

Regional District of Nanaimo: Solid Waste Management Plan

Planning for the Future of Our Waste



ESTABLISHED 1967

ROAD TO
90%
WASTE DIVERSION



Final Version

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Regional District of Nanaimo: Solid Waste Management Plan Summary

Planning for the Future of Our Waste

Our Region

The Regional District of Nanaimo (RDN) provides regional governance and services to more than 155,000 people on Vancouver Island’s central east coast. It is expected to grow by another 52,000 residents to approx. 207,650 within the next 10 years.

Governed by a 19-member Regional Board, the RDN covers a large, diverse area of nearly 207,000 hectares with distinct communities that include the municipalities of Nanaimo, Lantzville, Parksville, and Qualicum Beach, as well as seven unincorporated Electoral Areas.

The RDN is sited within the traditional territory of several First Nations, including the Snuneymuxw, Shaw-naw-as, and Qualicum First Nations.

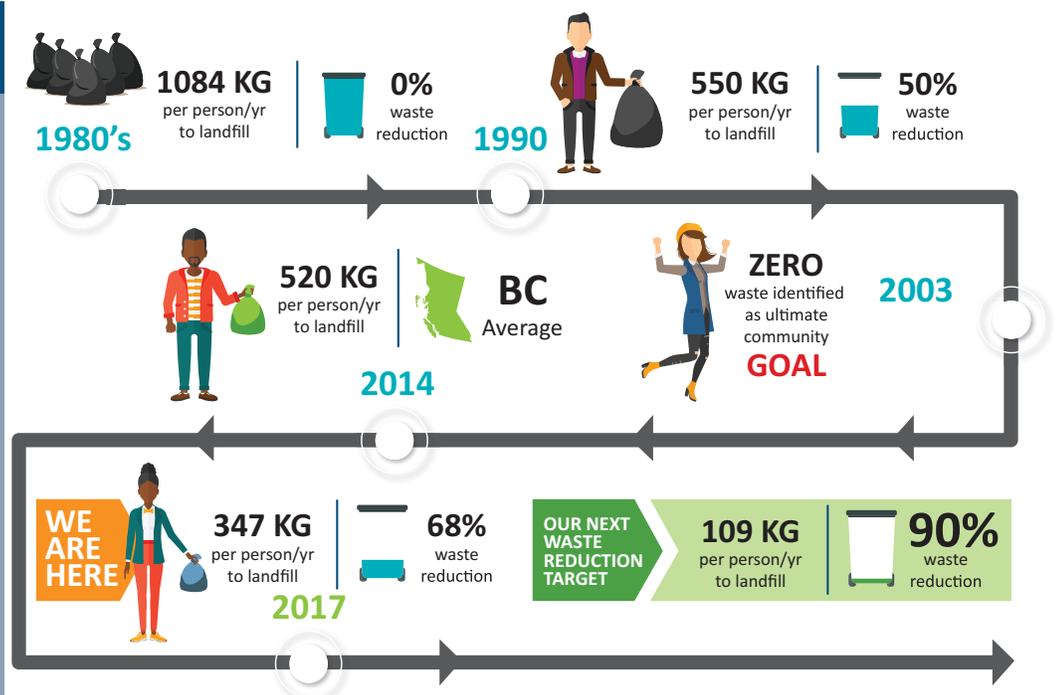
Our Plan

In British Columbia, regional districts are required by the Provincial *Environmental Management Act* to develop a Plan — a long-term vision — that defines how the regional district will manage its solid waste, including waste diversion and disposal. The RDN prepared its first Plan in 1988, with updates that followed in 1996 and 2004.

The RDN has tracked its waste disposal since the 1980s. Since then, residents have reduced, recycled, diverted and composted more than 68 per cent of their waste that was otherwise destined for the landfill. Residents are now throwing away about one-third of what they were in the 1980s — 347 kg/capita/year in 2014 compared to 1,084 kg/capita per year from 1980s disposal estimates. The amended Plan is targeting a diversion rate of 90 per cent, meaning per person disposal would be about 109 kg/year by 2027.

A New Target

Proposed: Adopt a new target to reduce the amount of waste going to the landfill by 90 per cent by the year 2027, equal to the average per person throwing away 109 kg of garbage per year. Thanks to the ongoing participation of our community, the RDN could reach this target through enhancing existing education and enforcement programs, encouraging more businesses to recycle by introducing new regulations and working with other governments, manufacturers and waste producers to reduce waste at the source.



The RDN is achieving some of the highest waste diversion in the world. In 2002, the RDN adopted “zero” as its waste diversion target, meaning that the region will continuously strive to reduce the amount of waste requiring disposal. The RDN was the first jurisdiction on Vancouver Island and one of several forward-looking local governments in Canada and around the world to move beyond recycling and adopt a Zero Waste approach to eliminating waste.

New programs like Curbside Recycling and the Green Bin food waste program have extended the life of the RDN’s landfill, reduced greenhouse gas emissions and created a local industry of recycling and composting that supports 190 jobs, adding more than \$17M to the local economy.

This updated Plan shows the RDN’s commitment to achieving Zero Waste addressing both waste diversion and residual waste (what is left over after everything has been composted or recycled) and includes two main components. One is an update of the Zero Waste Strategy including a Zero Waste definition and strengthening existing Zero Waste programs particularly Education, Construction and Demolition, and Multi-Family and Industrial, Commercial and Institutional recycling, composting and waste diversion. The second is the introduction of bylaws to regulate and enable Mandatory Waste Source Separation and Waste Hauler Licensing.

The Opportunity

A recent review of the landfill shows that more than half of what’s being dumped, or about 58 per cent, can be readily reused, recycled or composted, and most is coming from the commercial, construction and demolition, and multi-family sectors.



ROOM FOR IMPROVEMENT

Here is a snapshot of the types of commercial waste still being landfilled.

This, along with multi-family waste, represents the greatest opportunity to reduce and recycle.

- 42% COMPOSTABLE ORGANICS**
- 15% PAPER**
- 13% PLASTIC**
- 7% BUILDING MATERIALS**
- 5% HOUSEHOLD HYGIENE**
- 4% HOUSEHOLD HAZARDOUS**
- 3% ELECTRONICS**
- 3% TEXTILES**
- 2% OTHER**
- 2% GLASS**
- 2% BEVERAGE CONTAINERS**
- 2% METALS**

Zero Waste Defined

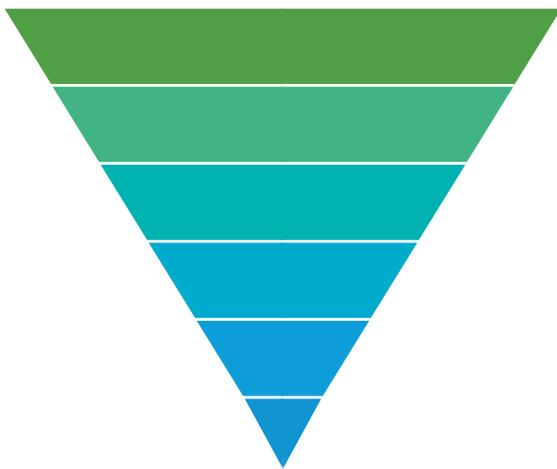
To achieve its Zero goal in the long term, the RDN recognizes it needs to maximize source separation and will need to move beyond the largely voluntary programs that currently exist across the region.

Proposed: Adopt the Zero Waste International Alliance (ZWIA) definition:

Zero Waste is a goal that is ethical, economical, efficient and visionary, to guide people in changing their lifestyles and practices to emulate sustainable natural cycles, where all discarded materials are designed to become resources for others to use.

Zero Waste means designing and managing products and processes to systematically avoid and eliminate the volume and toxicity of waste and materials, conserve and recover all resources, and not burn or bury them. Implementing Zero Waste will eliminate all discharges to land, water or air that are a threat to planetary, human, animal or plant health.

ZW Hierarchy of Highest & Best Uses



- Reduce, reuse & return
- End subsidies for wasting
- Product & packaging redesign
- Clean production & takebacks
- Reuse, repair, remanufacture
- Recycle, compost & digest
- Regulate (bans, biological energy recover, landfills with re-processing)
- Not ok: incineration, bioreactor landfills

Our Guiding Principles

To achieve the goals set by the RDN Board seven principles were established to guide the development and implementation of the Plan;

1. Promote the Zero Waste Hierarchy of highest and best uses and support a circular economy.
2. Maximize use of waste materials and manage residual waste appropriately.
3. Support polluter and user-pay approaches and manage incentives to maximize behavior outcomes.
4. Prevent organics and recyclables from going in the garbage.
5. Collaborate with other regional districts wherever practical.
6. Develop collaborative partnerships with interested parties to achieve regional targets set in plans.
7. Level playing field within regions for both private and public solid waste management facilities.

Our Existing Programs

The RDN has made significant advances, introducing a broad range of solid waste management programs and infrastructure since the 1980s. In 1991, the RDN introduced Canada's first user pay residential garbage collection system. Since then, the RDN and its partners have expanded curbside recycling programs, banned paper, metal, commercial food waste, clean wood waste and other recyclable materials from the landfill, and successfully promoted composting throughout the region.

The 2004 amended Plan introduced the Zero Waste strategy and expanded on policies and programs to increase diversion. This strategy has effectively created a private-sector market for recyclables such as wood waste, some commercial and demolition waste, yard waste, food waste and product stewardship programs.

Involving the private sector has meant reduced costs to government and established a robust waste management industry in the region, resulting in world-class waste diversion levels.

Existing programs include:

- **School Education Program** - a primary school program that focuses on the concept of zero waste.
- **Illegal Dumping Program** - includes surveillance and enforcement activities as well as ongoing clean-up of illegal dumping sites and free disposal for community clean-up events.
- **Disposal Bans** - certain compostable/recyclable materials are banned from being buried in the landfill and must be recycled or composted. These include drywall, cardboard, paper, metal and tires, commercial food waste, yard and garden waste, wood waste and product stewardship materials designated under BC's recycling regulation. Banning specific wastes from the landfill, when viable recycling alternatives are in place, has been used effectively by the RDN to increase recycling, composting and waste diversion since 1991.
- **Zero Waste Promotion** - the Zero Waste Promotion and Education program includes the website, newsletters, guides, and participation in community events.
- **Recycling and Organics at RDN Facilities** – self-haul customers disposing of wastes can also recycle items such as appliances, propane tanks, scrap metal, gypsum, cardboard, paper, glass, and metal and plastic food and beverage containers. Self-haul and commercial customers can also compost food waste, yard waste and wood waste at these facilities.
- **Waste Stream Management Licensing Bylaw** - this Bylaw regulates all facilities that handle municipal solid waste, setting out operating and reporting requirements. The RDN processes new applications, reviews operating plans, monitors reporting and inspects existing licensed waste management facilities.
- **Residential Curbside Garbage, Recycling and Food Waste Collection** – the RDN provides residential garbage, recycling and food waste collection to more than 28,000 households, with biweekly garbage collection and weekly food waste collection.
- **Advocacy** - the RDN continues to advocate for greater waste diversion in the region by working with federal, provincial and local government agencies as well as BC stewardship groups. The RDN believes the costs and risk to manage end-of-life products should progressively transfer to the manufacturers of goods and the consumers who use them, rather than local government, to encourage more sustainable manufacturing and consumer choices.
- **Greener Purchasing Policy** - Implement an internal Purchasing Policy to minimize the environmental impact of purchasing and operations. Although the effect may be minimal on actual waste diversion, it demonstrates leadership and is consistent with the RDN Board's strategic goals.





Our Proposed Solid Waste Management Plan Programs

As the RDN works toward its Zero Waste goal, the key will be to build on its successes to date, nurture the existing framework of services and programs, improve service delivery and continue to reduce the amount of waste sent to landfill.

- **Expanded Zero Waste Education**

Helping residents make the right choices every day is critical to achieving Zero Waste. For that reason, education is a crucial component — making sure people know what, when, where and how to reduce, recycle, divert and compost. Educating people around regulations and making sure people are following the bans on landfilling materials that can be recycled, composted or taken elsewhere is also important. This will help make it easier for residents and businesses alike to make sure the right waste goes to the right location.

Proposed in the Plan is to enhance existing education, awareness and enforcement programs to help multi-family and commercial sectors improve their food waste and recycling programs; enhance existing public education for Zero Waste and waste reduction (includes public events, school and community presentations, advertising for campaigns, social media and more); and, enhance education and enforcement for construction and demolition waste to help ensure waste is sorted for reuse, chipping, composting or recycling before being landfilled.

A greater emphasis on reaching adult audiences through traditional and social media, as well as being more active in a variety of public events, is also proposed. The RDN will continue its advocacy efforts around greater waste diversion in the region by working with federal, provincial and local government agencies as well as BC stewardship groups, producers and the public.

- **Household Hazardous Waste**

Household hazardous waste is generally managed through BC product stewardship programs with established collection programs for the majority of household hazardous waste products, such as paint, pesticides, solvents and used motor oil. However, there are non-stewarded household hazardous waste (i.e. unidentified hazardous products or non-domestic pesticides) without a recycling or safe disposal option. The RDN will explore options for further expanding collection of non-stewarded residential household hazardous waste which may include sponsor and/or run residential drop-off events.

- **Expanded Industrial, Commercial and Institutional (ICI) Waste Management**

The RDN encourages recycling by the ICI sector through variable tipping fees and landfill bans which prohibit the disposal of recyclables, food waste and yard waste in the landfill in favour of recycling and composting instead. However, a significant amount is still making its way to the landfill, including food scraps (28 per cent), yard waste (eight per cent), compostable paper (six per cent), and recyclable paper and cardboard (12 per cent) with metal, pallet wrap and drywall making up the remainder of the recyclable portion of the ICI garbage.

In addition to enhancing education, enforcement and assistance for multi-family and commercial, new regulations are proposed that require waste generators to separate garbage from recycling and food waste.

- **Expanded Construction and Demolition Waste Management**

Construction and Demolition waste generates a wide range of materials most of which is reusable or recyclable. These include concrete, asphalt, wood, gypsum wallboard, metal, cardboard, asphalt roofing and plastic.

The RDN promotes diversion of these materials through disposal bans on cardboard, gypsum (drywall), metal and wood, and high tipping fees on loads of Construction and Demolition waste arriving at the Regional Landfill. The RDN will improve and reintroduce education and communications regarding Construction and Demolition waste in the RDN.

- **New Regulatory Tools**

The RDN's existing "Waste Stream Management Licensing Bylaw" was the first regulatory tool used as part of the Solid Waste Management Plan (SWMP) to create more opportunities for recycling and composting. This Bylaw regulates all facilities that handle municipal solid waste, setting out operating and reporting requirements. It sets high standards for the local waste management industry and creates a level playing field for the industry. The result is less risk and cost to the taxpayers for clean-up of poorly operated facilities, abandoned facilities and abandoned municipal solid waste and recyclable material (illegal dumping). Furthermore, the Bylaw sets reporting requirements making it possible to track waste diversion and progress of the SWMP.

As part of the updated Plan, the RDN proposes to continue with the existing Licensing bylaw as well as create two new additional bylaws — "Mandatory Waste Source Separation" and "Waste Hauler Licensing."

- **Mandatory Waste Source Separation Regulation** - A Waste Source Separation Regulation is a potential tool that would help ensure recyclables and compostables don't end up being landfilled. While many businesses and multi-family buildings already have recycling programs, this proposed regulation would expand to require all existing and new commercial, institutional and industrial businesses to have separate containers for recyclables, organics and waste.
- **Waste Haulers Licensing** - The second proposed new regulation would require businesses that haul waste for profit to obtain a license from the RDN. This is similar to the Waste Stream Management Licensing Bylaw that was introduced in the 2004 RDN SWMP. Licensing waste haulers provides the ability for the RDN to change the existing financial model to one where the waste industry is more profitable if they divert waste rather than dispose of it. The intent is to promote the "business of diversion" and foster industry innovation to achieve the lowest system cost with the highest waste diversion.

Both of these proposed regulations would also require additional Provincial approvals before they come into effect. Subject to adoption of the Plan, the RDN will conduct further consultation on the introduction of waste source separation regulation as a potential tool to help ensure these recyclables and compostables don't end up being landfilled.

- **Zero Waste Recycling**

The RDN proposes to promote Zero Waste Recycling by making funding available to target materials that are currently not part of a stewardship program or are not part of an established commercial market and end up in the landfill. The objective of this funding is:

1. **Maximizing waste diversion;**
2. **Encouraging non-profit and private sector innovation to develop markets and processes; and**
3. **Improving convenience for recycling materials.**

It is envisioned that the RDN will target recycling of specific materials or processes that do not have local commercial markets. The RDN will fund the Nanaimo Recycling Exchange (NRE) to act as a research/recycling hub for recycling items currently not commercially marketable. Acting as a research/recycling hub, the NRE would develop methods, markets and collaborations for items not currently easily recyclable, investigate barriers to recycling these items, and develop recycling programs that would ultimately benefit the RDN as a whole.



Our Residual Waste

While the long-term goal is Zero Waste, the RDN recognizes there is a need for landfill capacity in the future. The Regional Landfill has capacity until 2040 based on current landfilling rates. Depending on the speed and success of further diversion initiatives, the life of the landfill could be extended for an additional 10 to 15 years.

Just how much residual waste is generated depends on population growth and the success of the Zero Waste Plan's implementation. Economic growth in the region, new product stewardship programs, and the unanticipated development of private waste management facilities in the area will also be a factor.

During the life of this Plan, the RDN expects technologies will be advanced and the economic viability of residual waste processing and disposal may change. The RDN will continue to review and consider alternative technologies that are consistent with the Zero Waste Hierarchy and Zero Waste commitment.

Discussions with adjacent regional districts to identify potential cooperative strategies for waste management system improvements have been ongoing for a number of years and will continue. Future options for residual management could include collaboration with other local governments, siting a landfill and/or considering export on or off the island.

Costs

The updated Plan will begin in 2018, with full rollout of all components expected by 2021. Cost recovery mechanisms to fund the Plan's implementation include user rates, tipping fees and taxation.

The difference in costs to ratepayers is minimal — about \$10 more per year per person between the existing SWMP and the proposed SWMP. The costs are entirely from improvements to the Zero Waste Strategy — about \$10 more per year per person with an existing diversion rate of 68 per cent compared to the proposed strategy that is targeting a 90 per cent diversion rate.

