing Feedback

Research shows that providing public feedback on program goals can help build community norms. This should be done for this program as well as subsequent reduction/diversion themes. Different tools can be used for different audiences. Suggested actions for providing feedback are included in the action plan

APPENDIX A: WASTE REDUCTION/DIVERSION AND COMMUNICATIONS RESEARCH

Communications

Canadian Internet Project (2008) – Canadian Internet Project Launches Report From Second Phase of Study on Canadian Internet Habits. Accessed at http://www.ciponline.ca/en/publications.htm.

Dietz et al, 2009 – Household actions can provide a behavioral wedge to rapidly reduce U.S. carbon emissions. Accessed at http://www.pnas.org/content/early/2009/10/23/0908738106.

Fostering Sustainable Behaviour, Community-Based Social Marketing (2010) – Articles, Cases, Strategies, Forums http://www.cbsm.com/public/world.lasso

Goldstein, N.J., Cialdini, R.B. and Griskevicius, V. (2008). A room with a viewpoint: Using social norms to motivate environmental conservation in hotels. Journal of Consumer Research, 35(3), 472-482.

Harvard Business School, Sarah Jane Gilbert, Sunil Gupta (2009) – Social Network Marketing: What Works? Accessed at http://hbswk.hbs.edu/item/6187.html.

Hoggan and Associates (2006), Communicating Sustainability. Accessed at http://www.hoggan.com/sites/default/files/Hoggan%20Sustainability%20Choice%20Dialogues%20Report%202006.pdf.

Ipsos Reid – Canadians Prefer PC to TV http://www.cbc.ca/canada/british-columbia/story/2010/03/22/consumer-tv-online-web-internet-viewing-habits.html#ixzz0j4Ez8JQ5

Ipsos Reid for Ministry of Environment (2009) - Consumer Awareness of Industry Led Product Stewardship Programs in BC. Accessed at http://www.env.gov.bc.ca/epd/recycling/resources/reports/cas/pdf/ipsos-reid.pdf.

Ketchum's Online Magazine – Media Myths and Realities http://ketchumperspectives.com/archives/2009_i1/key_findings.php

Kujawski, M. (2009). Guide to Branding in the Public and Non-for-profit Sectors. Accessed at http://www.mikekujawski.ca/ftp/cepsm_branding_ebook.pdf.

McKenzie-Mohr, D (2011). *Fostering sustainable behavior: An introduction to community- based social marketing* (3rd ed.). Gabriola Island, BC: New Society.

Savelson, Wynesberghe, Frankish and Folz (2007). Application of a health promotion model to community-based sustainability planning. Accessed at http://www.tandfonline.com/doi/abs/10.1080/13549830500321832#.U8_m_VbYeDE.

Sheely, L. & Dingle, P. (2003). *Goal setting and sustainability: Living smart in the city of Freemantle.* Retrieved from www.sustainability.dpc.wa.gov.au

Statistics Canada (2003) – Canadian Social Trends. Keeping up with the times: Canadians and their news media diet. Accessed at http://www.statcan.gc.ca/pub/11-008-x/2006008/9610-eng.htm.

Weinreich, Nedra (2011). *Hands-On Social Marketing: A Step-by-step guide to designing change for good- 2nd edition*. Thousand Oaks, CA, SAGE Publications.

Zinc Research and Dufferin Research (2009) – Canadians and Social Networking Sites. Accessed at http://www.zinc-tank.com/include/get.php?nodeid=23.

Waste Reduction and Diversion

Brook Lyndhurst. (2006). Waste Watch. *WR0504: Establishing the Behaviour Change Evidence Base to inform Community Based Waste Prevention and Recycling.* A project for DEFRA's WRAP. Retrieved from http://randd.defra.gov.uk/Document.aspx?Document=WR0504_5409_FRP.pdf.

CBC, 2012. What a waste. Accessed at http://www.cbc.ca/strombo/news/what-a-waste-new-study-says-canadians-waste-27-billion-worth-of-food-every-.

Chapman, S. (2011, June). Globe and Mail. *How to save money on food? Quit wasting it.* Retrieved from http://www.theglobeandmail.com/globe-investor/personal-finance/household-finances/how-to-save-money-on-food-quit-wasting-it/article2042905.

District of Lillooet (2009). Official Community Plan. Accessed at https://lillooet.civicweb.net/Documents/DocumentDisplay.aspx?Id=1058.

District of Squamish (2010). Comprehensive Solid Waste Strategy. Accessed at http://squamish.ca/assets/Comprehensive-Solid-Waste-Strategy-3.pdf.

MacDonald, N. (2009, November 9, 11:24am). What a waste. Accessed at http://www2.macleans.ca/2009/11/09/what-a-waste/.

Resort Municipality of Whistler (2013). Solid Waste Management Strategy. Accessed at Resort Municipality of Whistler (2013) Solid Waste Strategy

Squamish-Lillooet Regional District (2007). Solid Waste Management Plan. Accessed at http://www.slrd.bc.ca/sites/default/files/pdfs/UES/recycling-composting-solidwaste/SWRMP/SLRD%20SWMP%20final%2018%20April%2008.pdf.

Squamish-Lillooet Regional District (2013). Integrated Sustainability Plan. Accessed at http://www.slrd.bc.ca/sites/default/files/pdfs/SLRD%20ISP%20(FINAL2)_.pdf.

Squamish-Lillooet Regional District (2014). Technical Memo-Waste Diversion Options for the Northern SLRD. Accessed at http://www.slrd.bc.ca/sites/default/files/pdfs/UES/recycling-composting-solidwaste/SWRMP/TM1_Waste%20Diversion_North_29%20May.pdf.

Squamish-Lillooet Regional District (2014). Technical Memo-Waste Diversion Options for the Southern SLRD. Accessed at http://www.slrd.bc.ca/sites/default/files/pdfs/UES/recycling-composting-solidwaste/SWRMP/TM1_Waste%20Diversion_South_25Feb2014.pdf.

Squamish-Lillooet Regional District (2010). Regional Growth Strategy. Accessed at http://www.slrd.bc.ca/sites/default/files/pdfs/BL1062.pdf.

Whistler 2020 (2010). Descriptions of Success for Materials and Solid Waste. Accessed at http://www.whistler2020.ca/whistler/site/strategy.acds?instanceid=1930592&context=1930591.

Other

Statistics Canada (2011). 2011 Census results for the Squamish-Lillooet Regional District. Accessed at http://www12.statcan.gc.ca/census-recensement/2011/dp-pd/prof/details/page.cfm?Lang=E&Geo1=CD&Code1=5931&Geo2=PR&Code2=59&Data=Count&SearchText=Squamish-Lillooet&SearchType=Begins&SearchPR=01&B1=All&GeoLevel=PR&GeoCode=5931&TABID=1.

Statistics Canada (2011). Composting in households in Canada. Accessed at http://www.statcan.gc.ca/pub/16-002-x/2013001/article/11848-eng.pdf.

Statistics Canada (2006). 2006 Census results for the Squamish-Lillooet Regional District. Accessed at http://www12.statcan.gc.ca/census-recensement/2006/dp-pd/prof/92-591/details/page.cfm?Lang=E&Geo1=CD&Code1=5931&Geo2=PR&Code2=59&Data=Count&SearchText=squ&SearchType=Begins&SearchPR=59&B1=All&Custom=.

APPENDIX B: SUGGESTIONS FOR FUTURE COMMUNITY-BASED SOCIAL MARKETING PROGRAMS

These suggestions come from the audience segmentation process conducted as part of the project.

- Multifamily building residents –food scraps reduction and diversion
- Multifamily building residents –recycling
- Institutions and major industry– food scraps reduction and diversion
- Institutions and major industry –recycling

Other suggestions from the SLRD SWRMP update process and elsewhere (target audience to be identified for some)

- Reduction and reuse of single use packaging (plastic bags, coffee cups, water bottles)
- Reduction of unwanted ad mail through signing up residents and business for Canada Post's program to opt out as well as for unwanted directories through Yellow Pages and Can Pages (can distribute stickers at events, can have iPads for people to register online at events).
- Encouraging reuse
- Encouraging repair through highlighting existing options and/or by hosting repair cafes
- Promoting the use of rental and sharing options (work with Chambers of Commerce to have them identify repair and rental options offered by their members, support the creation of equipment libraries)
- Reduction of material use by encouraging gifts of experience over gifts of things (using materials developed and shared by Metro Vancouver)
- Encouraging use of back yard composting through a bear aware compost coaching program
- Recognizing Zero Waste heroes with a school programs where classes receive buttons to hand out to people they see modeling desired behaviour. Heroes are asked to log in to the website to state what they received the award for and to pass it on to the next person they see doing the right thing.

A Reduce/Reuse campaign could incorporate many of the above ideas, working with the Chambers of Commerce to highlight local businesses, using iPads for online signups for opting out of yellow pages distribution, giving out stickers and instructions for people to avoid junk mail from Canada Post, showing an "urban backpack" with reusable coffee mug, cutlery, shopping bag and workshops for people to share their solutions and tips. Similar tactics that were recommended for the food scraps reduction/diversion theme such as Zero Waste heroes and their news stories could be used as well as competitions, pledges and partnerships with relevant businesses for prizes.

APPENDIX C: SOCIAL MARKETING AUDIENCE SEGMENTATION PROCESS

On a scale of 1 – 10, with the **higher end being the best possible**, score the following groups against the criteria identified. Note that your scores will be determined by their comparison to each other. One segment has been left blank for you to add your own, if desired.

S: Size: total number of people that could be influenced: estimated population

AR: At Risk: most likely to engage in problem behaviour

P: Persuadability: realistic to expect change in attitudes and behaviour of the group

A: Accessibility: ease in reaching the group through existing communications tools

RR: Resources Required: financial and other assets needed to reach the group

Segment	S	AR	P	A	RR	TOTAL
Residential, single family in town						
Residential, single family rural						
Residential, multi family complex						
Institutions and major industry like schools, hospitals, etc.						
Commercial: retail and office						
Commercial: food and Accommodation						

APPENDIX D: POTENTIAL STAKEHOLDER LIST

This list highlights the main stakeholders whom the SLRD will want to consider when designing programs. For certain projects, there may be additional ones for specific materials.

Primary Stakeholders

Primary stakeholders are those integral to the program, such as decision-makers targeted to ensure effective support or residents or businesses targeted in order to influence behaviour.

Internal – Decision Makers, Opinion Leaders and Support

- SLRD Board of Directors
- SLRD Staff and contractors

External – Decision Makers and Opinion Leaders [4]

- Ministry of Environment – Environmental Protection Division
- Ministry of Environment regional offices (sit on Regional District Waste Committees etc.)
- BC Product Stewardship Council
- BC Stewards Association
- Local governments' Mayor and Council, administrators or managers
- Members of the Legislative Assembly
- BC Members of Parliament
- Aboriginal leaders/First Nations
- Local government waste management and education staff
- Local government contract staff (i.e. landfill contractor, hauler)
- Local government support staff that respond to inquiries
- Key ENGOs (e.g. AWARE, Squamish CAN)

External - Partners / Service Providers

- Recycling Council of British Columbia (RCBC) operating information services
- Service providers including waste haulers and recyclers such as Whistler Community Services Society, Regional Recycling, Carneys, Waste Control Services, Lillooet Recycling & Disposal, Sea to Sky Soils, etc.
- Service providers offering stewardship programs like Encorp Pacific, and Product Care
- Service providers offering rental, sharing or repair services
- Retail and commercial partners that are providing reduction/diversion theme information at point of sale/decision *(note: this may be most effective when part of a larger ICI target audience campaign, to ensure congruence between partner organizational waste management practices and public promotional of SLRD waste reduction brand).

External - Residents

Residents may be further identified based on their type of dwelling, such as single family home or multi-family home, or by rural or urban location. Residents can be defined by demographics such as age (i.e. children, youth,

[4] Note that some of these could be internal where working groups and partnerships are formed.

adults, seniors), by family status (i.e. parents with children, empty nesters, retirees) as well as by gender. Other characteristics, known as "psychographics" may also segment the residential target audience by habits, attitudes, lifestyle, and behaviour patterns, such as gardeners or commuters. Strategies, tactics, and message delivery may vary according to target audiences. For example, backyard composting messages are well suited to the residents in single-family homes, while not as applicable to those living in apartments.

Individual audiences can include:

- Single family homes
- Multi-family homes
- Rural residents
- Urban residents
- Families with children
- Children
- Youth
- Adults
- Retirees
- Seniors
- Employees

External –Businesses, Institutions, Accommodations

This can include individual businesses or types of businesses such as retail, office, foodservices and accommodations services. It may depend on size of business or the specific community. In some cases, there are local associations to which they may belong (e.g. Whistler Retailers Association). Institutions can include schools, universities and health care and long-term care facilities. In the region, there are various types of accommodations from hotels, and bed and breakfasts to timeshare strata buildings with property managers that may require different approaches.

External –Construction, Demolition, and Renovation

Solid waste statistics often have a separate category for waste generated by this group as there are different kinds of materials handled and the logistics may be different. This would include companies that construct, demolish or renovate buildings but there may be other groups to consider that may be in this category or others (such as planners, permitting staff, rebuild it centres, architects, and certification programs).

Secondary

The following audiences have been identified as secondary in order to prioritize delivery of programs.

External – Media

Mass media is identified as one of the foundational tools in community-based social marketing. Paid advertising disseminates the SLRD's messages to a large portion of the population over a wide geographically diverse area and supports ongoing educational activities at the local level. In some cases, Public Service Announcements could be created and aired or published.

Leveraging media coverage through publicity efforts can serve to increase this reach. Strengthening media relationships can increase social diffusion of the message as it is broadcast by credible media personalities

- Community newspapers
- Radio
- Online news outlets or discussions

External - Schools

Behaviours learned in the classroom help shape the social norms and values of a community, as students learn new behaviours and transfer them into the home. The school community is a primary focus for delivering environmental education.

- School District administration
- School Principals
- Teachers
- Students

External – Provincial / Regional ENGOs

These are like-minded organizations that are often composed of opinion leaders at a provincial or regional level. They can serve as channels for information distribution and for feedback.

- Sierra Club BC
- David Suzuki Foundation

External - Community Organizations

These are key groups of residents and are often opinion leaders at the grassroots level. In addition, they also serve as excellent channels for information distribution and feedback.

- Chambers of Commerce and other business leaders or associations
- Service clubs such as Rotary, Lions, and Kiwanis Clubs
- Community neighbourhood resident and ratepayers associations
- Interest-specific groups such as WORCA, SORCA, outdoor clubs, women in business groups, etc.

APPENDIX E: SLRD STATISTICAL INFORMATION

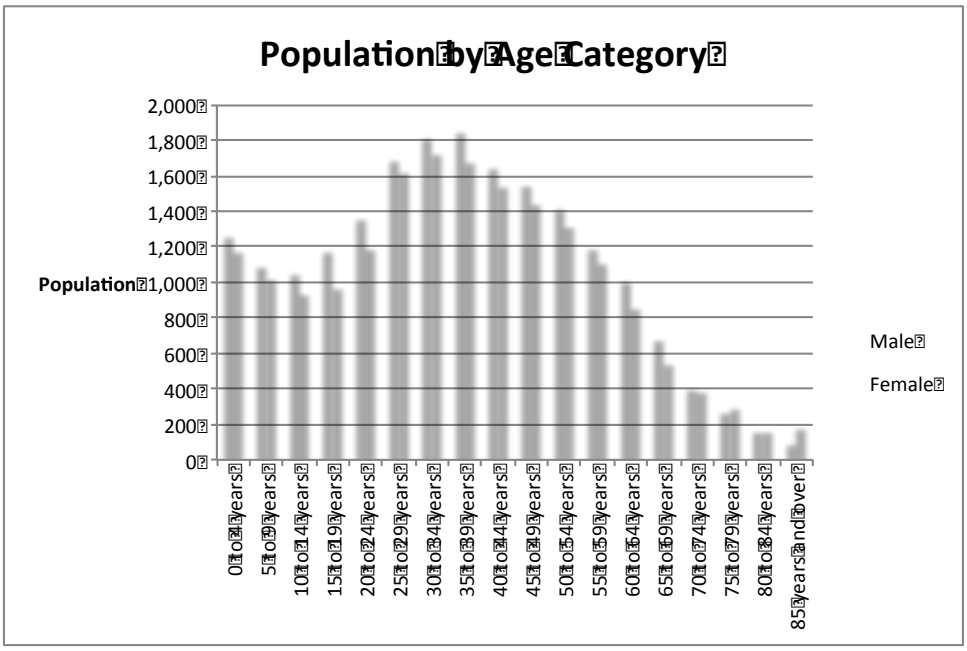
This data provides a description of the residents and characteristics of the SLRD. The data is from Statistics Canada 2011 Census and Composting by households in Canada (Statistics Canada).

Population -38,171 (note this does not include the very high number of visitors that come to the region and use the infrastructure built for them. These visitors are concentrated in Whistler but also visit surrounding communities.)

Private dwellings -22,146
Private dwellings occupied by usual residents 14,998 (note that there are more private dwellings than are occupied as there are many second or holiday homes that are only used occasionally. The percentage of unoccupied homes is higher than in other communities due to the region's tourism sector and needs to be considered when offering services as there can be peaks and dips in demand for services and some actions may not be suitable for non-permanent residents (such as backyard composting) or neighbourhoods with a high vacancy rate (such as curbside collection).

Population density -2.3 persons/km^2 with a land area of 16,310 km^2

Age Groupings by Sex in the SLRD



Median age – 36.2 (note this is lower than the provincial average of 41.9 years and may reflect the numerous younger workers that come to work in the resort or enjoy the outdoor activities). There are also slightly more males in this region (52% of the population versus 49% provincially)

Marital status – 57% are married or living with a common law partner (note this is similar to the BC average but in the SLRD a higher percent of those people are common law rather than married, possibly reflecting the younger

demographic). 43% are not married or living common law which is also similar to the BC average but a higher percentage of those people in the SLRD are single and have never been married rather than separated, divorced or widowed (this again may be a reflection of the younger demographic).

Family characteristics –There are 10,260 families and 49% of them have at least one child at home which is similar to the provincial average. There are 8,190 people not living in a census family (living alone, or with others)

Table E-1 Household and dwelling characteristics

Dwelling Types	Number of Dwellings	Relative Percentage
Single detached house	6,895	46.0%
Movable dwelling	810	5.4%
Semi-detached house	870	5.8%
Row house	2,290	15.3%
Duplex	1,635	10.9%
Apartment (under 5 storeys)	2,400	16.0%
Apartment (5 storeys or more)	65	0.4%
Other single-attached house	45	0.3%
Total number of occupied dwellings	14,995	

Language -83% or residents have English as their mother tongue, 3.5% listed French and 12% listed other languages (the highest being Panjabi 3% and German 1.6%, Tagalog 1% and Japanese (1%). Only 325 people do not know English. While there are numerous languages spoken at home, there are no predominant groups and English is commonly spoken in the region.