Annual Net Per Capita Cost of Solid Waste Services in the RD[†]

	ANNUAL NET COST (\$ MILLION)	PER CAPITA COST (\$)
Current Zero Waste Strategy (68%)	\$3.3	\$53.66
Proposed Zero Waste Strategy (90%)	\$4.9	\$63.69
DIFFERENCE	\$1.6	\$10.03
Total Current SWMP	\$14.7	\$94.44
Future Proposed SWMP	\$16.3	\$104.47
DIFFERENCE	\$1.6	\$10.03

[†]Based on 10 year Budget, 2017 – 2026

New Zero Waste Program	Annual Average Cost	Total Cost per Household*
Expanded Zero Waste Education	\$40,000	\$0.55
Household Hazardous Waste	\$100,000	\$1.38
Expanded ICI Waste Management Diversion	\$200,000	\$2.71
Expanded Construction and Demolition Diversion	\$40,000	\$0.57
Waste Hauler Licensing	\$469,000	\$6.23
Mandatory Waste Source Separation	\$373,000	\$4.96
Zero Waste Recycling	\$300,000	\$4.07

*Based on an Avg \$500,000 value



Making it Happen

Our Implementation

A draft of this Plan will be subject to public consultation in the fall of 2017. Input from the consultation process will be incorporated into the final version of the Plan which will be presented to the Regional Board for their approval. Once approved by the Board, it will be submitted to the BC Ministry of Environment for final approval.

Contact Us

For more information on the Plan and public consultation and opportunities to provide input, please visit getinvolved.rdn.ca or contact the RDN at 250-390-6560 or toll-free at 1-877-607-4111.

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3 Glossary of Terms and Acronyms

Bylaw: A bylaw is a document that formalizes a regulation made by a local government council or board.¹

CD: Construction and demolition waste.

Circular economy: An alternative to a traditional linear economy (make ◊ use ◊ dispose). The circular economy keeps resources in use for as long as possible, extracts the maximum value from them while in use, then recovers and regenerates products and materials at the end of their service life.

Collection facility [Recycling Regulation, B.C. Reg. 449/2004]: A facility for collecting products and materials.

Composting [Organic Matter Recycling Regulation, B.C. Reg. 18/2002]: The controlled biological oxidation and decomposition of organic matter.

Composting facility [Organic Matter Recycling Regulation, B.C. Reg. 18/2002]: A facility that processes organic matter to produce compost.

Disposal [Hazardous Waste Regulation, B.C. Reg. 63/88]: The introduction of waste into the environment through any discharge, deposit, emission or release to any land, water or air by means of facilities designed, constructed and operated so as to minimize the effect on the environment.

Downstream environmental impacts: Impacts created by the use of a product after its useful life.

EMA: The Environmental Management Act, S.B.C. 2003, c 53.

Extended Producer Responsibility (EPR): A management system based on industry and consumers taking life-cycle responsibility for the products they produce and use. Referred to as “product stewardship” under the B.C. Recycling Regulation. B.C. Reg 449/2004.

Hauler [EMA]: A person who picks up, delivers, hauls or transports municipal solid waste or recyclable material on a commercial basis (note under EMA the term ‘Waste Hauler’ is defined in section 26 for the purpose of section 26 only).

Hauler licence [EMA]: A licence issued by a regional district to a hauler, under the authority of a bylaw made under EMA section 25(3) (h) (i).

ICI: Industrial, commercial and institutional waste.

¹ Union of BC Municipalities (UBCM), “Fact Sheet #6: Bylaws”, December 2014, http://www.ubcm.ca/assets/Services/Publications/06_BYLAWS.pdf

Interested parties: Organizations, agencies and individuals with an interest in the planning process. This includes governments (including First Nations), private sector interests, non-government and community organizations, and the public at large

Manage or management: Includes the collection, transportation, handling, processing, storage, treatment, utilization and disposal of any substance.

Minister: The B.C. Minister of Environment Ministry: The B.C. Ministry of Environment.

Municipal solid waste (MSW) or waste [EMA]: a) refuse that originates from residential, commercial, institutional, demolition, land clearing or construction sources, or b) refuse specified by a director to be included in a waste management plan. May be referred to as “waste” or “solid waste” throughout this document.

Municipality: A municipality incorporated as such under the Local Government Act

Operational certificate (OC) [EMA]: A certificate issued under section 28 [operational certificates] for the design, operation, maintenance, performance and closure of sites or facilities used for the storage, treatment or disposal of waste or recyclable material.

PMAC: Plan Monitoring Advisory Committee; A committee established to support the implementation and monitoring of the solid waste management plan.

Product stewardship: see Extended Producer Responsibility (EPR).

Recovery: The reclaiming of recyclable components and / or energy from the solid waste stream by various methods including but not limited to manual or mechanical sorting, incineration, distillation, gasification, or biological conversion other than composting.

Recyclable: In this Plan, refers to a product or substance, after it is no longer usable in its present form that can be diverted from the solid waste stream. (Note that "recyclable material" has a more specific definition in the EMA)

Recycler licence [EMA]: A licence issued by a regional district, under the authority of a bylaw made under EMA section 25(3) (h) (i), to the owner or operator of a site that accepts and manages recyclable material.

Recycling: The collection, transportation and processing of products that are no longer useful in their present form and the subsequent use, including composting, of their material content in the manufacture of new products for which there is a market.

Reduction or reduce: Decreasing the volume, weight or toxicity of municipal solid waste generated at source. Includes activities which result in more efficient reuse or recycling of primary products or materials, but does not include only compacting or otherwise densifying the waste.

Regional director: Regional Director, Environmental Protection Division of the Ministry of Environment, or someone designated to carry out authorization duties on behalf of the Regional Director.

Regional district [EMA section 25(1)]: a regional district as defined in the Local Government Act.

Residual management: The disposal in accordance with the EMA of what remains in the solid waste stream following reduction, reuse, recycling and recovery activities.

Reuse: At least one further use of a product in the same form (but not necessarily for the same purpose).

RSWAC: Regional Solid Waste Advisory Committee (RSWAC); a committee established to support the development of the solid waste management plan. May include a public advisory committee, technical advisory committee and a plan monitoring advisory committee.

Site [EMA]: Any site, including those identified specifically or by class, in an approved waste management plan for the management of municipal solid waste or recyclable material. (Note under EMA this term is defined in section 25 for the purpose of section 25 only)

Solid waste management system: The aggregate of all sites and facilities, services and programs for managing municipal solid waste within a region.

Solid waste stream: The aggregate of all municipal solid waste and recyclable materials, and the process through which they move from generation to utilization or disposal.

Triple Bottom Line: Economic, environmental and social cost considerations Upstream environmental impacts: Impacts from the creation and transportation of a product to where it is used.

Waste management facility (facility) [EMA]: A facility for the treatment, recycling, storage, disposal or destruction of a waste, or recovery of reusable resources including energy potential from waste.

Waste management plan [EMA]: A plan that contains provisions or requirements for the management of recyclable material or other waste or a class of waste within all or a part of one or more municipalities.

Waste stream management licence [EMA]: A licence issued by a regional district, under the authority of a bylaw made under EMA section 25(3) (h) (i), to the owner or operator of a site that accepts and manages municipal solid waste.

Zero Waste Hierarchy: Also called the Pollution Prevention Hierarchy or Waste Management Hierarchy, define in Section 1.2.

Zero Waste approach: as both a philosophy and a goal, aims to reduce and ultimately eliminate garbage; further defined in Section 4.2.

4 Introduction

Regional districts are mandated by the Provincial *Environmental Management Act* (EMA) to develop a Solid Waste Management Plan (Plan) that is a long term vision of how each regional district would like to manage their solid waste, including waste diversion and disposal activities. The Regional District of Nanaimo (RDN) prepared its first Plan in 1988 and made amendments to it in 1996 and 2004. This Plan update is projected for a 10-year planning horizon, from 2018 to 2027.

The process to update the Plan has occurred in three stages. The first stage involved a review of the current solid waste system and preparation of a report on the implementation status of the 2004 Plan. The second stage involved a review of options to address the region’s future solid waste management needs and identify preferred management options. The third stage sets out the implementation schedule for the preferred options and forms the revised Plan.

This Plan provides a policy and regulatory framework for solid waste management and solid waste management related activities in the RDN. In conjunction with EMA, regulations and Operational Certificates (OC) that may apply, the Plan provides the framework for regulation of storage and disposal facilities that make up the region’s solid waste management system.

4.1 Guiding Principles²

The principles guiding the development and implementation of the Plan are:

1. Promote the Zero Waste Hierarchy of highest and best uses and support a circular economy.
2. Maximize use of waste materials and manage residuals appropriately.
3. Support polluter and user-pay approaches and manage incentives to maximize behavior outcomes.
4. Prevent organics and recyclables from going in the garbage.
5. Collaborate with other regional districts wherever practical.

² BC Ministry of Environment, “A Guide to Solid Waste Management Planning,” September, 2016, <https://www2.gov.bc.ca/assets/gov/environment/waste-management/garbage/swmp.pdf>.

6. Develop collaborative partnerships with interested parties to achieve regional targets set in plans.
7. Level playing field within regions for both private and public solid waste management facilities.

4.2 Zero Waste Hierarchy and Targets

The future solid waste system will build on the existing framework of services and programs while improving the delivery of those services, and reducing the amount of waste sent for disposal. The proposed programs, infrastructure and policies for the Plan are presented in accordance with the Zero Waste Hierarchy, as shown in Figure 1.



Figure 1 Zero Waste Hierarchy (Adopted from the Zero Waste International Alliance)

The implementation of these programs and policies over the Plan’s 10-year timeframe is expected to continually exceed the provincial disposal rate target of 350 kg per capita and result in achievement of the following regional targets:

1. The ultimate goal of Zero Waste, as defined by Zero Waste International Alliance and adopted by the RDN:

“Zero Waste is a goal that is ethical, economical, efficient and visionary, to guide people in changing their lifestyles and practices to emulate sustainable natural cycles, where all discarded materials are designed to become resources for others to use.

Zero Waste means designing and managing products and processes to systematically avoid and eliminate the volume and toxicity of waste and materials, conserve and recover all resources, and not burn or bury them.

Implementing Zero Waste will eliminate all discharges to land, water or air that are a threat to planetary, human, animal or plant health.”³

2. The introduction of programs and strategies to move the RDN towards 90% diversion by 2027 and/or a per capita disposal of 109 kg/year.

5 Background

The Province approved the RDN’s first Plan in 1988. The main elements of the Plan consisted of a transfer station, a resource recovery facility, and a sanitary landfill to manage the residuals from the facility (estimated to be 20% of the solid waste stream). However, the resource recovery facility never came to fruition due to the proponent’s inability to secure financing. Consequently, the RDN’s new landfill was receiving 100% of the solid waste stream, resulting in filling much faster than anticipated at the landfill’s inception. As a result, the RDN reviewed the Plan in 1992 to re-focus the Plan on the reduction of solid waste sent to the landfill.

Consequently strategies for user pay garbage collection, curbside recycling, a backyard composting program, and a disposal ban on cardboard were implemented.



³ Zero Waste International Alliance, “ZW Definition,” last modified 2009, <http://zwia.org/standards/zw-definition/>.

In 1994, a full Plan amendment was initiated, which was comprised of two main components. The first part was the development of the “3Rs Plan” that was approved in 1996. The 3Rs Plan contained programs and policy initiatives to reduce the RDN’s annual solid waste disposal needs by approximately 70%. The two major elements of the 3Rs Plan were the development of a privately built and operated composting facility for source-separated organics, and a privately built and operated construction and demolition (CD) waste recycling facility.

The second part was the development of a residual solid waste management plan to address the portion of the solid waste stream that would not be eliminated, or diverted through composting or recycling. The residual solid waste planning process assessed a wide array of processing and disposal options, and conducted detailed assessments of municipal solid waste (MSW), composting (as a means of further reducing the amount of solid waste requiring disposal) and solid waste export (as an alternative to siting a new landfill in the RDN).

In 2003, the RDN adopted “Zero” as the solid waste diversion target.

In 2004, the second full Plan amendment began. This Plan amendment consolidated the 3Rs Plan, (later called the “Zero Waste Plan” due to the RDN adopting “zero” as their new solid waste diversion target in 2003); the outcomes of the residual waste management planning process, and a bylaw to license private solid waste management facilities. The key components of the 2004 Plan were:

2003



ZERO
waste identified
as ultimate
community
GOAL

1990



550 KG
per person/yr
to landfill

 **50%**
waste
reduction

- **Banning commercial organic waste from disposal as garbage** – This initiative supported the newly opened, privately built and operated composting facility (an objective of the original 3Rs Plan).
- **Implementation of an organics collection program for single-family homes** – This service was fully implemented throughout the RDN, including all municipal areas, by 2011.
- **Implementation of the Waste Stream Management Licensing Regulatory Bylaw** – The bylaw was implemented in 2005.
- **The export of garbage received at Church Road Transfer Station (CRTS) to the Cache Creek Landfill** – The RDN exported garbage delivered to the CRTS through a contract with the Greater Vancouver Regional District (now called Metro Vancouver) from 1998 to 2005 as a means to preserve space at the Regional Landfill.
- **Expansion of the capacity of the Regional Landfill within the existing property boundary through the construction of a geogrid toe berm** – Construction of the first toe berm was completed in 2004. This expansion allowed for the cessation of waste export and for all RDN garbage to be disposed at the Regional Landfill.

5.1 Plan Area

The RDN covers an area of approximately 207,000 hectares on the southeast coast of Vancouver Island. The RDN includes four incorporated municipalities and seven unincorporated electoral areas. A map of the RDN is provided as Figure 2.

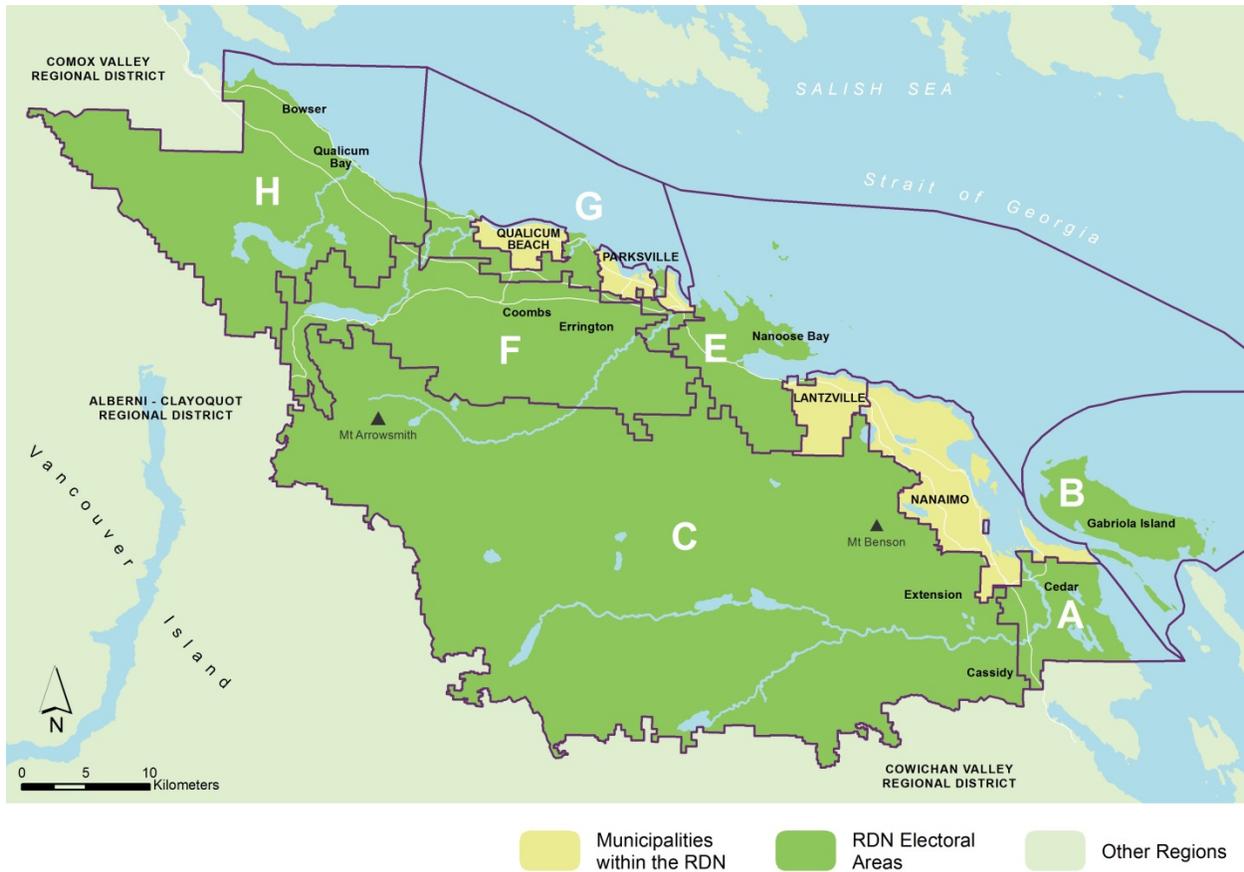


Figure 2 Electoral Areas in the RDN

Statistics Canada reports the 2016 population for the RDN as 155,698, including First Nations reserves, as shown in Table 1.⁴ Of this number, 25% (39,097) lived in electoral areas, 1% (1,035) lived on reserves, and the 74% (115,556) lived in municipalities. The four municipalities in the region are the City of Nanaimo, the District of Lantzville, the City of Parksville, and the Town of Qualicum Beach.

⁴ Statistics Canada, "Census Profile, 2016 Census: Nanaimo, Regional district," last modified March 20, 2018, <http://www12.statcan.gc.ca/census-recensement/2016/>.

The seven electoral areas in the region are:

- A: Cassidy, Cedar, Yellowpoint, South Wellington;
- B: Gabriola, Decourcey and Mudge Islands;
- C: Extension, Arrowsmith-Benson, East Wellington, Pleasant Valley;
- E: Nanoose Bay;
- F: Coombs, Hilliers, Errington;
- G: French Creek, Dashwood, Englishman River; and
- H: Shaw Hill, Qualicum Bay, Deep Bay, Bowser.

Six First Nations Reserves neighbour the RDN:

- Nanaimo Town 1 & Nanaimo River 2, 3 & 4 (Snuneymuxw First Nation);
- Nanoose (Nanoose First Nation); and
- Qualicum (Qualicum First Nation).

Table 1 Population by Area

Area	Population 2016
Electoral Area A	7,058
Electoral Area B	4,033
Electoral Area C	2,808
Electoral Area E	6,125
Electoral Area F	7,724
Electoral Area G	7,465
Electoral Area H	3,884
Sub-Total	39,097
City of Nanaimo	90,504
District of Lantzville	3,605
City of Parksville	12,514
Town of Qualicum Beach	8,943
Sub-Total	115,566
Nanaimo Town 1 Indian Reserve	360
Nanaimo River Indian Reserve	371
Nanoose Indian Reserve	230
Qualicum Indian Reserve	74

Sub-Total	1,035
Total Population (RDN)	155,698

5.1.1 Population Growth

The population of the region increased 73% from 84,819 in 1986 to 146,574 in 2011. As of 2016, Census data indicates the population of the region as 155,698, an 84% increase since the inception of the original Plan.⁵ Forecasts predict the population will increase to 181,201 (114%) by 2026, and 194,849 (130%) by 2036.⁶



5.2 Waste Generation and Management

Waste generation in the RDN is measured by the total tonnage of material landfilled. The base line figure for waste generation in the RDN is 1,084 kg/capita/year from 1980's disposal estimates. Over the past 36 years, the RDN waste disposal rate has been reduced by approximately 50% to 550 kg/capita/year in 1990 and, by 68% to 347 kg/capita/year in 2014. The target for the amended Plan is to further drive diversion to 90% and/or a per capita disposal rate of 109 kg/year by 2027. Table 2 provides some comparable waste disposal rates for reference regarding the RDN disposal target.