Business information

There is a Chambers of Commerce in each of the member municipalities:

Lillooet -50 members
Pemberton -145 members
Squamish -520 members
Whistler over 800 members

Note: some businesses may belong to more than one chamber.

APPENDIX F: RECOMMENDATIONS FOR SIGNAGE AND BINS

Studies on best practices for signage and bins shows that the following is the most effective:

- Reverse signage - white letters on darker background, high contrast
- Terminology clear, short, consistent
- Clear slogan and messaging
- Consistent colour-coding - (mixed containers/recyclables – blue, paper – yellow/gold, organics –green, landfill black or grey)
- Photo realistic or pictorial images without product branding for "point of use" signage
- Large icons on front to identify bins and ideally coloured bins (plus line of sight labels above and possibly also below the slot for people approaching from different angles or of different heights)
- Use tied bag or garbage can as iconic garbage sign (indicates a mix of unsorted items)
- Use banners or floor/walls where appropriate
- Keep waste prevention in mind (do not show whole food or usable items)
- Use restricted shapes to guide behaviour
- Consistent bin order –recycling, organics, and then landfill last
- Use modular containers for maximum versatility related to material types collected and options for "right sizing" bins over time; vet for accessibility and ease of servicing bins
- Use transparent bags to ensure servicing of bins is conducted properly (e.g. clear blue for recyclables, compostable liners for organics, and clear for garbage)
- Replace higher use solo garbage cans with zero waste stations; eliminate other solo garbage cans

It has been shown that clear graphics can reduce contamination by 50%. Despite the perception that people have that they respond best to words, testing showed that the decision making process to determine which stream to place an item in was slower with words only. When words are needed to define terminology, reverse signage makes words stand out more clearly as shown in the York Region, Ontario signage below.



Compost and recycling bins are the hardest to navigate so consistent colour coding and signage is especially important. The Granville Island Zero Waste station below shows the effective use of large "approach" icons and





colour coding with pictorial/photo realistic point of use signage. It is also recommended that the SLRD work towards using the colours noted above for bins where possible as well as encouraging partners to do the same.

With the above in mind, and the start of the Multi Material BC program—which has introduced its own signage which uses the above practices—it is recommended that the MMBC icons (as adapted by Whistler to remove the pizza box from the mixed paper and cardboard icon) be used. Where there is not an icon available for specific items, using one from the resources at www.3Rs.ca which is promoting a Canada-wide use of certain images, means that over time, residents and local visitors will become more familiar with them.

It is recommended that the SLRD create its own downloadable signs and encourage municipalities, businesses and residents to use them. Below is a screen shot from the City and County of San Francisco's sign maker page[5], which provides image options for businesses, apartment managers and others to customize their own signs while still keeping the same look and feel.



Related Signage Studies:

Title	Source	Highlights
Best Practice for Public Space Recycling	Collaboration between the BAR Lab, Metro Vancouver & UBC. Contact Metro Vancouver Corporate Relations for more information: www.metrovancouver.org, 604.432.6200	Examined the impact of colour vs. black and white, images vs. words, icons vs. photos on time and accuracy of reaction. Found that colour, images and photos deliver the best results.
Colour, Cognition, And Recycling: How The Design Of Everyday Objects Prompt Behaviour Change	http://americarecyclesday.org/wp-content/uploads/2013/07/MontazeriGonzalez-2012.pdf	Experiment conducted in university setting to study the role of colour in triggering recycling behaviour. Found that colour can affect the salience of an object and consequently trigger the associated desired behaviour.
Clinical Validation and Cognitive Elaboration: Signs that Encourage Sustained Recycling	http://content.lib.utah.edu/cdm/ref/collection/uspace/id/5258	Tested different forms of signage and persuasive messages to increase recycling. Found that simple, well-designed signs can influence behaviour while the signs are in place as well as

[5] City and County of San Francisco, 2014. http://www.sfenvironment.org/signmaker

		after their removal. Effective signs can encourage recycling despite some inconvenience, thereby potentially reducing the costs of recycling programs.
Keep America Beautiful	http://americarecyclesday.org/wp-content/uploads/2013/07/Public-Space-Recycling-Guide1.pdf	Ten tips for developing public space waste diversion opportunities, includes best practices for signage: use few key words, use clear language, pictures are best, avoid "don'ts", put label where it will be seen.
Metro Media Technologies	https://www.google.ca/#q=MMT+outdoor+101	How to use colour in designing public space and outdoor signs. Need to focus on: intensity, legibility, contrast and comprehension for best results
The Art & Science of Signs and Graphics, Article in Winning Campaigns	http://www.completecampaigns.com/article.asp?articleid=30	Tips for developing cleaner, brighter, more readable graphic signs. Rendering your name in reverse - white against a contrasting bright or dark coloured background- makes your name look larger and improves visibility. According to a study by the Outdoor Advertising Institute, reverse messages are up to 40% more visible.

Sample signage for the SLRD:













APPENDIX G: FOCUS GROUP RESULTS

Date: July 8, 2014, at the Millennium Place in Whistler

Attendees: 4 women + 2 men, all from Whistler (representatives that were confirmed to attend from Squamish and Pemberton did not arrive). These people varied in experience with solid waste diversion and reduction practices in their daily lives, from avid enthusiasts to beginners. People were recruited through member municipality social media channels, as well promotions through personal networks.

Purpose of Focus Group:

- Understand how people think about the waste reduction issue
- Identify where people look for waste reduction information
- Understand the barriers preventing people from reducing their household waste
- Discover motivating factors that would encourage participation in household waste reduction
- Response to initial program messaging / branding options

Analysis:

When asked to describe **waste reduction habits that people wanted to improve,** the following themes emerged:

- Better system: more efficient way of sorting and storing materials; what are the best bins and where to store them at home
- Clarity about contamination issues: for compost and recycling
- Connection to transfer station/depot system: want information they can trust about the system at the transfer station/depot that can be replicated, "mirrored", at home
- Over-packaging of materials: how can municipal governments pressure for change? Interest in EPR

When asked about **where people find information**, the following themes emerged:

- Online, but not clear about where to look. Often use Google for information (rather than local and/or regional links); Carney's website
- Waste facility staff
- Newspapers –Pique, editorials, would like recycling tip of the week
- Peers, friends who know more than they do
- Note that in some families one partner may sort at home and the other may actually drop it off (need to communicate with both)
- One person noted that they use You Tube to find out how and why to do things
- For reuse: buy and sell, kids swaps, Facebook
- Would like to hear how we are doing when elected officials speak to reinforce that this is what we do, pride, showcase accomplishments in living sustainably

When asked about **barriers to reducing waste**, the following themes emerged:

- Two major themes: transfer station/depot staff ineffective (discussion about not having information or giving misinformation), and ineffective home systems (i.e. storage bins)
- Conflicting information online, and online info is different from brochure information = confusion
- Stratas have terrible waste diversion systems; people living in stratas have fewer reduction options
- Misinformation from transfer station/depot staff: i.e. plastic film is incinerated, there is nowhere to recycle light bulbs

- Don't want to spend time at the depot: want to be in and out, but also see transfer station/depot staff as experts who could be consulted for advice if the customer service was better
- Perception that bins already take up too much space at home
- Compost: possible perception that they are already active enough with their recycling efforts
- Myth that recyclables are dumped: what happens to all the recyclable stuff at the end? Incinerated? Is the stuff actually made into something new?
- Compost: stinky bin, aren't happy with the system of managing scraps in home
- Can there be more reuse at depots (discussion about how a person used to take door hinges, etc off of items left at depots)
- Would like curbside pick up
- Need to educate newcomers (HR departments, Spirit Pass training, staff housing, etc) "we love this place and this is what we do with our waste…"

When asked about **motivating factors to improve waste reduction**, the following themes emerged:

- Two major themes: proof of impact/outcome, and feelings of making the world/community better
- Face to face conversations with experts who are teaching about new systems; explain what happens to the recycling; why is it worth the effort
- If facility staff were better service providers: misinformed, did not follow up to get question answered; rude to people; do not appear knowledgeable. Need more pride in the job. One said friendly interaction where items were taken away for refurbishing
- Simple poster with information about what can be done locally; stickers for home bins that mirror the transfer station/depot system
- There should be a sign at the garbage bin that tells people to stop and check, "Dude! There's a glass recycling bin over there! Are you sure you need to drop that off here?" and thank you notes on the recycling containers
- Walk to garbage bin/chute should be walk of shame.
- If the bins separate the types of recycling, then they believe that the stuff ends up be recycled but if its' one big bin then they're more sceptical
- More disincentives they felt could work: fees for putting recyclables/food scraps in garbage
- Share detailed target: not a broad "waste reduction" target, but more specific diversion theme goals
- Localized impact of waste: consequences to water quality; consequences to climate change
- Feel more connected to the community and better about themselves when they know they're doing the right thing; doing the right thing is empowering
- Guilt feeling by doing the wrong thing, that I'm damaging the environment but I brag to everyone about where I live I feel ashamed of myself
- Negative stories from other places in the world: See how bad it can be in other places in the world; it is pristine and heaven here, want to do the right thing in every aspect of life for here and for the globe; pacific gyre of plastic.
- Discussion of how in Japan the garbage men check your waste and will return it if unsuitable
- Seeing recycled fleece proves that there is a positive outcome of recycling: show the lifecycle of recyclables to demonstrate what happens to it; show how SLRD and local municipalities use recycled products that could have come from our own collection systems
- Have same systems (i.e. recycling and bin categories) throughout: depots/transfer stations, home bins, workplace bins, streetscape bins

When asked about how to **pass along their engagement**, the following themes emerged:

- Talking with people at work is the best way to spread the message
- The workplace is like having roommates that bring these new habits home with them, different group of people interacting

- Make it a standard way of life in public places; make public places the role models of waste diversion; the single recycling bins in public spaces send the message that it is all contaminated
- Need to showcase rebuild it and reuse it centres; need to show the EPR options

Key messaging recommendations:

- Icons –initially not sure of connection of paw to waste but as they started discussing it, made the connection and then liked it. Especially once added taglines. Discussion of local versus global issue. Selected bear icon with green and tan icons of options shown. In black version, concern that claws look like candles.
- Preferred version with tag line separate and horizontal below icon as opposed to including in icon.
- **Love this place, reduce your waste** (this was a modification of one tagline suggested by a group member, which the whole group then chose as their favourite)
- Zero Waste not seen as compelling: seen as too lofty, too ambitious and unattainable, confusing, not motivational as felt it is too far away
- Front line transfer station/depot staff have untapped role
- Lack of dialogue on the waste issue; need more, get it started in local papers
- Award or publicity for people who are reducing waste: want to see success stories, need to hear stories of how people are solving the problems they have, what are they doing to overcome barriers
- Local business success stories: they are motivating
- Monthly award: nominate each other for specific examples of what' they're doing, personal connection goes a long way, "waste reducer of the week"
- Provide free compost bins for use inside (i.e. kitchen catchers)
- Need benchmark: where is the best I can be, where should I be when compared to others
- Include metrics and a scale (e.g. this many bottles end to end of x kg of paper recycled equals _____)

APPENDIX H: ACTION PLAN

The following tables provide the detailed actions to be taken, the materials required, times and resources, as well as space to identify the person responsible for the action (in-house or with partners). Once the action and the person responsible have been confirmed more accurate costs can be determined. Cost estimates have been provided for planning purposes. Note that developing partnerships and collaborating with other agencies may be a way to accelerate the rollout of this plan or extend its reach; however, time must be allocated to developing these partnerships and the number of partners and their availability will impact the amount of time required to complete tasks. Timelines can be adjusted based on work with partners. To coordinate these actions with other existing communications actions, it is recommended that an annual planning calendar is used to plan events, programs and services for the year. The six phases of a social marketing plan are outlined in Section 4. Note that these tables outline key tasks but is not a comprehensive list of every action that will be required and through work with partners, other actions may need to be added. There are some time estimates included here but these are strictly estimates. There may be more time needed for actions with partners and there may be additional time needed for other details not listed here (such as setting up office computers, liaising with printers, team meetings, etc).

Phase 1: Develop the Social Marketing Plan

Time frame (June 2014 -October 2014)

Phase 1 has been mostly completed for the overall solid waste communications coordination improvements, as well as the first program theme: organics or "food scraps" reduction and diversion. The remaining tasks shown below are to pilot the food scraps collection tools in one or two partner municipalities before rolling out the program more broadly across the SLRD and in the future, use the six stages outlined in section 4 to plan the next reduction/diversion theme.

Table H-1 Phase 1 Actions

	Phase 1 Tactics	Collateral or Planning Materials Required	Timeline	Time (hours)	Evaluation
1	Pilot Pumpkin Drop project of initial food scraps actions and revise plan as needed.	Advertisement, Facebook post, web information, arrange and staff events, collect data and feedback	Fall –prep, Early November - implement	30 h	Number of attendees, weight of food scraps/pumpkins, website hits, feedback
2	Review new SLRD food scraps promotional plan and revise plan as needed based on pilot project	None yet: preparation stage. New materials are already prepared and will be printed and distributed in Phase 2 below	Fall 2014	10 h	

3	Develop plan for next reduction/diversion theme (once first one has reached maintenance phase)	None	2016 or as suitable based on results	Variable	

Phase 2: Develop Tools

Time frame (September 2014 - April 2015 – ongoing)

This phase involves developing tools that will be needed to implement a program. Initially it will also include the development of standard tools that can be used for all SLRD programs and which partners should use where possible. This includes a website, standards for signage, standards for bin colours and labels, a brand and logo and standard messaging. In some cases, these tools may also include ones that are not directly communications-related but address a program-related barrier noted by the target audience (for example, the need to change hours of operation or provide kitchen catchers).

Objectives met:

- Knowledge: Waste reduction and diversion options and services in their community
- Belief: It is easy to find out what they need to know
- Behaviour: Initiate and sustain home food scraps collection and other waste reduction and diversion systems

Purpose: All internal and external decision makers and opinion leaders are made aware of the new tools. Wherever possible, they are encouraged to provide links to SLRD website for solid waste reduction and diversion information.

Outcome: Internal and external decision makers are prepared for the solid waste information requests.

Outcome: Member municipalities, service providers and ENGOs website link to the SLRD Solid Waste webpages.

Outcome: SLRD and associated partners use branded, standard messaging for solid waste.

Table H-2 Phase 2 Actions

	Phase 2 Tactics	Collateral or Planning Materials Required	Timeline	Time (hours)	Evaluation
1	Set up and coordinate SLRD solid waste communications partnership group with member municipalities, First Nations,	Meetings	Sept 2014 and	Depends on partners	Progress on partnership: #

	key service providers and others. Meet at least quarterly. Consider using video and screen sharing call in capacity for more distant team members.		quarterly thereafter		meetings, # partners
2	Develop SLRD webpages for solid waste that reflect the needs outlined in the plan Use search engine optimization strategies so that SLRD waste landing webpage is one of top three hits on Google for common phrases	Website	Sept 2014 and ongoing	5 h	Complete[6] Ranking on Google search
3	Develop QR code and include on printed collateral.	QR code	Sept 2014	1 h	Complete
4	Ensure accurate information is provided by partners (check RCBC website recycling information as well as inform any other partners of discrepancies).	None	Sept 2014	15 h	Accurate info # of reports of inaccuracy
5	SLRD to use the icon for all public solid waste information pieces	Include on website, email tags, printed materials for public, advertisements, collateral	Fall 2014	2 h	Complete Regular check
6	SLRD to encourage the use of the icon by member municipalities and other partners (AWARE, Squamish CAN, etc)	Meetings, communications with partners	Fall 2014	2 h	How often used? On municipal waste webpages
7	Develop outreach kit for use in Farmers Market Zero Waste stations	Outreach kit (includes wallet cards, pledge cards, other items as relevant)	Fall 2014	3 h	Complete
8	Develop a list of opportunities to give brief presentations to new residents and plan for the following year	List	Fall 2014	Depends on opportunities	Complete and vet with partnership group
9	Banner for events with icon and tagline and SLRD logo	Durable banner	Fall 2014	3 h	Complete
10	Signage for bins and colour guidelines	Jpegs (other formats as needed) of signage	Fall 2014	Depends on work with partners	Complete

[6] Completing a task will also include vetting and/or reporting back to the partnership group and maintaining an updated task list.

	• Approve standard signage with partners (munis, service providers, MMBC) • Make signage available on website for downloads and printing (by citizens for home bin labeling and businesses for their internal bins); print stickers for citizens for distribution at waste facilities and events • Present information on plan and new signage to chambers of commerce 4), school districts (2) and healthcare organizations (2)[7] • Encourage use of signage in multifamily buildings (engage with service providers, management companies, stratas in conjunction with host municipality) • Develop plan for having these signs used for all waste facilities in SLRD • Develop plan for having these signs installed on all streetscape bins in the SLRD	Guideline document, stickers, online signage Presentation Presentation Plan, signs for SLRD sites Plan	Winter 2015 Winter 2015 Winter 2015 Fall 2014 Fall 2014		Number of downloads # meetings 1 meeting per municipality Complete Complete
11	<u>Waste facilities</u> Develop plan for maximizing waste reduction through waste facility site layout (i.e. place garbage bins in less convenient locations at transfer stations, and put signs on garbage bins, such as "last stop before landfill" and questions, such as "Have you really done everything you can to love this place and reduce your waste?", provide additional info at garbage bin (i.e. if not Styrofoam in this bin, clear transfer station map about which bin). Provide training for waste attendants to be able to answer common questions and ensure clarity on answers Investigate best way for waste attendants to follow up with residents questions they could not answer (i.e. smart phone, getting email addresses, café style blackboard)	Plan, meetings Q&A Plan	Winter 2015 Fall 2014 /Winter 2015 Fall 2014 /Winter 2015	Depends on partners and # of training sessions required	# facilities laid out this way # training sessions Secret shopper experience Complete

[7] This also lays the groundwork for future collaboration when the ICI audience is engaged. Include the ZW school coordinator in the school district meetings.

12	Develop base line metrics for waste weights by month, food scrap weights by month and waste site visits by residents (can be a one week record)	Metrics	Fall 2014	10 h	Complete measurements
13	Develop wallet card for each municipality and arrange for printing on 100% post-consumer recycling paper using vegetable-based inks (or lead and acid-free)	Wallet cards	Fall 2014	4 h per card	Complete
14	Develop different contact lists for different key stakeholders that need to be engaged or kept informed (municipal waste staff, municipal front desk staff, SLRD Board, municipal councils, waste attendants, service providers, local media, grocery stores, etc.)	Contact lists	Fall 2014	10 h set up plus ongoing	Complete
15	Develop outline for Zero Waste coaching sessions as community talks. Start with food scraps and move from there. Participants share ideas and stories with SLRD or partner person as facilitator. Facilitator can be the Zero Waste educator if time permits.	ZW coaching outline for workshops	Fall 2014	3 h	Complete
16	Continue with existing tools: Support of RCBC Hotline and Recyclepedia; contract with Zero Waste educator; existing partnerships. Zero Waste educator to integrate diversion theme into workshops.	None	Ongoing	Existing Depends on theme and existing curriculum	Complete annually

Food scraps-specific

While the actions in Table H-2 are to build tools and systems that will work for all diversion themes, the table below shows the actions that are specific to the food-scraps diversion theme.