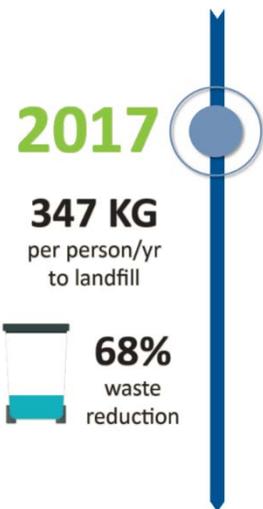


Table 2 Jurisdictional Scan on Per Capita Disposal Rates⁷

⁵ Statistics Canada, "Census Profile, 2016 Census: Nanaimo, Regional district."

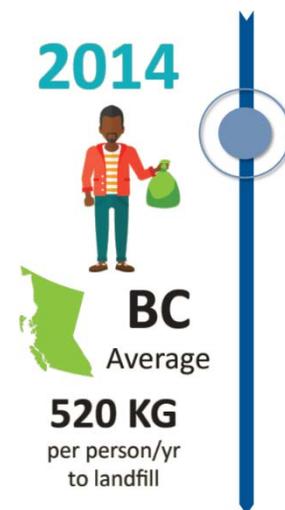
⁶ BC Stats, "Sub-Provincial Population Projections: P.E.O.P.L.E. 2017," last modified August 2017, <https://www.bcstats.gov.bc.ca/apps/PopulationProjections.aspx>.

⁷ Sharon Horsburgh (RDN Staff Report), "Jurisdictional Scan Regarding Waste Diversion Program," January 5, 2016.

Location	Reporting Year	Disposal kg /capita /year	Comment
RDN - projected	2027	109	Based on a 90% diversion target.
RDN - actual	2014	347	Based on 68% diversion achievement.
BC	2014	520	MSW Disposal in B.C. (1990-2014), Environmental Reporting BC.
California	2012	712	California's per capita disposal rates may not capture all waste and per capita disposal may be higher.
San Francisco	2012	482	Claim to have the highest waste diversion rate in the US.
Germany	2012	220	Highest reported diversion rate of European countries. Accounts for MSW only. The European Environmental Agency notes that municipal waste only accounts for around 10% of the waste stream.
Capannori, Italy	2012	146	Accounts for <u>household</u> waste only.

A jurisdictional scan of North American and Europe indicates there are two potential paths being taken by communities striving for high levels of diversion:

1. Lower priority on source separation with the emphasis on energy recovery of the waste. The City of Edmonton provides an example of this strategy, and they are targeting a 90% diversion rate.
2. Maximizing source separation by moving beyond voluntary waste diversion and introducing regulatory instruments (e.g. mandatory waste separation and fines) or monetary incentives (e.g. “pay as you throw”). San Francisco and Capannori, Italy provide examples of communities using these strategies.



The RDN favors the maximization of source separation approach, while recognizing it is necessary to move beyond the largely voluntary programs that currently exist in the RDN to achieve high levels of diversion.

5.3 Waste Characterization

In 2012, the RDN commissioned a study of the composition of waste being landfilled in the Region. As shown in Figure 3, the study found compostable organics (food waste and compostable paper) and CD waste as the largest components of waste by weight being landfilled. These materials were targeted for diversion from the landfill through the Green Bin Program, and disposal bans on Commercial Food Waste and Clean Wood Waste. The 2012 Waste Composition Study is a key tool in the current process to update and review the Plan. The study's findings have been used to assess the effectiveness of Zero Waste programs in diverting landfill waste and opportunities for improvement.

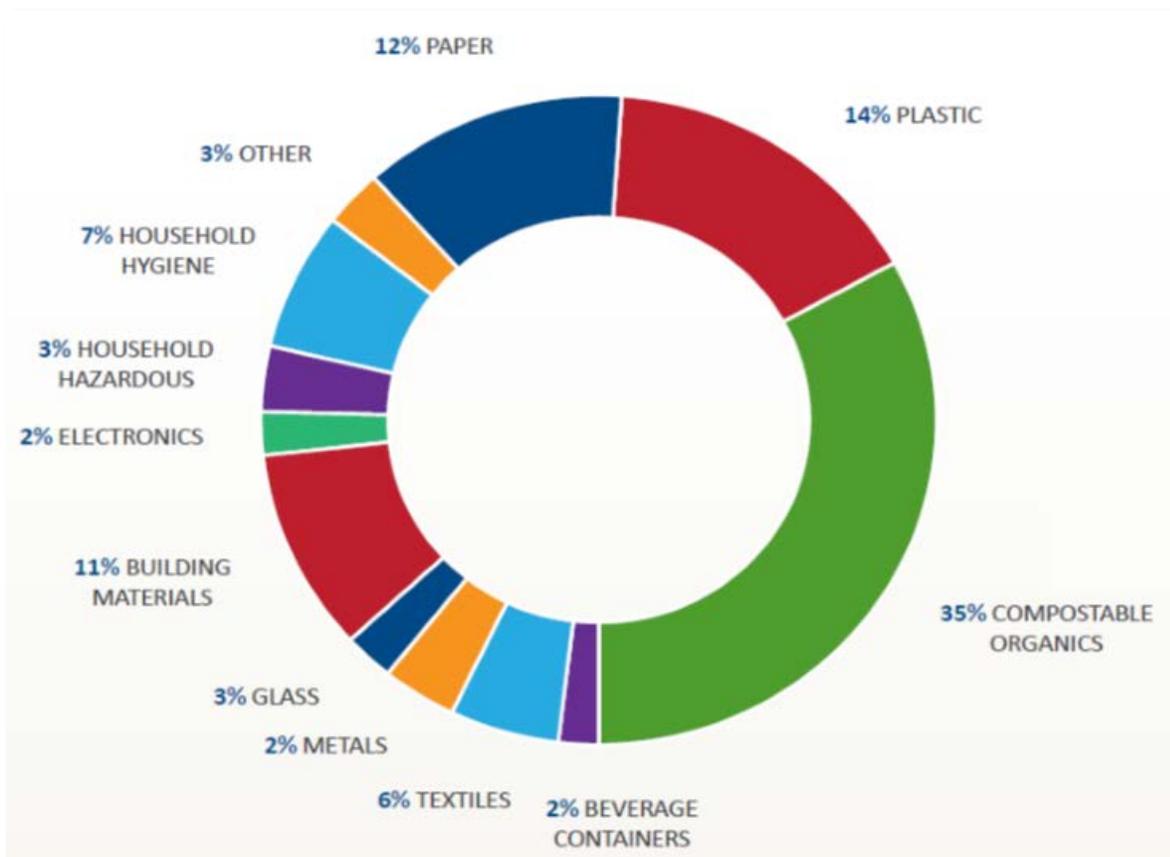


Figure 3 RDN Waste Disposal at Regional Landfill by Material, 2012

As shown in Figure 4, the study indicated institutional, commercial, industrial (ICI) including multi-family and CD accounts for the largest portion of waste disposal at 63%, followed by self-haul customers at 20%, and the remaining 17% of the volume is attributed to residential accounts.

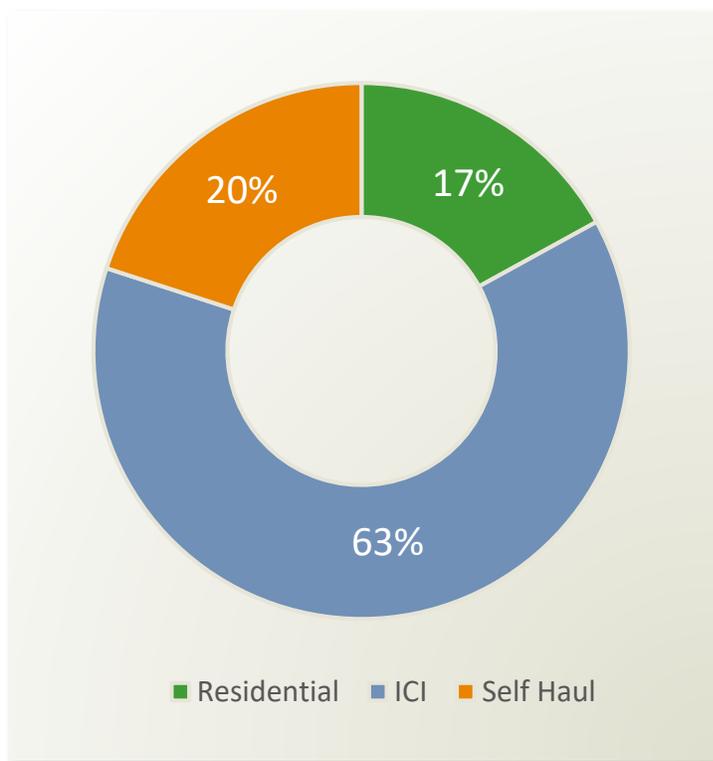


Figure 4 RDN Waste Disposal at Regional Landfill by Sector, 2012

It is estimated that approximately 3,300 tonnes of solid waste left the region in 2016, and can be attributed to the following three circumstances, which includes both CD and MSW:

1. It is believed a nominal amount of solid waste is transported in and out of region in areas near the regional boundaries as people look for the most convenient disposal location. For example, there are a few known incidences of Ladysmith residences hauling solid waste to the Regional Landfill in Cedar due to its close proximity. Similarly, anecdotal comments suggest RDN residents in the Qualicum area, on occasion, haul solid waste to the Comox Strathcona Regional District for disposal. The net amount is deemed negligible in the context of the overall Plan.
2. It is known there have been large demolition projects in recent years where solid waste has been hauled out of region for disposal. Two examples are:
 - a. 2015 City of Nanaimo Ferry Dock Demolition - 476 tonnes disposed of at a private landfill in the Capital Regional District; and
 - b. 2015 Wellington School Demolition - approximately 250 tonnes disposed of at a private landfill in Chilliwack. The contractor advised that disposal cost was less than half of the cost of RDN disposal, and they were not required to source separate recyclables.

It is impossible to predict to what extent similar circumstances will exist in the future. However, the examples demonstrate the propensity to seek out the lowest cost option, which is often contrary to Zero Waste.

3. Between 2013 and 2014, there was a drastic reduction of approximately 25%, estimated at 3,600 tonnes/year⁸ (excluding the large demolition projects noted above), of commercial solid waste exported for landfilling in the United States, which was previously destined for the Regional Landfill. This was likely a consequence of the lower Canadian dollar value as compared to the US dollar. It is without doubt future trends for export will continue to fluctuate and be influenced by the values of the Canadian and US dollars, transportation costs and business decisions.

5.4 Roles in Solid Waste Management

Table 3 outlines the organizations that contribute to solid waste management in the RDN.

Table 3 Organizations Contributing to Solid Waste Management

Who	Roles in Solid Waste Management
Federal Government	<ul style="list-style-type: none"> • Regulates solid waste management facilities under federal jurisdiction. • Regulates the safety, labelling and sale of consumer products.
Provincial Government	<ul style="list-style-type: none"> • Various ministries have regulatory authority related to solid waste management. • Regulates product stewardship responsibility in BC.
RDN	<ul style="list-style-type: none"> • Develops Plan to provide big picture oversight of solid waste management in the region. • Through plans and plan implementation (including bylaws), works to meet solid waste disposal goals and targets and ensures that community has access to solid waste management services that are environmentally sound and cost effective. • Ensures that legislative and policy requirements are followed, including monitoring and reporting. • Chairs committees and coordinates with municipalities in service delivery.

⁸ Carey McIver & Associates Ltd., “RDN Waste Export Analysis,” February 10, 2015.

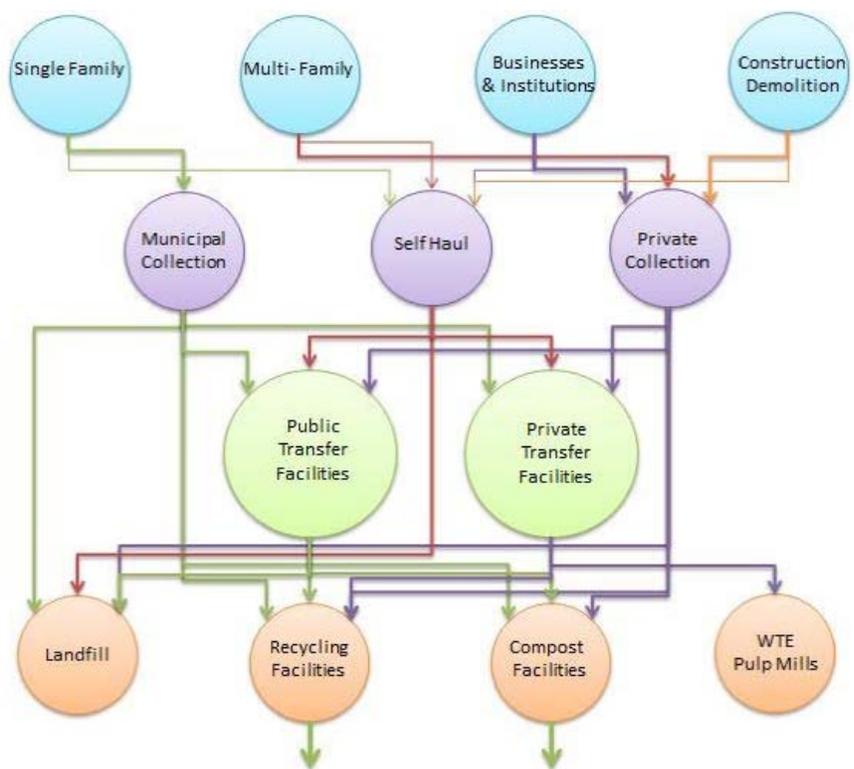
Who	Roles in Solid Waste Management
	<ul style="list-style-type: none"> • Operates the Regional Landfill and Church Road Transfer Station (CRTS). • Provides residential curbside collection of food waste, garbage and recycling in all Electoral Areas, District of Lantzville, City of Parksville and food waste and recycling in the Town of Qualicum Beach. • Supports Extended Producer Responsibility (EPR) programs in the jurisdiction. • Incorporates the Zero Waste Hierarchy within operations and those of member municipalities. • Serves as a model for the ICI sector incorporating the latest strategies and approaches for achieving Zero Waste (e.g. purchasing policy, print material requirements). • Develops policies which promote a level playing field within the solid waste management sector.
Municipalities (council and staff)	<ul style="list-style-type: none"> • May provide/coordinate solid waste management service, or own/operate facilities. • May make bylaws dealing with solid waste collection. • Municipal enforcement officers as part of enforcement team.
First Nations	<ul style="list-style-type: none"> • May provide solid waste management services or may participate in regional solid waste management system.
Product Stewards	<ul style="list-style-type: none"> • Collect and process stewarded products. • Coordinate local government delivery of service where applicable. • Provide and/or fund education and marketing. • Provide deposit refunds to consumers (where applicable). • Monitor and report on recovery rates.
Private sector involved in solid waste management (e.g. haulers, facility operators, collection facility operators)	<ul style="list-style-type: none"> • May provide recycling and solid waste management services and own/operate facilities. • May provide collection sites for residential, multi-family, and ICI recycling. • May provide collection sites for product stewardship items. • May provide zero waste recycling and marketing for hard to recycle products. • Generally, services multi-family residential buildings, ICI, CD and land clearing sectors. • May provide zero waste education services. • May be regulated by local government through Waste Stream Management Licensing Bylaw.
Nanaimo Recycling Exchange	<ul style="list-style-type: none"> • Recipient of RDN funding for a five year period for research and recycling of materials not commercially marketable.

Who	Roles in Solid Waste Management
Neighbouring jurisdictions	<ul style="list-style-type: none"> • May send solid waste to Regional Landfill or accept solid waste from the RDN. • Partner to look for synergies and/or consistencies in solid waste management with neighbouring jurisdictions.
Residents and businesses	<ul style="list-style-type: none"> • Responsible for carrying out proper solid waste reduction, recycling and disposal activities.

5.5 Solid Waste Flows

Figure 5 illustrates the breadth of activities/services, and stakeholders engaged with the current solid waste management system. There are a wide range of solid waste management activities underway that reflect both a relatively mature solid waste management system and significant economic activity based on secondary resources.

Figure 5 Components of the Waste Management System in the RDN



6 Existing Solid Waste Management System

The RDN has a broad range of solid waste management programs and infrastructure. This section provides an overview of the existing solid waste management system and describes the major infrastructure, services, programs and policies. A detailed description of the Existing Solid Waste Management System can be found in Appendix D.

The updated 2004 Plan introduced the Zero Waste Plan and expanded on policies and programs to increase diversion. This strategy effectively increased recyclable commodities and transferred the management of those items to the private sector. Examples of this span the solid waste stream spectrum and include wood waste, CD, yard waste, food waste and extended producer responsibility (EPR) products.

This transfer of solid waste management responsibility to the private sector has resulted in reduced cost of government, as well as growth in the solid waste management business sector, contributing to increased employment opportunities and tax contributions which are of significant benefit to the community. These policies have created a robust solid waste management industry in the region and have resulted in world class solid waste diversion levels.

This model of transferring the solid waste management activities to the private sector ensures “user pay” where the full cost of solid waste management is born by the generator. Conversely, many communities rely primarily on taxation in providing solid waste management services hiding the true cost of waste management.

In May 2013, the report *“Zero Waste Business Case, Draft for Expert Review”*, by Innes Hood Consulting Inc., was prepared for the Ministry of the Environment.⁹ The report concluded there is a positive business case for implementing a Zero Waste Strategy for BC. Depending on how aggressively it is implemented (i.e., 62% vs 81% diversion), by 2025 a Zero Waste Strategy will:

⁹ Innes Hood, “Zero Waste Business Case: Draft for Expert Review,” May, 2013, https://www2.gov.bc.ca/assets/gov/environment/waste-management/industrial-waste/industrial-waste/zero_waste_business_case_draft.pdf.

- Produce between \$56 million and \$126 million of annual net economic benefit;
- Add between \$27 million and \$89 million to the GDP; and
- Generate between \$755,000; and \$2.5 million in annual income tax revenue for BC.

The report also states the business case for Zero Waste is strengthened if supporting policies are developed to encourage the creation and retention of remanufacturing facilities within BC, and prevent leakage to other jurisdictions. The RDN’s current policies, which move waste to the private sector, are in harmony with the findings of this study. The preferred options for the amended Plan set out in Section 4 further strengthen this model. As a result, the RDN is expected to continue seeing an increased diversion, coupled with further economic growth in the waste management sector.

6.1 Education and Outreach

Both the RDN and the City of Nanaimo undertake promotion and education related to solid waste management within the region, as detailed below:



The RDN:

- Provides information related to the solid waste management planning, bylaws and Zero Waste programs on the Solid Waste and Recycling pages of the RDN’s website (<http://www.rdn.bc.ca/>) and the RDN Get Involved webpage (<http://getinvolved.rdn.ca/>);
- Distributes a Zero Waste program newsletter to all homes two to three times per year;
- Maintains a curbside app for users to find out where they can bring their reusable, recyclable and compostable items;
- Delivers a Zero Waste school education program which provides free classroom workshops to schools throughout the RDN;
- Delivers curbside outreach program; and,
- Monitors and maintains social media posts.

6.2 Reduction and Reuse Activities

The RDN and member municipalities encourage residents to “reduce and reuse”, in accordance with the Zero Waste Hierarchy.

Backyard composting is promoted via respective websites by providing advice on how to backyard compost and grasscycle. Each spring, the City of Nanaimo holds a weekend long reuse-focused, curbside swap event called “Reuse Rendezvous” whereby residents are encouraged to put out items they no longer want but may be useful to others.

In addition to the RDN’s and municipalities reduction and reuse activities, there are several other organizations involved in reuse in the RDN, including several private and non-profit retailers and many on-line classified services such as Craigslist and UsedNanaimo.com that are actively involved in the sale and purchase of used goods. The Repair Café Nanaimo holds repair workshops where residents can bring in their broken items and receive help from local repair experts.



6.3 Recycling

Curbside collection of recyclables is provided to single family homes to residents of all electoral areas, City of Nanaimo, City of Parksville, District of Lantzville and Town of Qualicum Beach.

Both regional facilities (Regional Landfill and the CRTS) accept limited recyclable material, including scrap metal, paper, cardboard, household plastic containers, metal food containers, vehicle batteries, oil filters, wood waste, yard waste, mattresses, gypsum, ODS appliances and controlled wastes.

There are three Material Recycling Facilities (MRF) owned and operated by private waste management companies in the RDN: Waste Connections of Canada, Emterra and Cascades, all located in Nanaimo.

Figure 6 shows the locations of both the private and not-for-profit recycling collection facilities throughout the region which accept EPR material and other recyclables from private businesses and residents.

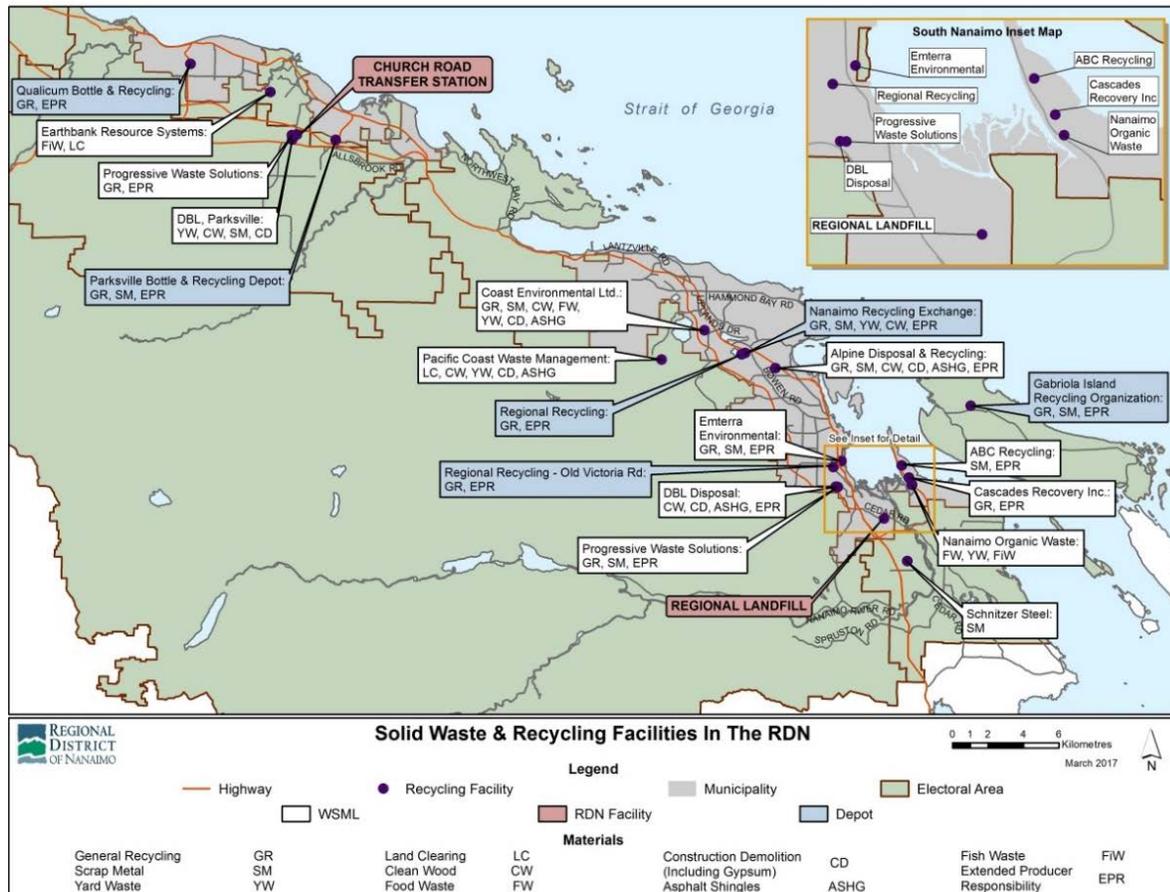


Figure 6 Solid Waste and Recycling Facilities in the RDN

In the RDN, there are reuse programs for leftover and excess food through food banks and other food redistribution services. Additionally, some food scraps are picked up by area farmers for use as animal feed. However, the majority of organics are sent to centralized composting facilities. There are two licensed composting facilities in the RDN: Nanaimo Organic Waste (formerly International Composting Corporation) and Earthbank Resource Systems. The types of materials each of these facilities manages are as follows:

- Nanaimo Organic Waste
 - Residential “green bin” kitchen scraps and soiled paper
 - Commercial food waste
 - Yard waste
 - Fish waste
 - Clean wood



- Earthbank
 - Farmed and wild fish waste
 - Farmed salmon mortalities
 - Ground up bark from the forestry industry
 - Ground up land clearing debris (exclusively local forest materials)

Nanaimo Organic Waste, a drum-style in-vessel composting facility, opened in Nanaimo in 2004 and is the only food waste processing facility in the RDN. The composted end product is sold as a bulk product for blending into soil mixes.

In 2005, the RDN introduced a commercial organics ban. Based on waste characterization studies carried out before and after the ban, the per capita tonnage of compostable organics in the waste stream dropped from 95.5 kg/capita to 91.2 kg/capita in 2004 and 2012, respectively. These findings indicate the current organics ban has achieved only modest success, and there remains significant opportunity for further diversion of organic waste.

In 2018, more than 56,000 single family homes in Nanaimo, Lantzville, Parksville, Qualicum Beach and the RDN Electoral Areas received weekly curbside food waste collection service.

6.4 Yard Waste

Yard waste, such as leaves and grass clippings, are not collected as part of the residential waste collection services offered by the RDN. Residents and businesses are encouraged to manage their yard waste in one of the following manners:

- Reduce the amount of yard waste through practices such as grasscycling and xeriscaping;
- Compost in backyard or on-site;
- Self-haul to one of several yard waste collection facilities in the RDN (“What Goes Where” tool);
- Hire a yard waste removal service; and/or
- Inclusion of yard waste removal clause in landscaping contracts.

Use of these yard waste management practices and services is encouraged by a variety of policies including:

- Enforcement of ban on yard waste disposed as garbage at the Regional Landfill site and CRTS;

- Enforcement of ban on the inclusion of yard waste in the City of Nanaimo’s¹⁰ and RDN’s residential garbage collection service;
- Exclusion of yard waste collection as part of the single-family residential curbside service; and
- Promotion the yard waste management alternatives.

This approach to yard waste management has been successful at minimizing the amount of yard waste being landfilled. The 2012 waste composition study indicated yard waste is roughly 2.5% of the residential waste sent to landfill, and 5% of overall waste landfilled.

From 2017 to 2018, the City of Nanaimo began introducing their “Sort, Toss, Roll” program of automated residential curbside collection trucks. As part of this program, yard and garden waste is being picked up in a co-mingled container with food waste.

6.5 Waste Collection

The RDN Residential curbside garbage, recycling and food waste collection program is a compulsory service set up under Local Service Establishment Bylaw No. 793. In accordance with the Bylaw, the RDN provides curbside garbage, recycling and food waste collection to single family homes in all Electoral Areas of the RDN, City of Parksville and District of Lantzville by a private collection provider, under a service contract with the RDN.



As per Bylaw No.1591, a single family dwelling unit means a single family detached dwelling and each Dwelling Unit of a duplex, triplex or quadruplex and a Manufactured Home not situated in a Manufactured Home park. Town of Qualicum Beach staff provide garbage collection to some ICI buildings and all single family homes, while recycling and food waste collection is provided by the RDN through a contracted waste hauler for single family homes.

¹⁰ As part of the City of Nanaimo’s “Sort, Toss, Roll” residential curbside automated collection program, yard waste is included as part of their curbside collection service; Phase 2 of the project is expect to be completed in July 2018.

City of Nanaimo staff provide garbage and food waste collection to single family homes while recycling has been provided by a contracted waste hauler. With introduction of the City of Nanaimo's "Sort, Toss, Roll" automated garbage collection, all three waste streams will be collected by City staff. This new program also provides for the collection of yard and garden waste co-mingled with food waste.

Throughout the RDN, there are a number of private waste haulers that service the multi-family and ICI sectors that require solid waste collection.

6.6 Transfer Stations

The CRTS is located on Church Road, in Electoral Area F, about four kilometres southwest of downtown Parksville. The facility opened in 1991, and is approximately two hectares in size. The CRTS receives garbage, yard waste, wood waste, CD, and limited recyclables from communities in the northern portion of the RDN: Parksville, Qualicum Beach, and Electoral Areas E, F, G, and H. In recent years, with the growth of Nanaimo, this facility has also started to receive waste generated in parts of the City of Nanaimo. In 2012, approximately 30% of the region's garbage was delivered to CRTS.

Garbage brought to the CRTS is transferred to the Regional Landfill in Nanaimo. The limited recyclables such as cardboard and metal are transferred to various recycling processors, and food waste, kitchen waste, and yard waste are transferred to the Nanaimo Organic Waste Facility in South Nanaimo.

In 2010, the site was re-designed to accommodate population growth to 2030, including a food waste transfer area, and to segregate large commercial-sized waste vehicles from small passenger-sized vehicles and trucks. The new transfer station was built in accordance with the RDN Green Building Policy, and has received LEED Gold® accreditation, the first transfer station in Canada.

6.7 Landfill and Other Disposal Facilities

The Regional Landfill is located approximately 5 kilometres south of downtown Nanaimo and is owned and operated by the RDN. The Regional Landfill operates on a 21 hectare section of a 38 hectare property, approximately 2.7 hectares of which have been permanently closed. In accordance with Ministry of Environment-approved Design and Operations Plan, a North Berm Lateral Expansion was completed and added approximately 10 years of capacity to the site. One final expansion in the south east area of the site is planned when the North Berm area is filled. The site has been receiving MSW from the RDN since 1971 and given the current tonnages of

wastes received, the operation life of the Regional Landfill is expected to continue until approximately 2040.

There are two closed landfills in the RDN: the Parksville Landfill and the Qualicum Beach Landfill. These sites are the responsibility of their respective municipalities.

Waste disposal facilities on reserves are regulated by the federal Indian Reserve Waste Disposal Regulations. Currently, there are no federally authorized waste management facilities on First Nations land in the region. The RDN's Waste Stream Management Licensing Bylaw does not apply to activities on First Nations' land.

6.8 Policies and Regulations

Six main policies influence the RDN solid waste management system:

1. The user-pay system;
2. Variable tipping fees;
3. Disposal and collection bans;
4. Private sector waste management;
5. Open burning restrictions; and
6. Provincial product stewardship programs.

The first four policies fall within the scope of the Plan. Burning restrictions are applied through a combination of provincial regulation (e.g. Open Burning Smoke Control Regulation) and augmented by RDN and municipal bylaws. Provincial product stewardship programs are regulated by the BC Ministry of Environment and significantly influence the management of specific waste materials generated in the RDN.

6.8.1 User Pay

Both the RDN and the City of Nanaimo have user pay curbside garbage collection programs. All households have a one can limit (maximum 50 lbs) every other week¹¹. Residents can utilize up to two "Extra Garbage Tags" per week to set out additional cans. The vast majority of homes

¹¹ Subject to change in the City of Nanaimo following the full implementation of automated curbside collection.

set out one can of waste or less every two weeks. The RDN curbside program is fully funded by user fees and is not augmented by taxation.

The RDN solid waste program, other than curbside waste collection discussed in the previous paragraph, is primarily funded by landfill tipping fees augmented by a small tax requisition. In 2016 the split was approximately 93% tipping fee revenue and 7% taxation. These revenues are applied to solid waste program costs including operation of the Regional Landfill and CRTS, organics waste management, illegal dumping mitigation, education, policy and regulatory work. Insignificant relative to the overall budget are other revenues such as grants, sale of asbestos bags, and licensing fees associated with the Waste Stream Licensing program.

6.8.2 Variable Tipping Fees

The RDN tipping fees vary depending upon the materials. The 2018 base tipping fee for MSW is \$125/tonne. Fees for other materials are varied on the basis of cost to handle the material and/or to motivate diversion. For example, the 2018 tip fee for asbestos waste is \$500/tonne and is based on the landfill airspace consumption and the direct handling costs for management of the material. In the case of CD material containing recyclables, the 2018 tipping fee is \$360/tonne and potential of imposition of a fine. The intention with this latter example is to provide an incentive to source separate and divert waste. Schedule E: Financial Information contains a full list of the accepted materials and associated tipping fees.

6.8.3 Material Disposal Bans

The first material ban was introduced by the RDN in 1991 to encourage the recycling of gypsum. Since that time, a number of other materials have been banned. A full list of banned material and the implementation date of the ban is provided in Section 6.10. Enforcement of the bans to date at the Regional Landfill and at the CRTS has been applied to the most egregious cases of contamination. It is not uncommon for waste loads to contain at least some amount of banned materials such as paper, food waste or recyclable plastic.

6.8.4 Private Sector Waste Management

As the RDN waste management system has matured, the trend has been away from government provided service to an increase in services provided by the private sector, which includes both for-profit and non-profit organizations. The three policies described above, aided by burning bans and the provincial initiative discussed in the following section, have created a positive business climate for this trend.

Many communities have developed government-run collection facilities that accept a wide range of recyclable items. For those residents located in close proximity, these facilities typically provide a high level of convenience as a “one-stop” drop off. Commonly, the cost of operating these facilities is augmented by taxation. As a result, there is typically a loss of private sector enterprise given the challenge to compete with a government subsidized facility.

In the case of the RDN, government services have been reduced where the private sector is providing the service. RDN facilities typically do not accept products covered under the EPR programs. Where materials are accepted, there is a drop off fee. In this way, consumers and generators are encouraged to use the private facilities. The net result has been robust private sector waste management in the region, with diversion reaching 68%, and reduced cost to government to directly provide these services.

6.8.5 Burning Bans

Most developed areas of the RDN have burning restrictions for land clearing waste, CD debris, and yard waste. In most developed areas, burning of these wastes is prohibited year-round, but in some areas yard waste can be burned only during a limited time frame annually (usually a small window of time is given in the spring and fall). In undeveloped areas, burning of land clearing waste and yard waste is generally allowed, provided any local fire restrictions and the BC Open Burning Smoke Control regulation are being met. With restrictions in place, generators of these materials must find alternative disposal options and are encouraged to select options such as composting, reuse (of CD materials) or recycling.

6.8.6 Provincial Product Stewardship

The Province has implemented several product stewardship programs over the past decade. Product stewardship is defined as a management system based on industry and consumers taking life-cycle responsibility for the products they produce and use. As a result, the materials covered under a product stewardship program are less likely to enter the RDN’s waste management system. There are province-wide product stewardship programs currently in place for:

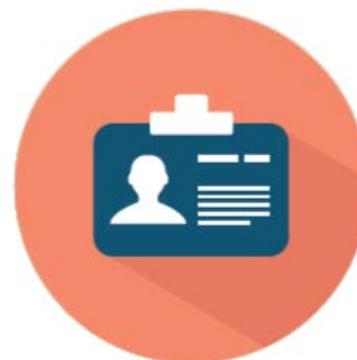
- Batteries (household)
- Beverage Containers (deposit)
- Cell Phones
- Electronic Equipment and Devices
- Flammable Liquids
- Gasoline
- Lead-Acid Batteries
- Oil and Antifreeze Containers
- Oil Filters
- Outdoor Power Equipment
- Packaging and Printed Paper
- Pharmaceuticals
- Small Appliances, Tools, Sports and Hobby Equipment
- Smoke and Carbon Monoxide Alarms
- Thermostats
- Tires

- Lamp and Lighting Equipment
- Large Appliances
- Paint Aerosols
- Paints
- Pesticides (Domestic)
- Used Oil and Antifreeze

The RDN has actively encouraged the Province and product manufacturers to undertake new product stewardship initiatives and continues to promote the expansion of stewardship programs.

6.9 Regulatory Authorities

The RDN incorporated authority into the existing 2004 Plan for waste stream licensing. RDN Waste Stream Management Licencing Bylaw No. 1386 requires solid waste management facilities operating in the RDN to obtain and to maintain a Waste Stream Management License (WSML). The authority to license and regulate solid waste facilities is given to regional districts through BC’s Environmental Management Act. The RDN’s licensing bylaw was enacted in 2004 pursuant to the 2004 Plan.



The Bylaw No. 1386 was adopted to fulfill the following objectives:

1. Create a high standard of operation for waste management facilities located in the RDN;
2. Encourage legitimate waste management operations within the RDN;
3. Establish a reporting system for the flow of waste materials within the RDN to assist in tracking our waste reduction rate;
4. Protect and enhance the waste reduction rate achieved in the RDN; and
5. Provide a level playing field for industry.