Table H-3 Phase 2 Food Scraps-Specific Actions

	Phase 2 Tactic –Food Scraps	Collateral or Planning Materials Required	Timeline	Time (hours)	Evaluation
1	Provide hoses and drains for home kitchen container rinsing near the food scraps collection bins at waste facilities	Hoses, signage	Fall 2014 – Spring 2015	Depends on existing infrastructure	# food scraps facilities with hoses
2	Develop and print pledge cards for residents to commit to reducing and diverting food scraps in the waste at events or waste facilities	Pledge cards	Fall 2014	3 h	Complete
3	Develop list of what food scraps drop spots are available for each community or note if none List what can go in and what can't	List of drop off opportunities Webpage and wallets cards	Fall 2014 Fall 2014	2 h	Complete
4	Develop advertisement for single family building residents	Food scraps advertisement	Fall 2014	1 h	Complete
5	Conduct and document an initial meeting with grocery store managers to encourage them to partner with the food waste prevention program (especially on area of shopping lists, planning, recipes). Follow up tool development could be store handouts they produce using SLRD artwork and messages plus an information session as held in Nesters Whistler)	Meeting to explore	Fall 2014	Depends on partners	Progress?
6	Develop list and timeline for key events that will have food scraps-related outreach	List	Fall 2014	5 h	Complete

7	Develop job description and hiring plan for keen food scraps ambassadors for events and facilities Hire ambassadors	Events requirements; HR support	Fall 2014	20 h	Complete
8	Get kitchen catcher bins for distribution (recycled ones from businesses like Cows as well as ordering some) Determine if can get small bags of soil amendment to give out with bins to demonstrate the full cycle and result of composting.	Bins Soil Amendment	Fall 2014 Fall 2014	7 h	Complete
9	Work with partners to get donations of small prizes (i.e. useful and/or durable 'green swag' that can be easily composted or recycled [pencils, kid-friendly temporary tattoos, hats, Frisbees] or gift certificates or food)		Winter 2015	5 h	Complete
10	Develop webpage content on where to get kitchen catchers and features to look for (local businesses, various models, features and where to get) Develop webpage content for food scraps program based on hierarchy (i.e. source reduction, food recovery – people and then animals, industrial uses and composting)	Webpages	Fall 2014	10 h	Complete
11	Service providers (waste and composting) and waste attendants –discuss the plan with them. Ask them to take baseline measures of key statistics.		Fall 2014	4 h	Complete Measures taken

Phase 3: Program Notification

Time Frame (March 2014)

Objectives met:

- Knowledge: How to improve their participation in waste reduction and diversion
- Belief: Inspired to help achieve the community waste reduction and diversion goals
- Behaviour: Motivate and inspire others to improve their waste reduction and diversion efforts

Purpose: All internal and external decision makers and opinion leaders are notified of the program's progress and launch date by (SLRD to insert date).

Outcome: Internal and external decision makers and opinion leaders are prepared for program information requests they may receive or know who to contact for more information.

Outcome: SLRD strengthens relationships with internal and external decision makers and opinion leaders.

Purpose: All external program partners are notified of the program's development progress to date and launch date by (SLRD to insert date).

Outcome: Service delivery is coordinated between existing service providers and the SLRD.

Outcome: Program partners / service providers are prepared for program information requests they may receive or know who to contact for more information.

Outcome: SLRD strengthens relationships with external program partners / service providers.

Table H-4 Phase 3 Actions

	Phase 3 Tactics	Collateral or Planning Materials Required	Timeline	Time (hours)	Evaluation
1	Identify media spokesperson/s and provide training as required	Training session if needed	Winter 2015	4 h	Prepared?
	Provide Q&A for all partners including date of program launch or event dates for multiple stages. Check messaging with partners	Q&A	Winter 2015	10 h	Complete
	Identify target communities for different messages (i.e. food scraps reduction and backyard composting for areas with out food scraps drop spots). Work with member municipalities and First Nations to develop area specific messages.	List	Fall 2014	Depends on partners	Complete
	Prepare website landing page for food scraps reduction and diversion	Webpage	Fall 2014	3 h	Complete
	Ask partners to list key program information on their websites and to link to the SLRD webpage for more information	Sample language and layout for partner's sites references	Fall 2014	2 h	# links # blurbs

2	SLRD Board, municipal councils, CAOs Provide email and or mail notification of program development, launch in (SLRD to determine date) and promotion in summer and fall Provide Q&A	Email, Q&A document	Winter 2015	6 h	Complete
3	Key SLRD staff, key municipal staff - waste reduction management staff, educators/communicators, public works staff, relevant ENGOs Provide email and or mail notification of program development, launch in (SLRD to determine date) and promotion in summer and fall Provide Q&A Commit to ongoing dialogue about program launch	Email, Q&A document	Winter 2015	10h	Complete
4	Service providers (waste and composting) and waste attendants Provide personalized email and or mail notification of program development, launch in (SLRD to determine date) and promotion in summer and fall Provide Q&A Commit to ongoing dialogue about program launch	Email, Q&A document	Winter 2015; follow up as needed to accommodate staff turnover	10 h	Complete
5	Work with RCBC to make sure they have correct information for communities and are aware of new initiative Ask RCBC to provide tracking on calls regarding food scraps (as well as other questions) as baseline and with monthly or quarterly updates	Q &A document	Fall 2014	5 h	Complete
6	Develop Public Service Announcements for printed media	PSAs	Winter 2015	5 h	Complete
7	Media (earned): Draft a coming soon press release and backgrounder about new program using Q&A for public as a basis	News release with Q&A for public	Winter 2015	10 h	Complete
8	Train ambassadors on information they need to know (facts, program intention, customer service and engagement, etc) Also train transfer station attendants, as necessary	Training outline, training days	Winter 2015	15 h	Complete

Phase 4: Program Announcement

Time frame April 2015

The program is launched during this phase.

Objectives met:

- Knowledge: Personalized benefits of reducing household waste
- Belief: Their actions make a difference
- Behaviour: Initiate and sustain home food scraps collection and other waste reduction and diversion systems

Purpose: Notify all stakeholders of program commencement including messages about how to reduce food scraps, how to "find food scraps depot near you", what to include, smart storage, and transport. (The purpose will be tailored to the specific program.)

Outcome: Stakeholders are aware of program commencement and know where to find information about the program.

Purpose: Prepare internal audiences and external program partners for public information requests prior to program announcement.

Outcome: Program partners provide consistent and correct information to potential program users.

Table H-5 Phase 4 Actions

	Phase 4 Tactics	Collateral or Planning Materials Required	Timeline	Time (hours)	Evaluation
1	Briefing note to SLRD Board and key staff and partners to provide info on program to date and plan for this phase Update action plan	Briefing note	April 2015	15 h	Complete
2	Provide update on planned promotions to service providers and waste attendants	Email	April 2015	2 h	Complete

3	Provide update on planned promotions to municipal waste reduction management, staff, educators/communicators, public works staff, relevant ENGOs	None	April 2015	4 h	Complete
4	Distribute news release to local media contacts Organize media events and photo opportunities across region to launch program and garner earned media coverage Follow up on news release (in-house) to garner increased earned media coverage (pitching for interviews)	News release	April 2015	Varies with uptake	Track uptake of news release
5	Work with local media to print PSA	PSA	April 2015	3 h	Number of printings
6	Put information on SLRD Facebook page and blog Ask for people to "like" this page Follow and like fans	Facebook posts	April 2015	10 h	Number of likes

Phase 5: Program Promotion

Objectives met:

- Knowledge: Personalized benefits of reducing household waste; Social, environmental and ecological impacts of inappropriate resource management
- Belief: Their actions make a difference
- Behaviour: Initiate and sustain home food scraps collection and other waste reduction and diversion systems

Purpose: Increase public participation in the priority waste diversion or reduction project.

Outcome: Target audience actively uses the SLRD waste diversion services available or adopts the desired behaviour.

Outcome: SLRD waste volumes decrease.