All facilities that handle MSW in whole or part are included in the licensing system, with the exception of those facilities noted under “exclusions” below. This means transfer stations, recycling collection facilities, composting facilities, material recovery facilities and brokers are subject to the licensing system. Facilities excluded from obtaining a license are:

- Disposal facilities such as the Regional Landfill and incinerators (these facilities will remain under the regulatory jurisdiction of the Province);
- Soil manufacturing facilities (unless they are composting MSW-based materials on-site);
- Private on-site collection facilities (such as the centralized recycling areas used by office buildings and mall tenants);

- Stewardship program collection facilities;
- Reuse businesses;
- Concrete and asphalt recycling operations and auto wreckers since the material handled by these operations has not traditionally been handled as MSW; and
- Municipally owned facilities, including the CRTS.

This Plan expands the “exclusion” to also apply to facilities operating under a Ministry of Environment Permit or Operational Certificate. This additional “exclusion” is consistent with the intent of the previous SWMP to avoid duplication in regulation by both the Province and Regional District.

As of May 2018, there are 14 WSMLs in place in the RDN. As Nanaimo Organic Waste Ltd. has been issued an Operational Certificate from the Ministry of Environment to regulate their operations and ensure an adequate level of environmental protection, they will no longer be subject to a WSML under this approved Plan.

6.10 Disposal Bans

The practice of banning the disposal of specific wastes from the landfill, when viable recycling alternatives are in place, has been used by the RDN since 1991. Current Regional Landfill bans on recyclable and compostable materials include:



- Gypsum (implemented in 1991);
- Cardboard (1992);
- Paper, metal and tires (1998);
- Commercial food waste (2005);
- Wood waste and yard and garden waste (2007);
- EPR materials designated under BC’s recycling regulation (2007); and
- Household plastic, metal food and beverage containers (2009).

Disposal bans are considered to be a critical policy mechanism to drive diversion activities, particularly in the ICI and CD sectors.

6.11 Illegal Dumping

Illegal dumping on private and public lands has been a long-standing concern in the RDN. In 2017, over 35 tonnes of illegally dumped material were removed through clean-up initiatives and disposed of appropriately.



Although it represents less than 1% of the total solid waste generated in the region, illegally dumped material can have serious effects on the environment, wildlife habitats and the ability of others to use and enjoy outdoor recreational areas.

The RDN has implemented an Anti-Illegal Dumping program that includes:

- Prevention of illegal dumping through education;
- Funding the clean-up of illegal dump sites; and
- Illegal dumping surveillance and enforcement activities.

The RDN spends approximately \$60,000 annually combating illegal dumping. Pursuant to RDN Bylaw No. 1386, those who generate (own), deliver or abandon waste illegally can be subject to a fine of up to \$200,000. The RDN also provides funding for four non-profit charity organizations to assist in the cost of hauling and tipping fees for illegal dumping at their operations at a cost of approximately \$76,000 annually.

6.12 Construction and Demolition (CD) Waste

CD projects generate a wide range of materials most of which are reusable or recyclable. These include concrete, asphalt, wood, gypsum wallboard, metal, cardboard, asphalt roofing and plastic.

The RDN promotes diversion of these materials through disposal bans on cardboard, gypsum (drywall), metal and wood, and high tipping fees on loads of CD waste arriving at the Regional Landfill (loads of CD waste cannot be delivered to the CRTS). However, there are examples of where the high tipping fees have failed to result in diversion with the material hauled out of region for disposal. Examples of these are the 2015 City of Nanaimo Ferry Dock Demolition where 476 tonnes of wood waste was disposed of at a private landfill in the Capital Regional District, and the 2015 Wellington School Demolition where approximately 250 tonnes of demolition waste was disposed of at a private landfill in Chilliwack. In the latter example, the

contractor advised that disposal costs were less than half of the cost of RDN disposal at the Regional Landfill and they were not required to source separate recyclables.

There are several facilities in the RDN that accept source-separated discarded CD materials for recycling, as listed in Table 4.

Table 4 Construction & Demolition Waste Management Operations in the RDN

Material	Facility Name
Asphalt	<ul style="list-style-type: none"> • Haylock Bros. Paving • Hub City Paving • DBL Disposal
Asphalt Shingles	<ul style="list-style-type: none"> • Pacific Coast Waste Management • Alpine Disposal and Recycling • DBL Disposal
Concrete	<ul style="list-style-type: none"> • DBL Disposal • DBL Recycling • Hub City Paving • Haylock Bros. Paving • Alpine Disposal and Recycling • Pacific Coast Waste Management • Parksville Heavy Equipment
Metal	<ul style="list-style-type: none"> • ABC Recycling • Alpine Disposal & Recycling • Annex Auto • Carl’s Metal Salvage • DBL Disposal • DBL Recycling • Parksville Bottle and Recycling depot • Regional Recycling – Nanaimo • Regional Recycling - South • Schnitzer Steel
Wood (lumber)	<ul style="list-style-type: none"> • Alpine Disposal & Recycling • DBL Disposal • DBL Recycling • Gabriola Island Recycling Organization • Pacific Coast Waste Management

It is believed a significant portion of CD waste is recycled or used as a fuel substitute, including the following processes:

- Wood waste is chipped and used as hog fuel at pulp mills on Vancouver Island and Washington State;
- Drywall (gypsum) is recycled;
- Metal is recycled;

- Concrete and asphalt are recycled; and
- Asphalt shingles are recycled on a limited basis.

There is also significant reuse of building materials and fixtures through salvage operations and retail stores such as Demxx and Habitat for Humanity's ReStore.

6.13 Multi-Family Waste

There are approximately 13,430 multi-family residential units in the RDN, of which approximately 12,000 units are located in the City of Nanaimo.¹² Collection services to multi-family buildings are privately managed throughout the RDN, including the City of Nanaimo. Each building is responsible for hiring their own collection services for garbage and recycling.

In 2008, the RDN implemented a Multi-Family Diversion Strategy aimed at increasing the level of recycling activities available to multi-family residents living in townhouses, mobile homes, apartments and condominiums. At the time, RDN staff estimated 75% of multi-family buildings had recycling services on-site, primarily for cardboard and paper collection only. In 2012, the service levels were found to have significantly improved since 2008, with 94% of multi-family buildings reporting they had recycling services for cardboard, paper and plastic containers. The primary mechanism by which the RDN encourages recycling in multi-family buildings is through landfill bans that prohibit the landfilling of residential recyclables such as household plastic containers, recyclable paper, cardboard and metal.

Since garbage and recyclables generated at multi-family buildings are generally collected by trucks servicing businesses and institutions, no data is available on the specific quantities disposed or recycled by the multi-family sector. Research done in other jurisdictions indicates recycling rates in multi-family dwellings are typically much lower than those associated with single-family recycling programs. For example, Metro Vancouver reports that only 16% of waste from multi-family dwellings is recycled, and the City of Toronto reports an 18% recycling rate.¹³

¹² Sharon Horsburgh (RDN Staff Report), "Multi-Family Housing Diversion Strategy Progress Report," February 2, 2012.

¹³ Metro Vancouver, "Multi-Family Waste Summary," April 19, 2010, <http://www.metrovancouver.org/region/dialogues/Reports%20and%20Issue%20Summary%20Notes/Multi-FamilyWaste-NS-Summary20110419.pdf>.

¹⁴ Comparatively, single-family homes in the RDN recycle 30% of their discards through the curbside recycling program (not including kitchen scraps collection).

During the RDN's 2012 waste composition study, a load of garbage from multi-family buildings was sampled to provide a rough estimate of the composition of the waste being discarded by multi-family buildings. The composition data suggests that the majority of waste disposed as garbage in multi-family buildings is recyclable (26%) or compostable (44%).

Challenges to achieving a high degree of source separation in the multi-family sector include inconvenience, cost, available space for separation and often a lack of a site champion to promote diversion.

RDN multi-family residences are serviced by private haulers. The service is typically provided in conjunction with, and using the same equipment as used to serve the ICI sector.

6.14 Industrial, Commercial and Institutional (ICI) Waste

The RDN encourages recycling by the ICI sector through variable tipping fees and landfill bans which prohibit the landfilling of recyclables, food waste and yard waste. An assessment of the garbage disposed by the ICI sector was done as part of the RDN's 2012 waste composition study. The data estimates approximately 42% of the garbage disposed is compostable, including food scraps (28%), yard waste (8%) and compostable paper products (6%). An estimated 16% is considered recyclable and consists primarily of paper and cardboard (12%) with metal, pallet wrap and gypsum making up the remainder of the recyclable portion of the ICI garbage.

6.15 Household Hazardous Waste

Household Hazardous Waste (HHW) is managed, to a large extent, through BC product stewardship programs which have set up collection programs for the majority of household hazardous waste products, such as paint, pesticides, solvents, and used motor oil.

¹⁴ City of Toronto, "Excess Garbage, Recycling & Organics," last accessed April 6, 2018, <http://www.toronto.ca/garbage/pdf/2010-graph.pdf>.

The RDN will continue to promote the use of existing Provincial product stewardship programs for the disposal of household hazardous wastes. Additionally, the RDN will encourage new product stewardship programs for other hazardous components of the MSW stream.

6.16 Advocacy

The RDN continues to advocate for greater waste diversion in the region by engaging with federal, provincial and local government agencies, as well as BC product stewardship groups. The costs and responsibilities of waste management have historically been borne by local governments and taxpayers. This is currently shifting; British Columbia is a national leader in having industry arrange for the collection and recycling of designated products and packaging. The responsibility for the costs and risk to manage the life cycle of products should progressively transfer to the manufacturers of goods, and the consumers who use them, to provide the appropriate market mechanism to encourage more sustainable manufacturing and consumer choices.

The RDN's advocacy role may include:

- Petition the Provincial and Federal Governments to act on matters outside local jurisdiction in an effort to minimize waste.
 - Petition senior governments on an on-going basis, and in a variety of ways, including writing letters, arranging meetings at a senior staff and political level, and alerting the media.
 - Consider partnerships with other organizations for joint advocacy initiatives.
- Encourage, demonstrate and advocate for consumers and producers to move towards a closed loop (cradle to cradle) system.
 - Educate the public on the Zero Waste Hierarchy.
 - Support and promote local reuse and repair programs.
 - Demonstrate how to build a closed loop system.
 - Advocate for producers to ensure their products' and packaging life cycle is consistent with the Zero Waste Hierarchy.
- Petition the Provincial and Federal Governments for the expansion and/or addition of EPR programs.
 - Petition senior governments and other related influential organizations, including the Union of BC Municipalities, Federation of Canadian Municipalities and the Local Government Management Association, on an on-going basis, and in a variety of ways including writing letters, arranging meetings at a senior staff and political level, and alerting the media.

- Insist that new EPR programs must meet or exceed current recycling collection programs and offer consistency of services.
- Collaborate with the BC Product Stewardship Council, EPR Stewards, the Canadian Council of Ministers of the Environment and the Recycling Council of BC.
- Partner with neighbouring regional districts and other organizations to ensure a broader, more unified message is expressed when shared concerns are brought forward.

7 Zero Waste Strategy

In 2002, the RDN committed to Zero Waste as its long-term waste reduction and diversion target through the introduction of the Zero Waste Strategy. Zero Waste focuses on reducing the region’s environmental footprint by minimizing the amount of waste that must be landfilled through reduction, reuse, recycling, redesign, composting, and other actions. The RDN was the first jurisdiction on Vancouver Island and one of several forward looking local governments in Canada and around the world to move beyond recycling and adopt a Zero Waste approach to eliminating waste.

In support of the RDN’s Zero Waste goal, the RDN Regional Growth Strategy (adopted November 2011) states the RDN will:

- Pursue an approach to solid waste management that focuses on waste reduction, with the ultimate goal of eliminating the need for waste disposal (i.e. a “Zero Waste” approach); and
- Ensure all new high density developments are designed to support full recycling to include food waste collection and materials prohibited from entering the RDN landfill.

The RDN and its member municipalities, residents and businesses have led the way in innovative approaches to reducing the amount of garbage that must be landfilled. In 1991, the RDN introduced Canada’s first user pay residential garbage collection system. Since then, the RDN and its partners have expanded curbside recycling programs, banned paper, metal, commercial food waste, clean wood waste and other recyclable materials from the landfill, and successfully promoted composting throughout the region.

The Zero Waste Strategy (previously called the Zero Waste Plan) outlines how the RDN plans to continue reducing the quantity of waste disposed.

The Zero Waste Strategy was developed by undertaking the following steps:

1. Reviewing the existing Zero Waste Strategy to identify what elements should be retained and carried forward to become part of the updated Zero Waste Strategy;
2. Identify new waste reduction opportunities by:
 - a. Reviewing waste diversion initiatives undertaken in other North American jurisdictions considered “leading edge”;
 - b. Interviewing waste management coordinators in BC and across Canada; and
 - c. Brainstorming RDN-unique ideas.
3. Develop a menu of options for possible inclusion in the Zero Waste Strategy using initiatives identified in the first two steps;
4. Present the menu of possible options to the Regional Solid Waste Advisory Committee (RSWAC) to obtain their feedback; and
5. Develop a draft Plan based upon RSWAC’s and staff input.

The Zero Waste Strategy is organized into two sections:

- **Ongoing Programs** – programs that were part of the 2004 Zero Waste Plan, were implemented and continue to operate, including programs identified in the annual budget for 2017;
- **New Programs** – programs with new diversion potential will be implemented in 2018 to 2021 upon adoption of this Plan.

7.1 Ongoing Programs 2017

7.1.1 School Education Program

The School Education Program currently contracts out the design and delivery of a primary school program with a focus on the concept of zero waste.

7.1.2 Illegal Dumping Program

The Illegal Dumping Program includes surveillance and enforcement activities as well as on-going clean-up of illegal dumping sites and free disposal (tipping fees are waived) for community clean-up events.

The RDN currently waives landfill tipping fees for waste received from a few select charitable organizations operating in the RDN. Although there is definite support for this program, there could be a future redistribution of funding.

7.1.3 Disposal Bans

The practice of banning the disposal of specific wastes from the landfill, when viable recycling alternatives are in place, has been used by the RDN since 1991. Current landfill bans on recyclable and compostable materials include gypsum, cardboard, paper, metal and tires, commercial food waste, yard and garden waste, wood waste and EPR materials designated under BC's recycling regulation, household plastic containers and metal food and beverage containers. Disposal bans are considered to be a critical policy mechanism to drive diversion activities, particularly in the ICI and CD sectors.

7.1.4 Zero Waste Promotion

The Zero Waste Promotion and Education program contains the following elements:



- Enhances current zero waste information initiatives including the website, newsletters and participation in community events.
- Supports and promotes use of communication tools to assist residents in accessing locations to take recyclable or reusable goods. Examples include the RDN Curbside “What Goes Where” feature, Zero Waste Business Tool kit and the RDN and City of Nanaimo Organic Waste in Multi-Family Buildings Guide.

7.1.5 Recycling at RDN Facilities

As a convenience, the RDN provides the opportunity for self-haul customers to recycle several different type of items. As of the preparation of this Plan, these items include appliances, propane tanks, scrap metal, gypsum (at CRTS), cardboard, paper, glass, and metal and plastic food and beverage containers. Self-haul and commercial customers can also drop off food waste and yard waste.

7.1.6 Waste Stream Management Licensing (WSML)

To support the maintenance of the Waste Stream Management Licensing Bylaw the RDN processes new applications, reviews site specific operating plans, monitors reporting and inspects existing licensed waste management facilities.

7.1.7 Residential Curbside Garbage and Recycling Collection

The RDN provides single family residential curbside garbage, recycling and food waste collection. As per Bylaw No.1591, a single family dwelling unit means a single family detached dwelling and each Dwelling Unit of a duplex, triplex or quadruplex and a Manufactured Home not situated in a Manufactured Home park. Key elements of the program are:

- Provide service to approximately 28,445 single family dwellings in all Electoral Areas, City of Parksville, District of Lantzville and the Town of Qualicum Beach;
- Contracted collection of materials suitable for recycling as part of the Recycle BC program;
- Biweekly collection of garbage with strict can limits; and
- Weekly collection of food waste.

7.1.8 Food Waste and Yard Waste Collection at RDN Facilities

To ensure on going opportunity to dispose of food waste and yard waste, the RDN accepts source-separated yard waste, food waste at the CRTS and Regional Landfill (yard waste only). This material is transferred to a private composting facility for processing.

7.1.9 Advocacy

The RDN continues to advocate for greater waste diversion in the region by engaging with federal, provincial and local government agencies as well as BC stewardship groups. The costs and responsibilities of waste management have historically been borne by local governments and taxpayers. The responsibility for the costs and risk to manage end-of-life products should progressively transfer to the manufacturers of goods and the consumers that use them to provide the appropriate market mechanism to encourage more sustainable manufacturing and consumer choices.

Costs associated with the RDN's current activities regarding advocacy are difficult to determine given the broad range of activities carried out by political and staff representatives. These range from support for organizations such as the BC Product Stewardship Council, active participation in organizations such as the Coast Waste Management Association, to engaging with the Province on policy and regulation development. The continued role of advocacy is a priority and will remain variable depending on the level of participation and costs related to the engagement opportunities (e.g. association dues, travel expenses).

7.1.10 RDN Purchasing Policy

The development and implementation of an RDN Purchasing Policy was budgeted for in the 2004 Plan. However, it was not completed during the term of the Plan.

Using existing municipal models, the RDN intends to develop an internal purchasing policy to ensure that the environmental impact of purchases and operations are minimized. Environmental purchasing policies developed by other municipalities, such as the City of Richmond, will be used as a template.

An RDN Purchasing Policy will have a minimal waste diversion impact; however, it demonstrates leadership and is consistent with the RDN Board's strategic goals.

7.2 New Programs 2018-2021

The future solid waste system will build on the existing framework of services and programs while seeking to improve the delivery of those services and continue to reduce the quantity of waste sent to disposal. The new programs, described below, will be essential in helping the RDN reach the target of 90% waste diversion.

7.2.1 Expanded Zero Waste Education

The RDN and the City of Nanaimo produce most of the solid waste management promotion and education materials provided in the Regional District. The objectives of the Expanded Zero Waste Education Program are to:

- Increase waste diversion;
- Educate all generators about the solid waste management priorities of the Regional District;
- Promote participation in waste diversion programs;
- Promote the Zero Waste concept;
- Encourage proper participation in garbage and recycling collection programs; and
- Encourage compliance with Regional District material bans.



Education activities include: staffing at public events and speaking engagements, mall displays, articles in the RDN newsletter "Perspectives", the RDN "Zero Waste" newsletter, a Zero Waste school education program, garbage and recycling program brochure (for RDN contract areas), brochures for various waste diversion programs (backyard composting, grasscycling, disposal

bans, etc.), and a web site featuring a recycling database, the RDN Get Involved webpage, and the Zero Waste tool kit and program information.

A greater emphasis is proposed to be targeted at adult audiences through traditional and social media, as well as being more active in a variety of public events.

7.2.2 Expanded Industrial, Commercial and Institutional (ICI) Waste Management

The RDN encourages recycling by the ICI sector through variable tipping fees and landfill bans which prohibit the landfilling of recyclables, food waste and yard waste.



An assessment of the garbage disposed by the ICI sector was done as part of the RDN’s 2012 waste composition study. The data estimates approximately 42% of the garbage disposed is compostable, including food scraps (28%), yard waste (8%) and compostable paper products (6%). An estimated 16% is considered recyclable and consists primarily of paper and cardboard (12%) with metal, pallet wrap and gypsum making up the remainder of the recyclable portion of the ICI garbage.

To increase diversion from the ICI and multi-family sectors, there are three paths available to the RDN:

1. Continue with, and increase education and awareness;
2. Increase enforcement of current disposal bans at the Regional Landfill and CRTS; or,
3. Incentivize the industry to achieve higher levels of diversion.

Education alone is not expected to make any measurable change to current diversion practices in this sector. A combination of education and enforcement of current disposal bans is expected to result in a measurable increase in diversion but also contribute to export of waste where there is less rigour in enforcement and/or resulting in an increase in cost without increased diversion as “fines” are just absorbed as a cost of doing business. There is opportunity to build in incentives, as discussed in the following section (Introduction of New Solid Waste Regulation). A combination of education, enforcement of landfill bans and incentives through new regulation has the highest waste diversion potential.

7.2.3 Introduction of New Solid Waste Regulations

The requirement and authority for a Solid Waste Management Plan is set out in the *Environmental Management Act*. The approval of a Waste Management Plan, can authorize regional districts to use additional regulatory tools to manage municipal solid waste within their boundaries.

Following the approval of the Plan by the Minister of Environment, the RDN intends to undertake further review to determine the viability of implementing regulations relating to Mandatory Waste Source Separation and Waste Hauler Licensing, as detailed in subsections 7.2.3.1 and 7.2.3.2. The processes for regulatory development and implementation is discussed in subsection 7.2.3.3.

Once the Province approves the Plan, further review and consultation is necessary to develop the authorities more fully, determine costs and undertake consultations with potentially affected stakeholders in accordance with section 27(1) of the Act. One or more bylaws will be needed to implement these regulations and these will require approval of the Minister of Environment prior to adoption of the proposed programs.

7.2.3.1 Mandatory Waste Source Separation

Waste source separation regulation provides Regional Districts the ability to regulate waste generators such as the mandatory separation of the waste stream (e.g. refuse, recyclables, and organics).

Currently, three local governments are considering or have already implemented this type of regulation.

- The Comox Valley Regional District Solid Waste Management Plan proposes to require mandatory recycling of the ICI sector. For example, their plans require all ICI buildings to implement a recycling collection service by a defined date. Their Plan was approved by the Minister of Environment in 2013.
- The District of Squamish is considering requirements for waste source separation, maximum contamination levels in each waste stream, and the use of clear bags for garbage.
- The City of Vancouver's Green Demolition Bylaw requires 75% recycling of materials on demolition of pre-1940 homes, and 90% on pre-1940 character homes.

Regional districts do not have the authority to introduce a regulation similar to the City of Vancouver's Green Demolition Bylaw, nor can the Province grant approval through the current

Solid Waste Management Plan system. Therefore, the RDN proposes to proceed sequentially through the two following options:

1. Request that the Province enact a regulation to grant the RDN region-wide the authority by way of a regulation for waste source separation. Although this would be done outside of the Plan approval, the Plan would provide the basis for the RDN's request. Granting of such authority would put the RDN on similar footing to that of other local governments (e.g. City of Vancouver).
2. Failing the Province's approval of the above, the RDN proposes to draft a template Bylaw that could be adopted by member municipalities of the RDN as the powers of municipalities are somewhat more extensive. The downside of this approach is that not all member municipalities may choose to participate, and as a result, there would be different solid waste requirements throughout the RDN. Even if all the member municipalities choose to participate, such regulations would not apply to the Electoral Areas of the RDN. Therefore, Option 1 is the preferred approach.

Waste source separation regulation will help ensure recyclables and compostables do not end up being landfilled. This proposed regulation would require businesses, institutions, and multi-family residences to have provisions for separated refuse, recyclables and organic waste. The requirement would apply to generators choosing to contract a waste hauler to collect their waste or to those choosing to self-haul their waste for disposal and recycling. The concept is to require that generators have a provision for three stream waste separation or they hire a service provider for this service. The RDN does not contemplate enforcing the actual use of the three stream service. Instead, it is expected to operate much like the residential curbside collection service provided by the RDN and the City of Nanaimo where participants are encouraged to participate in source separation. There is a very high level of participation in the residential three stream curbside service, and the RDN believes this is due in part that if people are paying for the service regardless, they are more likely to use it.

Should the RDN be granted this authority, consideration will also be given to the option of a post-collection sorting service being included as an alternative to source separation. This Plan has been developed on the basis of promoting source separation as a means of achieving the highest value recyclables to encourage the highest and best use of the materials. However, technological advances and customer convenience are considerations that must be considered in advancing new programs. Consultation with the community and industry in developing mandatory source separation regulation will consider post-collection sorting. A Bylaw that allows post-collection sorting as an option to source separation would likely provide incentive for the development of an industry funded multi-material recovery facility.

7.2.3.2 Waste Hauler Licensing

The RDN wishes to consider implementation of a regulatory scheme for the licensing of waste haulers. The licensing would apply to any business



transporting another parties' waste for profit where the waste originates within the RDN. The intent is to promote the “business of diversion” and foster industry innovation to achieve the lowest system cost with the highest waste diversion.

The traditional waste management economic model favours waste industry behaviour to seek the lowest disposal cost. With cost being the primary consideration, typically, the decision to divert waste and recycle must be cost competitive with disposal. To make diversion more cost competitive, waste disposal costs can be increased. Typically, communities with high waste disposal costs also have high waste diversion. The upward threshold that can be applied to disposal costs to drive diversion essentially equals the cost of lower cost disposal options in other jurisdictions. Businesses can usually be expected to opt for the lowest cost option (i.e. the cheaper of diversion or disposal).

Licensing waste haulers provides the ability for the RDN to change the existing financial model to one where the waste industry is more profitable if they divert waste rather than dispose of it. The Waste Hauler Licensing regime is proposed to have the following elements:

1. Licensed haulers will be required to pay a disposal charge to the RDN in the form of a levy for any waste collected and disposed of by landfilling or incineration at any facility within or outside the RDN. The levy will not apply to any waste that is diverted or recycled. The basis for this levy is:
 - a. To provide a direct incentive for waste services aimed to encourage source separation by customers, or extracts recyclable material from the waste stream (e.g. materials recovery facility); and,
 - b. To dis-incentivize generators of waste who opt to dispose of their waste out of the RDN to avoid paying their portion of solid waste services costs that would otherwise be collected through tipping fees. Introduction of the levy ensures all waste generators in the region pay their fair share of the solid waste management costs.
2. Licensed Haulers will receive a discounted tipping fee at the Regional Landfill and CRTS. The combined disposal levy and discounted tipping fee will be less than the tipping fee applied to all non-licensed customers. This fee differential, which favours the Licensed

Haulers, will be set at a rate aimed to encourage the flow of waste to industry before it is brought to RDN disposal facilities.

3. Licensed Haulers will be required to track waste disposal and diversion quantities, as well as submit records and remit the disposal levy. Licensed Haulers will also be subject to auditing at the request of the RDN.
4. Licensed Haulers will be required to submit an annual licensing fee along with proof of a business license and insurance. The licensing fee will be set at an amount that is not a barrier to licensing but only encourages waste haulers in participating in the program.

The licensing is intended to encourage the flow of waste through the waste industry and incentivize waste industry efforts to divert and recycle waste. Even though industry disposal costs go down as result of the fee differential, industry is more profitable if they engage in diversion rather than seek out low cost disposal. The expected outcome of this model is growth in the waste industry around waste diversion. As the waste industry grows, more and better services are provided, which in turn, provides more convenience to the community. Furthermore, as there is more competition for waste materials, the costs of services fall.

In addition, licensing haulers will allow the RDN to set requirements on the services the haulers provide. For example, the RDN could require all Licensed Haulers provide a three stream waste service to their customers (i.e. garbage, organics and recycling). Licensed Haulers would help ensure every business or multi-family building has a recycling and organics program. This is very similar to the Mandatory Waste Source Separation regulation discussed previously with the exception that anyone not using a third party waste disposal service would not be subject to this requirement.

7.2.3.3 Regulatory Development and Implementation Process

The Mandatory Waste Source Separation and Waste Hauler Licensing programs will be further developed following the approval of the Plan. Further review and consultation is necessary to develop the authorities more fully, determine costs and harmonize the strategy with potentially affected stakeholders. The RDN is requesting the Province grant additional authorities through the adoption of this Plan. One or more bylaws will be needed to enact these authorities, and will require approval of the Minister of Environment.

Following the approval of the Plan, the Plan Monitoring Advisory Committee (PMAC) will further participate in developing the framework for the Mandatory Waste Source Separation and Waste Hauler Licensing programs. The two programs and correlated bylaws will likely be done simultaneously, as proposed in the Plan Implementation Schedule in Section 10.1. The

development of the programs is likely to occur in multiple stages, and will include necessary consultation with authorities (i.e. the Ministry of Environment) and stakeholders.

A dataset will be compiled of stakeholders who may be directly affected by the new regulations. The stakeholders will be contacted to partake in the consultation process. A comprehensive consultation process will be facilitated, and may include meetings, presentations, surveys or open houses. Stakeholder feedback will be recorded, assessed, and incorporated into the programs and bylaws, as is appropriate.

The breakdown for the overall projected program costs can be found in Section 7.3, and the plan financing options are described in Section 10.2 and 10.3.

Along with best-standards procedures, the bylaws will be written to “avoid uncertainty and any potential for arbitrary decision-making.”¹⁵ The concepts for these bylaws are further described in Section 9.3.

Program implementation will commence once the Mandatory Waste Source Separation and Waste Hauler Licensing programs have been comprehensively developed and the correlated bylaws have been approved. Once implemented, the PMAC will participate in the continued monitoring and evaluation of the new programs and bylaws. This monitoring and evaluating process is further discussed in Section 10.6.

7.2.3.4 Hypothetical Outcomes of New Solid Waste Regulations

While it is impossible to predict the exact outcomes of the new solid waste regulations, hypothetical outcomes are illustrated below:

- **Mandatory Waste Source Separation**
 - This program is not intended to result in RDN-provided collection service for ICI and multi-family buildings. The program should continue the current competitive system of private waste haulers providing service to ICI and multi-family buildings.
 - The program is envisioned for source separation with the familiar three-stream sorting system (i.e. landfill, recycling and organics). However, in developing the

¹⁵ UBCM, “Fact Sheet #6: Bylaws”, 2014

regulation, consideration will be given to allowing post-collection sorting as an alternative. Such provisions may provide incentive for a private sector developed MRF.

- Mandatory Waste Source Separation is synergistic with the Waste Hauler Licensing program to promote high levels of waste diversion.
- The onus of the regulation will be on the waste generator, not the hauler.
- The RDN does not contemplate enforcement of the actual use of three stream containers (e.g. garbage police) only the provisions of having multiple containers. The premise is that if generators have multi waste stream separation options, they will use it.
- The participation in the use of the multi stream separation will be promoted through education and communication programs.
- The program is intended to favour recycling and remove the low cost disposal option of a single waste container.
- **Waste Hauler Licensing Criteria**
 - Anyone that collects waste for profit within the RDN would need a license.
 - Conditions of license would likely be:
 - Having valid ICBC insurance;
 - Monthly reporting of waste sent for disposal;
 - RDN's right to compel auditing of records of waste sent for disposal; and
 - Reduced landfill tipping fee and remission of a disposal levy for waste sent for disposal to a facility within or outside of the RDN.
 - The Licensing is not intended to be exclusive; anyone that meets the conditions for licensing would be granted a license and there is no "decision" process.
 - An annual renewal process with remittance of a licensing fee; and
 - The annual fee would need to be set at a value that is not so high to discourage participants but also not so low as it is ineffective in encouraging the flow of waste to the industry to fully realize the waste diversion potential.
- **Disposal Levy and Reduced Tipping Fees**
 - The intent is to encourage efforts around diversion in place of seeking out low cost disposal.
 - The intent is to development an economic model that grows the waste industry and promotes innovation around diversion. The model anticipates better future options and convenience for those that generate waste.
 - Licensed Hauler would receive a preferred discounted tipping fee at RDN facilities.

- Licensed Haulers would be assessed a Disposal Levy on waste disposed/sent for landfilling in or out of region. The Disposal Levy would not apply to recycled materials.
- The Disposal Levy is intended to offset RDN fixed costs for solid waste services programs which is currently not received from waste generated in the RDN that is shipped outside of region for disposal. In consideration of the “user pay” principal, all waste generators in the region should share in these costs. The net disposal cost for Licensed Haulers disposing of waste in region (i.e. preferred discounted tipping fee + disposal levy) will be less than the base tipping fee applied to other parties delivering waste to RDN facilities.

7.2.4 Expanded Construction and Demolition (CD) Waste Management

CD generates a wide range of materials most of which are reusable or recyclable such as concrete, asphalt, wood, gypsum wallboard, metal, cardboard, asphalt roofing, and plastic.



The RDN promotes diversion of these materials through disposal bans on cardboard, gypsum, metal and wood, and high tipping fees on loads of CD waste arriving at the Regional Landfill (loads of CD waste cannot be delivered to the CRTS). However, there are examples of where the high tipping fees have failed to result in diversion with the material hauled out of region for disposal.

The RDN will improve and reintroduce education and communications regarding CD waste in the region and increase enforcement of current disposal bans.

There is also opportunity to build in incentives, as discussed in the previous section (Introduction of New Solid Waste Regulation). A combination of education, enforcement of landfill bans and incentives through new regulation has the highest waste diversion potential.

7.2.5 Household Hazardous Waste

Household hazardous waste is managed, to a large extent, through BC product stewardship programs which have set up



collection programs for the majority of household hazardous waste products such as paint, pesticides, solvents, and used motor oil. The RDN will explore options for further expansion of collection of non-stewarded residential household hazardous waste, which may include hosting drop-off events or contracting with a service provider to accept the materials.

7.2.6 Zero Waste Recycling

The 2012 waste composition study, indicated there are still a number of waste types that can be recycled; however, they are not part of a stewardship program or there are no established commercial markets, and these materials end up in the residual waste stream. The RDN proposes to promote Zero Waste by making funding available to target these materials with the objectives of:

1. Maximizing waste diversion;
2. Encouraging non-profit and private sector innovation to develop markets and processes; and
3. Improving convenience for recycling materials.

The RDN will target recycling of specific materials or processes that do not have local commercial markets. The RDN will provide funding to the Nanaimo Recycling Exchange (NRE) to act as a research and recycling hub for recycling items currently not commercially marketable. Research and recycling hub activities would include developing methods, markets and collaborations for items not easily recyclable, investigating barriers to recycling these items, and developing recycling programs that would ultimately benefit the RDN as a whole. Funding for the research and recycling hub activities is proposed to be set at \$300,000 annually over a 5 year period.



Making it Happen

7.3 Zero Waste Strategy Summary of Costs

Table 5 contains a breakdown of the current budget for 2017 ongoing Zero Waste programs and cost estimates for new Zero Waste programs based on the full implementation costs in 2020. All costs are presented in 2017 dollars and rounded to the nearest \$1,000.

Table 5 Summary of Costs Estimates for Zero Waste Strategy

Ongoing Zero Waste Programs	Budget
School Education Program	\$30,000
Illegal Dumping Program	\$25,000
Charitable Organizations Tipping and/or Hauling Fees	\$76,000
Disposal Bans	N/A
Zero Waste Promotion	\$77,000
Recycling at RDN Facilities	\$161,000
Waste Stream Management Licensing Technical Assistance	\$10,000
Residential Curbside Garbage, Recycling, and Green Bin Collection	\$4,623,000
Food Waste and Yard Waste Collection at RDN Facilities	\$1,165,000
NRE for hauling and tipping fees of source-separated yard waste	\$269,000
Advocacy	\$20,000
Administration	\$66,000
Professional Fees	\$90,000
Building Ops	\$27,000
Vehicle & Equipment Ops	\$23,000
Operating Costs	\$227,000
Wages & Benefits	\$466,000
Contribution to Reserve Fund	\$69,000
Total	\$7,424,000

New Zero Waste Programs	Budget
Expanded Zero Waste Education	\$40,000
Household Hazardous Waste	\$100,000
Expanded Industrial, Commercial and Institutional (ICI) Waste Management Diversion	
Increased education of existing landfill bans and a relaunch of Commercial Organics Diversion Strategy and Multi-Family Diversion Strategy	\$100,000
Increased enforcement of existing landfill bans targeted at the ICI sector	\$100,000
Expanded Construction and Demolition (CD) Waste Diversion	
Improve and reintroduce education and communication regarding CD waste in the region	\$20,000
Enhanced enforcement of landfill bans related to CD materials	\$20,000
Waste Haulers Licensing¹⁶	\$469,000
Mandatory Waste Source Separation	\$373,000
Zero Waste Recycling	\$300,000
Total	\$1,538,000

¹⁶ Based on Full Implementation in 2020.

7.3.1 Diversion Potential

While many of the programs listed in the Zero Waste Strategy do not contribute directly to diversion, they are believed to be essential to supporting existing and planned Zero Waste initiatives and without them the diversion potential of the other programs could not be realized. Upon full implementation, the RDN could achieve an overall diversion rate of 90% as shown in Table 6.

Table 6 Zero Waste Strategy New Diversion Potential

New Programs	Diversion Potential (%)
Expanded Zero Waste Education	Not quantifiable
Household Hazardous Waste	<1%
Expanded ICI Waste Management Diversion	3%
Expanded CD Waste Diversion	3%
Waste Haulers Licensing	10%
Mandatory Waste Source Separation	
Zero Waste Recycling	1%
New Diversion (based on 2016 baseline)	17%
Total Cumulative Diversion (based on 2016 baseline of 68%)	90%



8 Residual Management

The Regional Landfill has capacity until 2040 based on current landfilling rates. Depending on the speed and success of further diversion initiatives, the life of the landfill could be extended for an additional 10 to 15 years. The long term goal of the RDN is Zero Waste. Nevertheless, the RDN recognizes that there will be some necessary landfilling capacity for the foreseeable

future. During the time frame of this Plan, technologies will be advanced and the economic viability of residual waste processing and disposal may change. The RDN will continue to review and consider alternative technologies that are consistent with the Zero Waste Hierarchy and goal.