Table H-6 Phase 5 Actions

	Phase 5 Tactics	Collateral or Planning Materials Required	Timeline	Time (hours)	Evaluation
1	Develop Zero Waste educator school curriculum based on food scraps diversion theme (could include action projects for classroom teachers involving groups auditing their school or a business, making recommendations and checking back in to measure progress)	To be determined, build off existing provincial and other curricula	Fall, winter-spring, summer	Depends on curriculum	# workshops, feedback
2	Host Zero Waste coaching sessions as community talks. Can start with food scraps and move from there. Participants share ideas and stories with SLRD or partner person as facilitator	Outline for coaching session, book space, advertise, etc.	Summer, Fall 2015	3 h per session (not including travel time)	# hosted, feedback
3	Partner with children's program such as AWARE kids nature club or the Whistler Museum summer programs to develop a food scraps or waste reduction themed session. It can include group activity of painting the paw prints to designated recycling or food scraps bins.	To be determined	Depends on partner	Depends on partners	To be determined
4	Give brief presentations to new residents on how we love this place so this is what we do for waste reduction (Spirit Pass training Whistler, Welcome Wagon type programs, Human Relations events for larger organizations)	Municipal wallet card	Fall/winter 2015-16	Depends on partners	# presentations, feedback, # cards given out
5	Post food theme-related items on SLRD Facebook page	Facebook	Spring-Winter 2016	4 h	# likes # posts
6	Post food theme-related items on SLRD twitter feed	Twitter	Spring-Winter 2016	2 h	Followers, retweets?
7	Good behaviour recognition –hero nomination or sending photos of people doing the right thing –Need name/pic/number or email and reason. Get people to commit to pass it on. Newspaper stories about the heroes Random awards of gift certificates from waste attendants/ambassadors to people demonstrating good food scraps sorting and collection during high traffic times (to maximize reinforcement of norms and visibility)	SLRD Facebook page, community volunteers to find heroes Newspaper stories Awards	May onward	40 h	# heroes, # website clicks # stories # awards, feedback

	Get pledges, give out bins	Pledge cards, bins, soil amendment			# pledges signed, # bins
8	SLRD SW Communications person to attend events, gather pledges and give out bins	Pledge cards, bins, soil amendment	April 2015 onwards	Depends on # events and duration	# events
9	Ongoing updates to all previously notified stakeholders on progress of program		Ongoing	Average 1 h /wk	
10	Clean Bin project –Just Eat It food waste movie screenings	Film night	If time permits		# attendees, feedback
11	Short film challenge on theme of food scraps reduction/diversion (like events during Ski and Snowboard festival), work with partner to promote, offer prizes	Film event	If time permits		# attendees, feedback

Phase 6: Evaluation and Ongoing Communication

Objectives met:

- Knowledge: Community waste reduction targets and progress towards them
- Belief: Convinced that other people "just like them" are already reducing waste
- Behaviour: Motivate and inspire others to improve their waste reduction and diversion efforts

Purpose: This phase focuses on measuring the effectiveness of the program and the development of ways to improve it as well as strategies for ongoing communication and evaluation.

Outcome: Meet SLRD waste diversion goal determined by the SLRD SWMP process or a sub-goal developed in the program development process.

Outcome: Identify is there is a need to modify or enhance the program based on results and make the needed changes.

Table H-7 Phase 6 Actions

Evaluate and act
Track key measures such as: • Total waste weight per site or event (per household or attendee) • Food waste remaining in the waste stream (visual waste audits) • Total food scraps volume per participating site • Webpage hits • Number of wallet cards distributed • Number of event attendees reached (over 5 years of age) • Quantity and quality of feedback • Number of pledges signed • Number of people attending ZW coaching sessions • Number of Zero Waste ambassadors trained and retained • Other material tonnages and metrics tracked by municipalities or partners
Evaluate progress quarterly and report at partner meeting Determine what the quarterly feedback to the public will be (gather input from waste attendants and member municipalities)
Provide quarterly feedback on progress (annually on waste weights/volumes, per capita, progress to overall goal, results of past actions, upcoming actions; other quarters on a message to be determined by partners -degree of contamination, number of facility users bringing food scraps, weight of food scraps, areas of improvement, areas that need improvement, etc.)
Monitor media for relevant stories in local media and uptake of SLRD releases
Monitor website visits (SLRD and member municipalities and partners (ENGOs, service providers)
Track calls to SLRD, member municipalities and partners regarding program
Ask for ongoing tracking updates quarterly from RCBC (hotline and online)
Seek and track anecdotal information on response to program
Review responses and metrics and incorporate changes to program based on results

Continuous Improvement

A review of the implemented communication strategies and tactics can provide valuable insights for continuous improvement. This can include a review by SLRD staff, interviews with key partners and contacts, informal conversations with members of the public, reviewing any measurable data such as website hits

and those noted above. Future communication action planning should specify continuation of existing promotions and propose adding new ones to keep awareness of the program(s), and the SLRD and its partners elevated.

For tracking, a master list should be set up to track metrics from all sources (e.g. Facebook number of impressions) or events (e.g. number of events where materials distributed). This can be used to track the numbers as well as the outcomes of the event and notes about whether it was worthwhile. This information can be used to help guide future decisions. It will also be handy to have available for reporting out about the program.

Continue to build media profile

Becoming a known and trusted source for information takes time. Consider developing an annual calendar of promotional days, weeks and months and arrange to send a news release with a photo to leverage media coverage (e.g. send news release reminder and photo about all how easy to find the food scraps collection sites nearest you just prior to Earth Day or other key times during the year). Showcasing positive testimonials in mass media is an excellent way to increase earned media coverage and build community norms. Providing advance notice of media releases to key contacts such as RCBC and local government staff will be required to ensure they are prepared in case they receive calls from the media or the public.

Schools Program

There are a number of options to consider in order to build stronger ties with the schools. School age children are strong influencers for bringing new environmental behaviours into the home. Examples of school-based programs can range from formal curriculum-based programs to lighter contests and events. In addition to the Zero Waste educator using the diversion theme as a basis for the curriculum, attention should be paid to barriers for teachers and children implementing the actions in school (i.e. they may need compost collection). Addressing some of these barriers may be part of a future diversion theme. The current program allows for 20 workshops per year but increasing this to 30 would allow for some follow up and possibly the ability to reach some community groups, as was the original intention.

Community Outreach

Personal contact is one of the most effective communication channels. Building some form of face-to-face communication into diversion theme plans can support other ongoing programs and partnerships. It can also help increase the community profile of the SLRD and its partners.

Building Relationships

It is important, and a worthwhile investment, to continue on the work started in this plan to build relationships. Activities can range from simple follow up phone calls with key partners and stakeholders to more personal contact with partners through regular meetings with member municipalities to continue to elevate SLRD communication programs and also support localized outreach efforts. Other opportunities may include:

- Continue to develop and update contact lists for local governments and other key stakeholders
- Continue to work with local environmental groups such as AWARE and Squamish CAN (ZW team).

*Note: there are other methods to evaluate the impact of programs such as surveys and media monitoring, however, given the scope of the budget and the manageable scale of local media, they were not included at this time

APPENDIX I: RECOMMENDATIONS FOR SWRMP CONSULTATIONS

As part of the update of the SWRMP, the SLRD has the opportunity to both collect input from the public about what motivates them to reduce waste, and to also hear what they perceive to be barriers preventing their use of the various waste diversion options available to them. Building on the insights shared during the research phase of this communications strategy, it will be most effective to leverage the unique sense of place, and to frame the invitation for consultation as an opportunity to demonstrate how much people love where they live. Consistent use of the new messaging will help it to grow and become more relevant.

Community engagement is best viewed as a long-term strategy with the aim of fostering meaningful community leadership. While there may be short-term programmatic feedback requirements, opening an issue to public input is also about building relationships with concerned citizens. Often people attend consultations as much to gather information about an issue as to share their opinions. Promotional activities should note the benefits for people who attend, such as providing them with practical waste reduction tools and access to expert staff who can answer questions relating to home or business waste reduction.

There are a wide variety of communications channels available to collect public input. The communities within the SLRD are spread across a wide geographic range, and residents vary in their ability to either travel or access online resources. Using a combination of online and offline methods, the SLRD can be most effective in collecting input from a broad cross-section of constituents. Below is an outline of a few options that may be most effective in the SLRD member municipalities:

- Intercept surveys at transfer stations and community centers
- Online surveys available through the waste reduction section of the SLRD website
- Open House event that coincides with a local celebration or festivals
- Special feature of an ongoing community event, such as a farmer's market

Leveraging stakeholder support and partnerships is critical to success, including the use of creative promotional tactics. In addition to traditional media advertising, earned media stories about a local project or issue can help to build interest and increase participation. Inviting community leaders to become active in recruitment of public input reinforces their value to the process (critical to long term community engagement success), and extends the credibility of the SLRD. Multiple messengers using diverse communications channels with the same messaging creates a sense of momentum; this is essential to fostering a new social norm.

Developing and implementing an effective community engagement strategy is equal in importance to developing and implementing an effective communications strategy. The ten step process below, *Planning for Successful Citizen Engagement in 10 Easy Steps*, illustrates how to get started.

Planning for Successful Citizen Engagement in 10 Easy Steps

TOPIC:

1 What is your purpose or call to action – what are you seeking input on or problem you need to solve? E.g. Get feedback on new bylaw? How to improve communications? Close landfill?

2 Who is your audience? Who do you need to reach, who will be impacted. E.g., front line staff, elected officials, neighbourhood residents, dog owners?

3 What level of consultation do you want to achieve? Inform only? Consult? Involve? Pick one per audience.

4 What are your key messages? Be audience focused: What does this mean to them?

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5 **How will you consult your audiences, what methods will you use?** Set up an advisory committee? Hold an open house? Host an online forum?

6 **How will you collect feedback, gain input?** Conduct a survey? Online or at event?

7 **How will you promote, what communication tools will you use?** Send a news release, newsletter? Advertise? Put up posters? Email? Online?

8 **What's your timeframe for completing these steps?** What's your last day for feedback? When do decisions need to be made? When will you report out?

9 **Create an action plan.** Identify who needs to do what by when and with what resources (people and money).

10 **How did it go?** Were you successful?

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APPENDIX J: REGIONAL EVENTS –LIST, SELECTION AND TOOLKIT

Events Listing across SLRD Member Municipalities

Spring/Summer

- Squamish Fest
- Pemberton Music Festival
- Whistler Presents summer series
- Whistler Children's Festival
- Whistler Envirofest
- Summer Farmer's Markets (across SLRD)
- Earth Day community events (across SLRD)
- Re-use it Fair (Squamish)
- Apricot Festival (Lillooet)
- Salmon in the Canyon (Lillooet)
- Moving Mountains Community Garage Sale -May (Whistler)
- Slow Food Cycle (Pemberton)
- Nesters Day (Whistler) –useful if partner with Nesters Grocery Store

Fall/Winter

- Whistler Ski and Snowboard Festival (Whistler)
- Cornucopia (Whistler)
- Fungus Among Us festivals (Whistler)
- Moving Mountains Community Garage Sale -October (Whistler)

Note that these events are for the member municipalities. Partnering First Nations could share details on events in their communities.