Discussions with adjacent regional districts to identify potential cooperative strategies for waste management system improvements have been on-going for a number of years and will continue. The RDN is currently a partner in the Association of Vancouver Island Coastal Communities (AVICC) that is actively looking into cooperative strategies for managing solid waste across regional district boundaries. Future options for residual management could include collaboration with other local governments, siting a landfill and/or considering export on or off the island.

8.1 Disposal

The disposal system involves:

- Continued use of the CRTS to service the northern portion of the RDN;
- Transfer of waste received at CRTS to the Regional Landfill; and
- Continued use of the Regional Landfill to service the southern portion of the RDN.

This system includes all of the necessary elements to effectively manage the RDN's MSW for the next 10 years. Additional MSW facilities are not required.

8.2 Church Road Transfer Station

CRTS will continue to receive MSW generated in the northern municipalities of Parksville, Qualicum Beach and Lantzville, and Electoral Areas E, F, G and H. Special wastes such as contaminated soil and asbestos cannot be delivered to CRTS and must be delivered directly to the Regional Landfill.

All waste received at the CRTS, with the exception of recyclables and yard waste, will be transferred to the Regional Landfill. Recyclables and yard waste will be picked up and recycled or composted by contractors.

CRTS charges variable tipping fees based on a RDN tipping fee and enforces RDN disposal bans.

8.3 Regional Landfill

MSW generated in the City of Nanaimo and Electoral Areas A, B and C will be delivered directly to the Regional Landfill. The Regional Landfill will also receive recyclable materials, yard waste, CD waste and some types of “special” wastes that require specific handling procedures (e.g. contaminated soil, asbestos, animal carcasses, etc.). The operating details of the Regional Landfill are included in the Landfill Operational Certificate, which is issued to the RDN by the Provincial Ministry of Environment. A copy of the Landfill Operational Certificate can be found in Appendix C.

Recyclables and yard waste will be picked up and recycled or composted by contractors. CD waste will be ground and reused on site, or landfilled.

The Regional Landfill charges variable tipping fees based on RDN tipping fee rate and enforces RDN disposal bans.

8.3.1 Closure and Maintenance

The RDN is responsible for operating and maintaining the environmental control infrastructure at the Regional Landfill site for a minimum post-closure period of 200 years. A closure fund has been established to address the long-term operation and maintenance of the leachate and landfill gas collection systems and the on-going monitoring of groundwater, surface water, landfill gas, erosion, slope stability and settlement.

8.4 Long Term Residual Waste Management

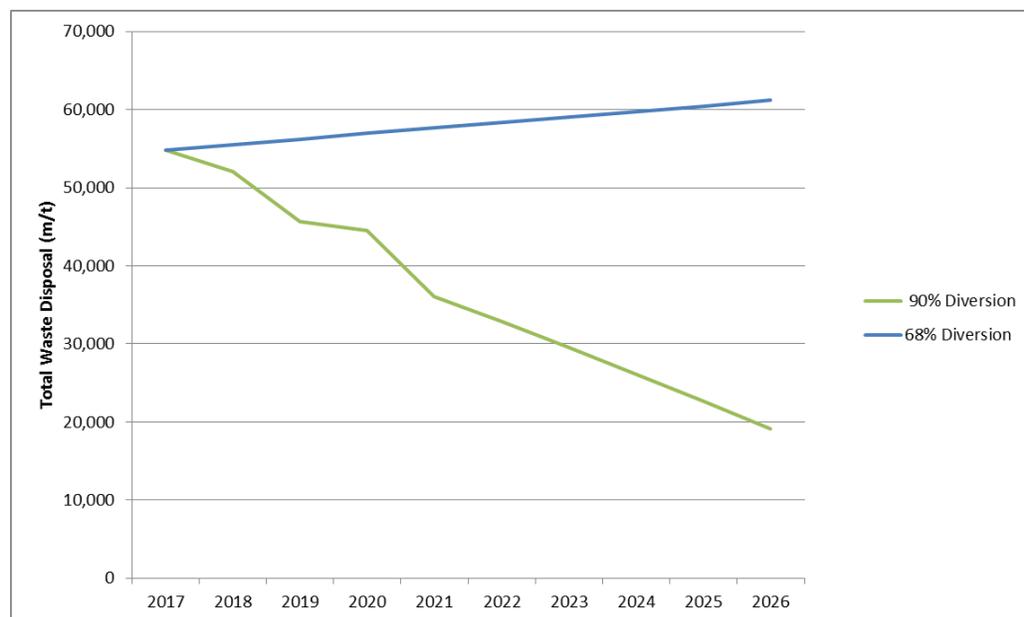
The Regional Landfill has capacity until 2040 based on current landfilling rates. Depending on the speed and success of further diversion initiatives, the life of the landfill could be extended for an additional 10 to 15 years. The long term goal of the RDN is Zero Waste. Nevertheless, the RDN recognizes that there will be some necessary landfilling capacity for the foreseeable future. During the time frame of this Plan, technologies will be advanced and the economic viability of residual waste processing and disposal may change. The RDN will continue to review and consider alternative technologies that are consistent with the Zero Waste Hierarchy and Goal.

Discussions with adjacent regional districts to identify potential cooperative strategies for waste management system improvements have been on-going for a number of years and will continue. The RDN is currently a partner in the AVICC that is actively looking into cooperative strategies for managing solid waste across regional district boundaries. Future options for

residual management could include collaboration with other local governments, siting a landfill, and/or considering export on or off the island.

8.5 Residual Waste Management Summary

The quantity of residual waste generated over the life of the Plan is primarily dependent on the growth of the population and the success of the Zero Waste Plan’s implementation. Figure 7 shows the projected difference of residual waste quantities if there is no additional waste



diversion (status quo), and if the Zero Waste Plan is fully implemented.

Figure 7 Projection of Residual Waste in the RDN

The future quantities of residual waste are also influenced by economic growth in the Region, new product stewardship programs, and the unanticipated development of private waste management facilities in the area. Therefore, the residual waste projections should be considered rough estimates.

9 Bylaws

For the purpose of implementing the approved Plan, the RDN intends to continue with the existing Waste Stream Management Licensing Bylaw, review solid waste curbside collection service options, as well as create two new additional bylaws, Mandatory Waste Source

Separation Bylaw and Waste Haulers Licensing Bylaw. These agreements and bylaws are discussed in the following sections.

9.1 Waste Stream Management Licensing

The RDN adopted Bylaw No. 1386, the Waste Stream Facilities Licencing Bylaw in 2004. The purpose of this Facilities Bylaw No. 1386 is to regulate facilities managing waste with the objective of:

- Setting a high standard of operation for the local waste management industry;
- Creating a level playing field for industry (to protect the good operators from low standard, “fly by night” operators);
- Minimizing risk and costs to the taxpayers for clean-up of poorly operated facilities, abandoned facilities and abandoned MSW and recyclable material (illegal dumping);
- Assisting in waste tracking and progress of the Plan and waste diversion;
- Protecting and enhancing the existing waste diversion rate; and
- Setting a consistent level of environmental and community protection throughout the RDN to reduce the incentive to move to less regulated areas of the RDN and outside the RDN.

This Bylaw involves licensing private MSW management and recycling facilities within the RDN, and sets out operating and reporting requirements as well as provisions for financial security. All facilities that handle MSW in whole or part are to be included in the licensing system with the exception of those below:

- Facilities regulated by the Ministry of Environment through a Permit;
- Soil manufacturing facilities (unless they are composting MSW-based materials on-site);
- Private on-site collection facilities (such as centralized recycling areas used by office buildings and mall tenants);
- Recycling collection facilities;
- Reuse businesses;
- Concrete and asphalt recycling operations and auto wreckers since the material handled by these operations has not traditionally been handled as MSW; and
- Municipally owned facilities, including the CRTS.

There are license application and annual administration fees associated with the licensing system. These fees are intended to cover most of the staff costs associated with maintaining

the licensing system. A copy of the existing RDN Bylaws is included in supplemental Plan Appendix J.

9.2 Curbside Collection Contract

In preparation for the expiration of the current Waste Connections curbside collection contract set to end in March 2020, the RDN has begun a review of solid waste service options.

Changes in service could result in significant capital expenditures by the RDN such as the borrowing for waste collection bins. The Environmental Management Act contemplates the implementation of such programs under the Plan through bylaw adoption without requiring the assent of electors which might otherwise be required by the Community Charter or Local Government Act.

Optimal financial benefit is realized where the length of the service contract is aligned with the useful life of equipment. The life of waste collection vehicles should be a significant consideration in moving forward with any future curbside collection service contract.

9.3 Development of New Bylaws

The Mandatory Waste Source Separation Bylaw and Waste Haulers Licensing Bylaw will be developed following the approval of this Plan. The programs associated with these bylaws, along with the processes in which the bylaws will be developed, are discussed in Section 7.2.3. As per the Implementation Schedule in Section 10.1, the RDN will conduct planning, bylaw development and public consultation prior to full implementation of these new bylaws.

In accordance with the Community Charter and/or Local Government Act, the bylaws will be written to “avoid uncertainty and any potential for arbitrary decision-making.”¹⁷

9.3.1 Mandatory Waste Source Separation Bylaw

As previously described, the Mandatory Waste Source Separation Bylaw will be developed following the approval of the Plan and granting of authority from the Province. Potential sections in the bylaw are illustrated below:

¹⁷ UBCM, “Fact Sheet #6: Bylaws”, 2014

- Definitions
- Interpretation
- Entities requiring source separation
- Exemptions
- Separation requirements
- Amendments
- Appeals
- Offenses and penalties

9.3.2 Waste Haulers Licensing

As previously described, the Waste Haulers Licensing Bylaw will be developed following the approval of the Plan and granting of authority from the Province. Potential sections in the bylaw are illustrated below:

- Definitions
- Interpretation
- Entities requiring license
- Exemptions
- Applications
- License Fees
- Discounted Tipping Fee
- Disposal Levy
- License requirements
- License renewal
- Auditing of Records
- Records and reporting
- Amendments
- Appeals
- Offenses and penalties

10 Plan Implementation

10.1 Implementation Schedule

The implementation of the Plan will begin in 2018, with all elements of the Plan anticipated to be in place by 2021. The implementation schedule is shown in Table 7.

Table 7 Implementation Schedule

2019	<ul style="list-style-type: none"> • On-going programs • Implementation of Expanded Zero Waste Education • Implementation of Household Hazardous Waste • Implementation of Expanded ICI Waste Management • Implementation of Expanded CD Waste Management • Consult on Mandatory Waste Source Separation Bylaw and Waste Hauler Licensing Bylaw <ul style="list-style-type: none"> ○ Introduction of 1 FTE at Zero Waste Coordinator level
2020	<ul style="list-style-type: none"> • On-going programs • Implementation of Zero Waste Recycling • Mandatory Waste Source Separation and Waste Hauler Licensing Bylaws <ul style="list-style-type: none"> ○ Bylaw Development and Legal Counsel ○ Develop Outreach Material
2021	<ul style="list-style-type: none"> • On-going programs • Increased enforcement of ICI Waste Management • Implementation of Waste Haulers Licensing Bylaw • Implementation of Waste Source Separation Bylaw <ul style="list-style-type: none"> ○ Introduction of 2 FTE at Zero Waste Compliance Officer level ○ 1 new vehicle
2022	<ul style="list-style-type: none"> • On-going programs • Waste Source Separation Bylaw <ul style="list-style-type: none"> ○ 1 new vehicle
2023	<ul style="list-style-type: none"> • On-going programs

10.2 Plan Financing

The principle funding mechanisms for delivery of programs under the Plan are:

1. Utility fees;
2. Recoveries;
3. Tipping fees; and
4. Taxation.

When available, opportunities for grants will be utilized to assist in the funding of programs.

Utility fees are currently applied to the residential curbside collection services. Recoveries received under contract from Recycle BC offset the costs of the curbside recyclables collection as part of their stewardship program. The cost of managing curbside organics and residual waste is fully funded by the utility fees. This practice is expected to continue in the future.

Other than the residential curbside utility fees, solid waste services programs are substantially funded through tipping fees. This is intended to encourage waste generators to seek alternatives to disposal of waste, and is consistent with the guiding principle of “polluter and user-pay approaches and manage incentives to maximize behavior outcomes.”

Although the Plan continues to advocate “user-pay”, there is recognition it will likely become necessary for a greater reliance on taxation, due to the following considerations:

1. There is an upward threshold in setting tipping fees where generators are more likely to seek alternative disposal locations, rather than the intended behavioral change to reduce/recycle waste;
2. For many programs listed in this Plan, the whole of the RDN benefits and there is no identifiable user – this includes programs such as the Illegal Dumping Program; and Programs with universal benefit, are more likely to be covered through tax requisition.
3. As waste diversion is more successful, there is less revenue generated through tipping fees to support programs under the Plan.

Table 8 shows a projected cost estimates for the entire solid waste services department for the next five years. For illustration only, operating revenues for new and expanded programs anticipated by this Plan have been incorporated into “Property Taxes”, with no rate change to “Landfill Tipping Fees”. This is only intended to project future budget amounts, and is not intended to forecast the actual apportionment of revenue sources.

Table 8 Solid Waste Services Projected Estimated Revenue Sources and Operating, Capital and Life Cycle costs 2017-2022

Operating Revenues	2017	2018	2019	2020	2021	2022
Property Taxes	\$722,610	\$1,289,632	\$1,941,508	\$2,682,643	\$2,831,185	\$2,869,640
Operations	\$1,224,129	\$1,231,581	\$1,239,081	\$1,246,632	\$1,254,233	\$1,261,887
Landfill Tipping Fees	\$7,600,000	\$7,600,000	\$7,676,000	\$7,676,000	\$7,752,760	\$7,752,760
Utility User Fees	\$3,422,696	\$3,491,149	\$3,560,972	\$3,632,192	\$3,704,836	\$3,815,981
Grants in lieu of taxes	\$6,800	\$6,800	\$6,800	\$6,800	\$6,800	\$6,800
Interdepartmental recoveries	\$103,007	\$103,007	\$103,007	\$103,007	\$103,007	\$103,007
Miscellaneous	\$498,944	\$508,523	\$518,293	\$528,259	\$538,424	\$548,793
Total Operating Revenue	\$13,578,186	\$14,230,692	\$15,045,661	\$15,875,533	\$16,191,245	\$16,358,868

Operating Expenditures	2017	2018	2019	2020	2021	2022
Administration	\$909,463	\$924,329	\$939,460	\$954,859	\$970,533	\$986,486
Professional Fees	\$440,510	\$449,195	\$458,053	\$467,087	\$476,300	\$485,695

Building Ops	\$205,283	\$209,362	\$213,523	\$217,765	\$222,093	\$226,507
Veh & Equip Ops	\$587,389	\$599,121	\$611,090	\$623,296	\$635,746	\$648,447
Operating Costs	\$6,790,266	\$6,876,072	\$7,024,969	\$7,154,092	\$7,299,676	\$7,443,167
Wages & Benefits	\$3,429,448	\$3,498,038	\$3,567,999	\$3,639,359	\$3,675,752	\$3,749,268
Contributions to Reserve Fund	\$692,300	\$717,300	\$1,017,300	\$1,317,300	\$1,067,300	\$1,167,300
Debt Interest	\$1,532	\$123	\$0	\$0	\$0	\$0
New Zero Waste Plan Programs	\$0	\$422,500	\$900,950	\$1,538,029	\$1,572,110	\$1,572,792
Total Operating Expenditures	\$13,056,191	\$13,696,040	\$14,733,344	\$15,911,787	\$15,919,510	\$16,279,662
% Increase in Operating Expenditures	0%	5%	7%	7%	0%	2%
Total Operating surplus/deficit	\$521,995	\$534,652	\$312,317	-\$36,254	\$271,736	\$79,206

Capital Asset Expenditures	2017	2018	2019	2020	2021	2022
Capital Expenditures	\$2,478,159	\$1,666,125	\$1,265,950	\$1,265,950	\$459,625	\$55,125
Transfer from Reserves	\$1,835,909	\$1,205,000	\$970,000	\$1,125,000	\$110,000	\$0
New Borrowing	\$0	\$0	\$0	\$0	\$0	\$0
Net Capital funded from Operations	\$642,250	\$461,125	\$295,950	\$140,950	\$349,625	\$55,125

Capital Financing Charges	2017	2018	2019	2020	2021	2022
Existing debt (principal)	\$125,967	\$43,070	\$0	\$0	\$0	\$0
New debt (principal & interest)	\$0	\$0	\$0	\$0	\$0	\$0
Total Capital Financing Charges	\$125,967	\$43,070	\$0	\$0	\$0	\$0

Total Proposed SWMP	\$13,824,408	\$14,200,235	\$15,029,294	\$16,052,737	\$16,269,135	\$16,334,787
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10.3 Cost Implications to RDN Residents

This section projects the cost impacts to RDN residents as a consequence of new programs presented in this Plan. Figure 8 represents the approximate cost of solid waste services in the region to an average size family, excluding the curbside waste collection utility. This is intended to present the estimated cost based on an average sized house generating an average amount of waste. The cost is an aggregate of both tipping fee and taxation.

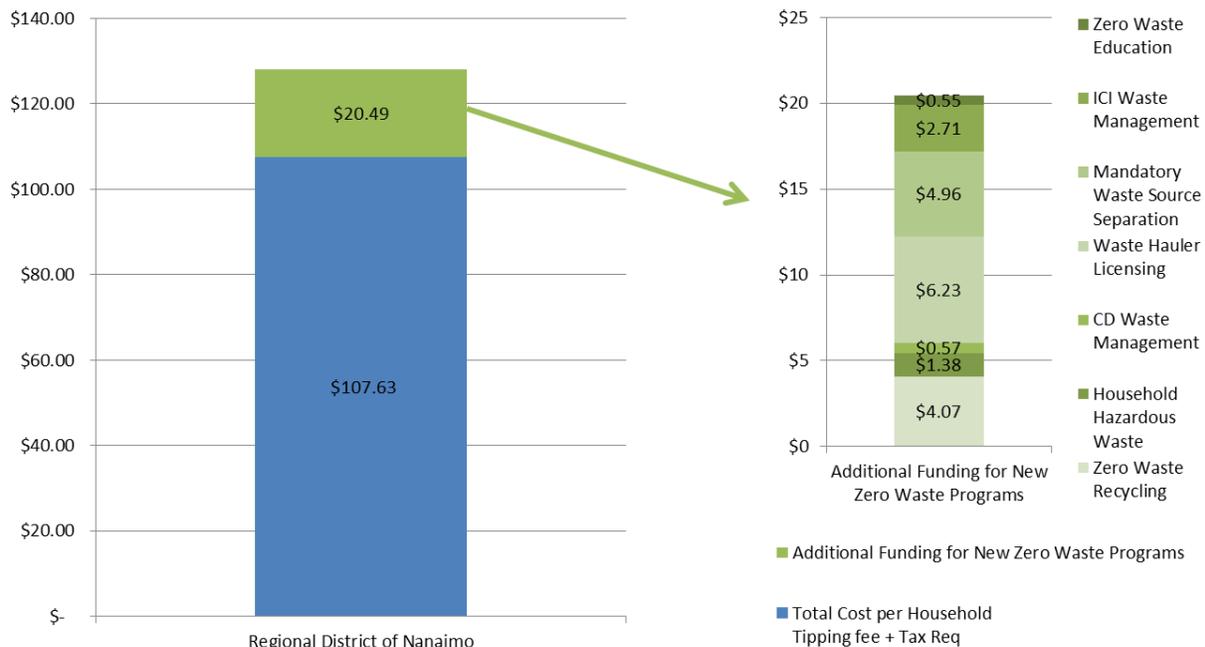


Figure 8 Cost of Solid Waste Management Services in the RDN based on \$500,000 property assessment value with 2.5 people and full implementation of the Zero Waste Plan by 2020.