Criteria for Selecting Event

Not all events will yield the benefits noted in Section 6.1. To ensure a positive return on the investment of time and resources required, consider the following criteria:

- Alignment with target audience: are the people we want to influence likely to attend?
- Alignment with current SLRD priorities: does this event advance our goals, such as: relationship building with a member municipality or other partner, or connection to new target audience?
- Expected size of event: how many people are we likely to meet?
- Message permeability: can we "stand out" from the rest of the event? Will we get noticed? Are we adding value or can our objectives be achieved by others already attending?
- Behaviour change modelling: can we provide opportunity to publically demonstrate desired behaviour change? Can the behaviour be replicated by others to demonstrate new norm?
- Resources required to attend: how much time and money will be required to participate? Will the return on the investment be worthwhile?

If any of these success criteria are not possible at the potential event, there may be a good reason to pass on the opportunity. Face to face marketing can be very beneficial so it may be useful to identify 10 major special community events per year across the region, in addition to the smaller farmer's markets.

Community Event Toolkit

- Establish clear objectives: what is the purpose of attending? Set a target for the number of people you want to talk with, and what you want them to do at the end.
  For example:
  - At the end of the event, 500 people will be introduced to the new SLRD waste diversion coding system
  - At the end of the event, 100 people will have signed a pledge to commit to using new food scraps containers and participating in one follow up with SLRD staff
  - At the end of the event, 60 people will have signed up to opt out of junk mail and directory delivery
- Develop interactive components: flat promotional booths are rarely memorable, and even less likely to influence behaviour. People need a way to actively engage with the message.
  For example:
  - Create a speed recycling contest between two people for prizes (prizes must align with overall waste reduction message, such a kitchen catcher compost bin, a $5 gift certificate to local re-use it centre, an SLRD branded re-usable water bottle or a cloth shopping bag made from fabric scraps or old banners)
  - Host a mock "food scraps feud" to dispel myths about composting, and again provide prizes that get people talking
- Provide a single set of branded materials: include mix of print materials and interactive display materials, all connected back to the objectives.
  For example:
  - Print branded banner for booth display (and tent if needed)
  - Distribute updated municipality-specific wallet cards, and provide stickers for bins that correlate to the transfer station colour codes
  - Show different food scraps containers, with sample of scraps with paper lining (and distribute bins at certain events)
  - Develop poster-size food scraps pledge for demonstration and postcard size pledges for use
  - Purchase simple camera to take pictures of booth visitors with poster pledge, for posting on social media sites. If this device has web capability (like an iPad), it can also be used for future actions such as having people sign up to stop receiving junk mail or directories, as well as be used to find out information if a question cannot be answered. (Note this item is not included in the budget).

APPENDIX K: MEDIA STORY STARTERS

These ideas can be used for regular or periodic submissions to local newspapers and other forms of media.

- Rate our region against another somewhere else in the world: how do we measure up? Against two other mountain towns, one in Japan, one in France / Switzerland or Banff/Jasper
- Focus on the lifecycle of a material: what happens to all the plastic that leaves the transfer station? Where does it go, and how does it end up in the market again? “50 reasons to love fleece”
- Case study on how one busy local woman started collecting food scraps after many attempts at “quitting garbage” failed in the past. Top tips on “how to stay on the waste wagon”
- EPR programs: what it means for locals
- Relationship between landfills and climate change
- Holiday story of “giving experiences” and top local “waste free gifts to give”

APPENDIX L: ICON



Love this place. Reduce your waste.

APPENDIX M: SAMPLE PLEDGE CARD

This pledge card could be made in a postcard style using the SLRD branding and commitments could be made at events. The cards should be made public to show that reducing food scraps to waste is the new social norm. The actions below can work for most communities with the exception of the food scraps collection which is available in Pemberton, Squamish and Whistler. Note that the draft below will need to be developed in alignment with the new branding before production and should include a place for the person to sign their name or even add their photo as well as providing contact information including an email address.



APPENDIX B:

Facility Authorization Process

Process for Authorizing New Facilities

All facilities not currently authorized in the Solid Waste Management Plan that are involved, or propose to be involved, in the handling of Municipal Solid Waste or recyclable materials, be it processing or disposal, shall file an application for authorization in the Plan with the Regional District. In the Squamish Lillooet Regional District (SLRD) this includes the following:

a) a disposal facility;
b) a transfer station;
c) a material recovery facility;
d) a storage facility (including recycling and organic waste depots);
e) a brokering facility;
f) a composting facility;
g) a land clearing/ demolition waste facility (including burn sites);
i) waste-to-energy facility (including the manufacturing facilities of refuse-derived fuel)
j) any proposal for the beneficial use of waste;
k) any other facility the Ministry of Environment requires.

The Director of Waste Management of the Ministry of Environment shall determine if a given or proposed facility or process can be authorized to the Plan using the procedure outlined below, or a SWM Plan Amendment is required.

Pre-Application Meeting

Prior to investing significant time and effort in the compilation of a formal application, it is required that the applicant discuss plans with BC Environment and meet with SLRD staff to identify any immediate concerns.

Form of Application

An application shall be filed at the Regional District office in the form prescribed by the SLRD and copied to both the host municipality, if applicable, and the Director of Waste Management of the Ministry of Environment. Applications submitted to the Regional District will not be accepted unless accompanied by the application fee. The Regional District will prepare a letter to the Director of Waste Management of the Ministry of Environment to determine if the proposed facility or process can be added to the Plan using this procedure found or a SWM Plan Amendment is required.

Application Fee

Every person who files an application shall pay to the Regional District, on application, a posted fee reflecting the technical review and administrative costs necessary to process these applications. SLRD member municipalities (Squamish, Whistler, Pemberton and Lillooet) shall be exempt from all application fees, as they are already contributing funds to the Solid Waste Management budget through disposal fees and tax requisition.

Application Enclosures

The application shall contain the following enclosures:

Operating Plan

The applicant shall submit an Operations Plan including, but not limited to:

a) the legal description and civic address of the facility;
b) the name of the owner of the land on which the facility is located or proposed to be located;
c) the full name and address of the operator of the facility;
d) a brief and complete description of the activity to be carried out and the municipal solid waste or recyclable material to be handled at the facility;
e) maximum annual tonnage of material to be handled at the facility;
f) the maximum amount of material or product (by type) to be stored at the facility at any one time;
g) maximum discharge to air, water or land, if applicable;
h) other information as requested by the Regional District.

Approval of Host Municipality

The applicant shall obtain written approval from the Municipal Administrator or designate of the municipality in which the facility is proposed to be located. This approval shall state that the facility meets all zoning bylaws and business licensing requirements and that the municipality endorses (at least in-principle), inclusion of this facility in the Plan. The Regional District shall not process an application if, in a report submitted to the Regional District, the municipality states that it does not approve of the application.

Ministry of Environment Concerns

All facilities must meet the British Columbia standards for environmental protection, and the applicable processes for the establishment of such facilities. If higher standards exist in the host jurisdiction, those standards must be met. A letter from the Director of Waste Management of the Ministry of Environment will be required.

Preliminary Approval by Regional District Board

Once the Director of Waste Management of the Ministry of Environment has determined that the proposed facility can be added to the Plan using this procedure, and upon receipt of an application, the application fee and the application enclosures (described above), the application shall be submitted to the SLRD Board of Directors for approval *to continue with the application process*.

Preliminary Evaluation of Plan Authorization Application

Having obtained the approval (at least in-principle) of both the host municipality and the Regional District Board of Directors, the application is subject to review by Regional District staff. In reviewing the application, Regional District Staff may consider the following:

a) the potential risk posed to the environment and public health;
b) protection of the environment (i.e. security considerations);
c) Ministry of Environment concerns;
d) compliance with Municipal or Regional District zoning and land use designations;
e) effects on other facilities identified in the Plan;
f) the report of the Municipal Council and other municipal concerns;
g) effects on the local community resulting from, but not limited to: transportation, odour, noise and aesthetics;

h) any environmental impact assessment and any other investigations, test, surveys or any other action taken;
i) any other information submitted to the Regional District;
j) operating plans submitted to the Regional District;
k) closure plans submitted to the Regional District;
l) the payment of any annual fees for operation or reporting of quantities as required by the Regional District;
m) compliance with the guiding principles of the Solid Waste Management Plan; and
n) any other matter which the Regional District considers relevant.

If the reports and technical studies indicate that the facility may be acceptable, (subject to addressing BC Environment concerns), the applicant will be directed by Regional District staff to proceed with public consultation.

Public Consultation Procedure

The applicants shall, at their own cost, and within 30 days of receiving Regional District direction:

(1) Publish two (2) successive notices in a newspaper that is distributed at least weekly in the area where the facility is located or proposed to be located. In the event that a newspaper does not service the area, the application shall be posted in a manner acceptable to the Regional District.

The notice must be SLRD-approved and entitled SOLID WASTE MANAGEMENT PLAN - REQUEST FOR A NEW FACILITY AUTHORIZATION. The notice must be at least 10 cm in width, at least 100 square centimetres in area (i.e. equivalent to 4”x 4”), and include at least the following information:

a) the legal description and civic address of the facility;
b) the name of the owner of the land on which the facility is located or proposed to be located;
c) the full name and address of the operator of the facility;
d) a brief and complete description of the activity to be carried out and the municipal solid waste or recyclable material to be handled at the facility;
e) that any concerns should be addressed in writing to the SLRD; and
f) other information considered necessary by the Regional District.

(2) Post a readable copy of the application, at the discretion of the Regional District, in a conspicuous place at all main road entrances to the land on which the facility is located, or proposed to be located, and/or erect a full-size sign in a location visible to the general public and keep these posted for a period of not less than 30 days.

(3) Serve a written notice that an application has been filed, on all neighbours, commercial or residential, within 50 metres from any lot line of the subject property. The written notice shall contain the information set out in paragraph (1) a) to f) above. In cases where there will be a significant discharge to the environment, or considerable financial impact on the Plan’s current solid waste facilities, the applicant may be required, at their own cost, to additionally complete the following:

(4) Arrange for a public meeting(s) as directed by the Regional District, in the municipality in which the facility is located, or proposed to be located.

(5) Publish a notice of the specifications set out in paragraph (1) a) to f) in all major newspapers of the Squamish Lillooet, at the discretion of the Regional District.

(6) Publish the subject application in The British Columbia Gazette, under the heading Waste Management Application.

(7) Serve a written notice that an application has been filed, on any tenants, commercial or residential, within 1 km of the proposed facility that the Regional District considers affected. The written notice shall contain the information set out in paragraph (1) a) to f).

(8) Forward copies of the application to the following agencies for circulation and review:

a) Environment Canada;
b) Ministry of Health;
c) Ministry of Environment
d) Council of Host Municipality; and
e) Any other government agencies the Regional District or Director of Waste Management of the Ministry of Environment consider necessary.

(9) Additional Public Consultation as recommended by the Director of Waste Management of the Ministry of Environment.

Final Evaluation of Application

Upon receipt of the required documents indicating the appropriate Public Consultation Process has been completed, Regional District Staff shall complete a comprehensive Technical Review of the proposed facility. If the review indicates the proposed facility is feasible, all concerns have been addressed, and the Director of Waste Management of the Ministry of Environment is satisfied that the application meets Ministry requirements for environmental protection, Staff will prepare a Final Evaluation Report to be presented to the Regional District Board. With the Final Evaluation Report, the application will be presented to the Board of Directors for final authorization and inclusion in the Plan. Board approval of the proposed application shall take into account the following:

1) Approval of the application by Regional District staff and the Plan Monitoring Advisory Committee.
2) Presentation on proposed facility by the applicant to the SLRD;
3) Written notice from the Director of Waste Management of the Ministry of Environment, stating the application meets Ministry requirements for environmental protection;
4) Payment in full of the Application Fee as determined by the SLRD;
5) The results of the Public Consultation Process and Technical Review; and
6) If the facility is to be situated within a municipality, the final approval of the Host Municipality, after receiving the completed application.

Final Approval by Regional District Board

Upon approval of an application by the Regional District Board of Directors, the facility shall be considered authorized in the Plan. As a condition of this Final Approval, the Board, in accordance with the Environmental Management Act, shall require an interim Operational Plan for the facility. The Director of Waste Management of the Ministry of Environment, in accordance with the Environmental Management Act, may issue an Operational Certificate (OC) for the facility. If an OC is issued by MOE, it will supersede the previous interim Operational Plan required by the Board. Prior to operational start-up of the facility, the Regional District shall receive a copy of the OC, or other Operational Plan documents as required by the Board.

Notification of Agencies

On approval of an application, the Regional District shall notify, in writing, the following agencies: a) Environment Canada; b) Ministry of Environment c) Ministry of Health; d) any other government agencies the Regional District considers necessary; e) Council of Host Municipality; and f) the Applicant.

Procedure for Changing Operating Conditions for Plan Facilities

If there are minor changes to operating conditions for solid waste management facilities listed in this Plan, notice of the change shall be provided by the facility owner in writing to the SLRD General Manager of Utilities and Environmental Services (General Manager). If the General Manager determines that the change does not affect the objectives of the SLRD Solid Waste Management Plan, he/she will provide written acceptance of the change of operation to the facility owner and provide a copy of this notice to the Plan Monitoring Committee. If the General Manager determines that the change in operational conditions has a negative impact on the objectives of the Plan, he/she will notify the facility owner that the change in operating conditions will require a Plan Amendment.

APPENDIX C:

Plan Monitoring Advisory Committee Terms of Reference

Solid Waste Management Plan Monitoring Advisory Committee

Terms of Reference

Purpose: As outlined in section 22 of the SLRD Solid Waste and Resource Management Plan (SWRMP) the purpose of the Plan Monitoring Advisory Committee (PMAC) is to monitor the implementation of the Solid Waste and Resource Management Plan and report directly to the Regional Board.

Goal: The goal of the PMAC is to ensure the ongoing evaluation, assessment, implementation and updates and/or amendments to the actions and policies outlined in the SWRMP.

Responsibilities: Plan Monitoring Advisory Committee members will:

- Review and become familiar with the Solid Waste and Resource Management Plan;
- Review and become familiar with the existing solid waste management system in the SLRD;
- Identify methodologies to be employed in the monitoring and evaluation of the Plan's implementation;
- Monitor the implementation of the Plan and annually report to the Board on the effectiveness of the SWRMP at achieving its objectives; and
- Make recommendations to increase the effectiveness of the Plan or the solid waste management system.

Expected Outcomes: It is expected that the PMAC will recommend to the Board strategies and an associated implementation plan for enhancing recommendations and objectives identified in the SWRMP. Additionally, the PMAC will strive to enhance communication and collaboration through committee members.

Membership: The committee membership will strive to have a broad representation of interests including the following:

- Local government/public works representatives from municipalities within the SLRD (4 members)
- SLRD staff (2 members)
- First Nations representatives within the SLRD (4 members)
- Members at Large - Interested members of the public, including local environmental groups and recycling organizations, owners and operators of private waste facilities, commercial and institutional solid waste generators, haulers and operators. (6 members, representing at least 3 electoral areas).

The Committee shall consist of a minimum of 7 and a maximum of 16 members appointed as follows:

- Local government/public works representatives from the four municipalities and the SLRD will be appointed by their organization.
- First Nation Members and Members at Large will be appointed by the Regional Board.

Term of Appointment: Membership of the SLRD and Municipal governmental agencies shall have permanent terms of appointment. However, the agencies can change their representation at their discretion.

First Nations and Members At Large will have the following Term of Appointment:

- In the first year of the Committee, one half of the Members at Large shall be appointed for a term to expire on December 31st of the year in which they were appointed and one half of the members shall be appointed for a term to expire on December 31st of the year following the year of their appointment.
- All subsequent appointments to the Committee shall be for a two year term.
- If appointments to the Committee have not been reviewed by the Regional Board before the expiration of the term of the members, members appointed to the Committee shall continue to hold office until the annual membership has been determined.

Group Culture: The PMAC membership shares the common understanding that all participants will:

- Act in a professional and respectful manner;
- Actively listen;
- Act with integrity and;
- Attend meetings with a positive purpose;

Decision Making: The main role of the PMAC is to be an advisory committee to provide recommendations to SLRD Staff for amendments to the SWRMP. SLRD staff will bring recommendations to the SLRD Board, as the SLRD Board is the decision making body. Ideally, results recommended by the PMAC will be made by collaboratively.

Committee Protocol

- The SLRD will chair and host the meetings.
- All PMAC members are equal and have equal opportunity to contribute at meetings, as well as responsibility to respect the opinions of others. Committee members are encouraged to actively participate in the discussions and use their experience, education, and insight to speak freely about any issues or opportunities to be considered.
- Committee members are present to give a voice to the community. However, members are equally responsible to listen and understand the views of others. It is only through this dialogue that real consensus can be achieved.
- Members are encouraged to work collaboratively and to be committed to reaching consensus where possible by using an interest-based approach rather than an individual member position-based approach. Consensus will be formally recorded in the meeting's Minutes. Any members unable to agree with the consensus decision may have their objections noted in the Minutes.
- Committee members may choose to express their personal views about the process to others outside the PMAC but may not speak on behalf of or in any way create the impression that they

are speaking for the PMAC as a whole. In order to ensure open and honest dialogue, Committee members should not discuss comments or opinions expressed by other Committee members without their knowledge and consent.

- Members will be asked to arrive promptly at meetings.
- Members of the public may observe meetings but will not have speaking rights unless invited to speak by the Chair.
- Members who miss three Committee meetings over the course of 18 months may have their membership revoked at the SLRD Board's discretion, or for appointments from government agencies, a request may be made by the SLRD Board that their representative be changed.
- A Conflict of Interest arises when a PMAC member speaks on a motion that could be the cause of some direct significant benefit - monetary or otherwise - to that member. If such a situation arises, the member involved should excuse themselves from proceedings that relate to the conflict unless explicitly requested to speak, only after a majority vote from meeting participants to do so. Any subsequent information provided by the individual will clearly be identified in the Minutes as coming from a source perceived to be in a conflict of interest.

Reporting: The Plan Monitoring Advisory Committee reports to the SLRD Board.

Meetings: In general, there will be three meetings per year of the PMAC with the provision for additional meetings, workshops or other presentations at the committee's discretion. The SLRD will chair and host all PMAC meeting in the geographic center of the SLRD, Pemberton, BC.
Agendas will be posted on the SLRD website at www.slrd.bc.ca

Resources: SLRD staff will provide administrative support to the PMAC including, but not limited to: arranging meetings, creating agendas, taking minutes, and distributing materials.

Any PMAC budget requirements will be included within the SWRMP budget subject to the SLRD's normal annual review and approval process.

PMAC participation is voluntary with no remuneration provided for members' time.

Contacts	
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