Table 9 represents the approximate net annual per capita costs of solid waste services, including residential curbside waste collection based on a 10 year estimated budget for 2018-2027.

Table 9 Annual Net Per Capita Cost of Solid Waste Services in the RDN

Service	Annual Net Cost (\$ million)	Per Capita Cost (\$)
Current Zero Waste Strategy (68%)	\$3.3	\$53.66
Proposed Zero Waste Strategy (90%)	\$4.9	\$63.69
Difference	\$1.6	\$10.03
Current Residential Curbside	\$5.1	\$32.51
Proposed Residential Curbside	\$5.1	\$32.51
Difference	\$0.0	\$0.00
Current Disposal Operations	\$6.4	\$40.78
Future Disposal Operations	\$6.4	\$40.78
Difference	\$0.0	\$0.00
Total Current SWMP	\$14.7	\$94.44
Total Proposed SWMP	\$16.3	\$104.47
Difference	\$1.6	\$10.03

Based on a 10 year budget 2018-2027

10.4 Future Capital Financing and Service Contracts

The language in Part 6 of the Community Charter places restrictive conditions on both contract terms and limit on borrowing for expenditures, which may not be conducive to providing optimal financial terms, nor the ability to make timely, financial obligations in the interest of providing operational excellence.

The *Environmental Management Act* recognizes this limitation and acknowledges that a bylaw adopted for implementing a Waste Management Plan does not require a petition, the assent of the electors or the approval of the electors. However, such a bylaw does require written prior approval from the Minister of Environment.

The RDN anticipates relying on this provision during the 10 year solid waste management planning horizon for the services and programs identified in the plan. It is impossible to be entirely predictive of circumstances where these provisions may be advantageous. This included but is not limited to:

- Capital upgrades or contingency measures related to RDN solid waste facilities mitigating an environmental hazard.
- Provision of equipment ancillary to facilities operation such as landfill heavy equipment or curbside collection equipment.
- Advancement of alternative technologies that are consistent with the Zero Waste Hierarchy and Goal.

10.5 Asset Management

This Plan supports the Regional Board's Strategic Priority to "*fund infrastructure in support of our core services employing an asset management focus*". Benefits to the region's residents (the taxpayers) of employing an asset management focus include:

- Greater predictability in year-to-year taxes;
- Fairness between present and future taxpayers;
- Stronger ability to sustain service levels over the long term; and
- Reduced reliance on borrowing when major investments are required.

Within the scope of the SWMP and operations at the region's solid waste facilities, planned capital investments are capital expenditures identified in existing financial plans. These include capital projects, asset replacements, and contributions to reserve funds for future replacement

and post-closure commitments. Utilizing an asset management approach will assist decision makers in improving longer term financial plans, and by comparing planned capital expenditures against long term average annual replacement costs. Integrating asset management into the Solid Waste department's financial plans will allow the RDN to track trends, and make informed decisions about future borrowing and optimal timing for replacing assets.

At this time, the RDN Solid Waste Services financial projections only anticipate borrowing in 2025 (approx. \$1.7 million) for a significant landfill capital project. There are numerous other capital expenditures associated with RDN facilities that will take place during the life of the Plan, such as heavy equipment purchase (e.g. landfill contractor), landfill capping, and facility upgrades (e.g. fare station). Current forecasting is to finance these capital expenditures through establishing prior year reserves. However, there is the potential for capital expenditures that are necessary due to unforeseeable events. The timing and cost of replacement equipment or upgrades is not entirely predictable. Furthermore, there can be significant variability in tipping fee revenues that are received which impacts financial projections and the ability to establish reserves. Therefore, additional borrowing may be necessary to finance the initiatives set out in this Plan.

10.6 Plan Monitoring and Evaluation

10.6.1 Plan Monitoring

The PMAC will monitor the implementation of the plan and make recommendations to increase its effectiveness. A description of the PMAC task and make up can be found in Schedule D.

10.6.2 Annual Reporting

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

The RDN will provide annual reporting to the MoE via the Ministry's MSW disposal calculator.

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

- Programs delivered each year and how they support the Zero Waste Hierarchy;
- Economic development related to solid waste management in the RDN;
- Challenges or opportunities identified by the PMAC;

- Monitoring data for closed sites;
- Compliance activities;
- Landfill gas capture and reuses;
- Spills, leaks and leachate collected at facilities; and
- Wildlife interactions and control measures.

10.6.3 Five-year Effectiveness Review

The RDN will carry out a review and report on the Plan’s implementation and effectiveness in 2023. A link to the report will be provided on the RDN’s website. The review may be conducted in-house or by a third party, and will include the:

- Overview of all programs undertaken in the first five years to support the plan goals and objectives – status (started, progress, complete); actual budget for each;
- Description of all programs not yet started and reason (e.g. delayed start and why, initiation planned for next five years, circumstances or decisions affecting the need for or feasibility of undertaking the actions at all); budget allocated for each;
- Five-year trend information for waste disposal per person;
- Five-year summary of economic development related to plan implementation;
- Five-year trend of landfill gas capture and reuse;
- Summary of any compliance activities taken, spills, leaks and leachate collected at facilities, and wildlife incidences over the past five years;
- Any significant changes related to the regional growth strategy or changes to large industry and businesses operating in the area that might impact the solid waste management system over the next five years;
- Based on the plan data from the first five years, an analysis of what’s working well (strengths) and challenges to meeting plan goals and targets; and
- Based on the analysis, any recommended changes that the RDN would like to make to the plan and next steps regarding seeking those changes (consultation and Minister approval for changes).

10.6.4 Plan Amendments

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

Due to changing circumstances and priorities that may evolve over time, and with the input of the PMAC and interested parties, all major actions identified in the plan will be reviewed for

appropriateness before implementation. This will generally occur on an annual basis. The Plan's implementation schedule will be flexible enough to reflect the availability of technologies that may arise over time, as well as the potential changes in regional issues and priorities. In addition, it will also take into account the financial priorities of the RDN, its member municipalities and other partners, the availability of funding to undertake Plan activities, and the availability of contractors and service providers.

The Plan amendment procedures apply to major changes to the solid waste management system which would include:

1. The opening (or changing the location) of a site or facility not already identified in the plan for the management or processing of MSW, such as:
 - New landfills, landfill expansion, landfill closure;
 - Any organics processing facility;
 - Mixed waste material recovery facilities;
 - Any new waste-to-energy facility located within the region;
 - Any new waste-to-energy facility located outside the region; and
 - Any other facility that could have an adverse impact to human health or the environment.
2. Waste import and export options which would significantly impact the RDN's or neighbouring solid waste systems, or not conform to provincial legislation, goals and/or targets;
3. Changing disposal targets or reductions in programs supporting the Zero Waste Hierarchy;
4. A change in the boundary of the Plan, which would significantly change the amount of solid waste to be managed under the Plan or significantly change the population of the Plan area;
5. The addition, deletion or revision of policies or strategies related to the conditions outlined in the Minister's approval letter; and
6. Major financial changes that warrant seeking elector assent.

When a Plan amendment becomes necessary, the RDN will undergo a public consultation process and submit a revised plan to the MoE for approval, along with a detailed consultation report.

The schedules to the Plan contain information that is not considered a major change listed above but could change during the 10-year lifespan of the plan. Each schedule includes a process for engaging the public, ranging from notification to a robust public consultation

process. Schedule updates may require approval from the Minister, but may not require submission of the entire plan for review and approval.

11 Approvals

This Plan has been subject to public consultation in advance of its approval by the Regional Board. Upon receiving Board approval, it will be submitted to the BC MoE for approval.

12 Schedules

Schedule A: Facilities

The following transfer station, regional landfill and licensed WSML facilities shown on are an integral part of the regional waste management system:

- Church Road Transfer Station, 860 Church Road, Parksville, BC
- Regional Landfill, 1105 Cedar Road, Nanaimo, BC
- Schnitzer Steel Pacific, 13271 Trans Canada Hwy, Cassidy, BC
- Parksville Bottle & Recycling Depot, 611A Alberni Hwy, Parksville, BC
- Nanaimo Organic Waste Ltd, 981 Maughan Rd, Nanaimo, BC
- Waste Connections Canada Nanaimo Recycling Facility, 333 Tenth St, Nanaimo, BC
- Emterra Environmental, 255 Eaton St, Nanaimo, BC
- Earthbank Resource Systems, 1424 Hodges Road, Parksville, BC
- Alpine Disposal & Recycling, 2250 McGarrigle Rd, Nanaimo, BC
- Pacific Coast Waste Management, Biggs Pit Road, Nanaimo, BC
- DBL Disposal Services Ltd, 4145 Jingle Pot Road, Nanaimo, BC
- DBL Disposal Services Ltd, 911 Church Road, Parksville, BC
- Waste Connections Canada Springhill, 1429 Springhill Road, Parksville, BC
- Cascades Recovery Inc., 800 Maughan Rd, Nanaimo, BC
- ABC Recycling Ltd., 750 Jackson Rd, Nanaimo, BC

EPR programs and facilities in the area are listed in the table below:

Stewardship Program	Collection Facilities
<p>Alarm Recycle</p> <p>Smoke alarms, Carbon monoxide (CO) alarms, combination smoke & CO alarms</p>	<p>Gabriola Island Recycling Organization (GIRO); Home Hardware – Parksville; London Drugs (North Town Centre); London Drugs (Port Place Nanaimo); Parksville Bottle & Recycling Depot; Qualicum Bottle & Recycling Depot; Regional Recycling – Nanaimo; Regional Recycling - South</p>

Schedule A: Facilities

<p>BC Used Oil Management Association</p> <p>Oil and antifreeze, oil filters, oil containers and antifreeze containers</p>	<p>Aerosmith Environmental; Arrowsmith Automotive; Canadian Tire – Nanaimo; Gabriola Island Recycling Organization (GIRO); Great Canadian Oil Change; Hetherington Industries; Highway 4 Auto Salvage; Parksville Safety & Auto Centre; Surfside Automotive; Terrapure Environmental; BC Used Oil Management Association; Harris Mazda; Mr. Lube; Parksville PetroCan; Top - Lite Car Services</p>
<p>Call2Recycle</p> <p>Consumer batteries (rechargeable and single-use) weighing less than 5 kilograms and cellphones.</p>	<p>Canadian Diabetes Association; Gabriola Island Recycling Organization (GIRO); Regional Recycling – Nanaimo; Regional Recycling – South; Staples - Nanaimo Island Highway; Staples - Nanaimo Parkway; ListenUP! Canada; Pharmasave; The Source; Island Cellular; Midland Tools; Tom Harris Cellular; Pharmasave – Parksville; Best Buy; Island Home and Garden; Parksville Bottle & Recycling Depot; Parkswest Business Products; Pharmasave - Qualicum Beach; Dollys Home Hardware; Windsor Plywood; Canadian Tire - Parksville</p>
<p>Canadian Batteries Association</p> <p>All consumer and industrial lead-acid batteries</p>	<p>Kal Tire – Edwards Tire Services; Kal Tire - Long Lake; Kal Tire – Island Hwy N; Kal Tire – Nanaimo (McCullough Rd); Kal Tire – Nanaimo (Norwell Dr.); Canadian Tire (Nanaimo), Canadian Tire (Parksville)</p> <p>Non-Stewarded Locations:</p> <p>Annex Auto Parts; Alpine Disposal & Recycling; Church Road Transfer Station; Cedar Landfill; Schnitzer Steel Recycling</p>
<p>Electro Recycle</p> <p>Small appliances and power tools, ranging in size from toasters and hand-held drills to countertop microwaves, vacuums and bench-top table saws.</p>	<p>Best Buy; Parksville Bottle & Recycling Depot; Regional Recycling – Nanaimo (Hayes); Regional Recycling – Nanaimo (Old Victoria); Staples – North Nanaimo; Staples – Central Nanaimo</p> <p>Non-Stewarded Locations:</p> <p>Gabriola Island Recycling Organization (GIRO);DBL Disposal; Alpine Disposal and Recycling; Schnitzer Steel</p>

Schedule A: Facilities

<p>Encorp Return-It Beverage</p> <p>Used beverage containers such as aluminum cans, plastic & glass bottles, other metal cans, drink boxes and cartons. Alcohol containers such as wines, spirits, liqueurs and non-refillable beer, cider and cooler bottles.</p>	<p>Parksville Bottle & Recycling Depot; Qualicum Bottle & Recycling Depot; Regional Recycling – Nanaimo (Hayes); Regional Recycling – Nanaimo (Old Victoria)</p>
<p>Encorp Return-It Electronics</p> <p>Desktop Computers + Accessories, Portable Computers + Accessories, Display Products + Accessories, Printing, Scanning + Multifunction Devices, Audio Products + Accessories, Video Products + Accessories, Video Gaming Systems + Accessories, Video Gaming Systems + Accessories, Cellular, Telephones + Answering Machines, E-Toys, Electronic Musical Instruments, IT + Telecom Devices, Medical Monitoring Control Devices</p>	<p>Parksville Bottle & Recycling Depot; Regional Recycling – Nanaimo (Hayes); Regional Recycling – Nanaimo (Old Victoria); Staples – Nanaimo North; Best Buy – Nanaimo; Staples – Central Nanaimo; Best Buy</p>
<p>Health Products Stewardship Association</p> <p>All prescription drugs, over-the-counter medications in oral dosage and natural health products in oral dosage.</p>	<p>Anchor Compounding Pharmacy – Nanaimo; Central Drug Store –Nanaimo; Central Drugs – Beban Plaza; Central Pharmacy – Nanaimo; Drugstore Pharmacy – Nanaimo; London Drugs; Medicine Shoppe; Memorial Compounding Medic Centre – Qualicum Beach; Nanaimo Home & Community Care; Outreach Pharmacy; Pharmasave; Rexall Drug Store; Save-On Foods Pharmacy; Qualicum Medicine Centre; Shoppers Drug Mart; Thrifty Foods and Pharmacy; Walmart Pharmacy; Costco Wholesale;</p>

Schedule A: Facilities

<p>LightRecycle</p> <p>All residential, commercial, institutional and industrial lighting products (lamps, fixtures and ballasts) ranging from light-bulbs to flashlights, table lamps and chandeliers.</p>	<p>Albertson's Home Centre; Canadian Tire; Gabriola Island Recycling Organization (GIRO); Habitat ReStore; Highway 4 Auto Salvage; Home Hardware – Parksville; Home Hardware – Qualicum; Junction Bottle Depot; London Drugs (North Town Centre); London Drugs (Port Place Nanaimo); Parksville Bottle & Recycling Depot; Regional Recycling – Nanaimo; Regional Recycling – South; Rona; Dollys Home Hardware; Parksville Central Builders' Supply</p>
<p>Major Appliance Recycling Roundtable</p> <p>Major Appliances that have been designated for residential use.</p>	<p>Carls Metal Salvage; Church Road Transfer Station; Gabriola Island Recycling Organization (GIRO); Parksville Bottle & Recycling Depot; Regional District of Nanaimo Landfill; Schnitzer Steel; Barrons Home Appliance Centre</p>
<p>Outdoor Power Equipment Institute of Canada</p> <p>Handheld, walk-behind and free-standing electrical outdoor power equipment and lawn tractors.</p>	<p>Alpine Disposal and Recycling; Highway 4 Auto Salvage; Regional Recycling – Nanaimo (Hayes); Regional Recycling – Nanaimo (Old Victoria); Schnitzer Steel</p>
<p>RecycleBC</p> <p>Packaging and printed paper supplied to BC residents, including printed paper and cardboard; non-deposit glass bottles and jars; paper, plastic, and metal containers; plastic bags and overwrap; plastic foam packaging.</p>	<p>Alpine Disposal and Recycling; Parksville Bottle & Recycling Depot; Regional Recycling – Hayes; Regional Recycling – Old Victoria; Qualicum Bottle Depot; London Drugs (North Town Centre); London Drugs (Port Place Nanaimo)</p>
<p>Recycle My Cell</p> <p>Cell phones and their batteries. All types of cell phones are accepted regardless of size, make model or age.</p>	<p>Regional Recycling – Nanaimo; Regional Recycling – South; Bell - Country Club; Bell – Woodgrove; The Source - Country Club; The Source – Parksville; The Source – Woodgrove; Virgin Mobile - Nanaimo North Town Centre</p>
<p>ReGeneration</p> <p>Household (architectural) paint and paint aerosols, flammable solvents, pesticides (domestic), gasoline. Paint exchange available at select collection sites in BC.</p>	<p>Gabriola Island Recycling Organization (GIRO); Regional Recycling – Nanaimo (Hayes), Regional Recycling – Nanaimo (Old Victoria); Parksville Bottle & Recycling Depot</p> <p>Non-stewarded Locations: Aerosmith Environmental; Habitat ReStore; Hetherington Industries; Rona; Terrapure Environmental</p>

Schedule A: Facilities

<p>Tire Stewardship BC</p> <p>Car tires (both on and off rim), bike tires and tubes.</p>	<p>Annex Auto Parts; BC Auto Wrecking; Canadian Tire – Nanaimo; Eco-Tire and Auto Parts; Highway 4 Auto Salvage; Kal Tire - 2294 McCullough Rd; Kal Tire - 2800 Norwell Dr; Kal Tire - 837 Old Victoria Rd; OK Tire; Applecross Automotive; Big O Tires; BMW / Mini – Nanaimo; Budget Brake & Muffler; Canadian Tire – Parksville; Chuck's Automotive; Coast Auto Service; Costco Wholesale; Dusenbury Automotive Services; Family Ford; Fountain Tire; French Creek Shell; Galaxy Motors – Nanaimo; Kerry's Car & Truck Centre Ltd.; Luctor Industries; Miles D Automotive; Parksville Chrysler; Parksville PetroCan; Sidney Tire Auto Service; Smithers Road Automotive; Stanford Auto Centre; Village Garage; West Coast Motor Sport; Wheaton Pontiac Buick GMC</p>
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Schedule B: Implementation Schedule

Schedule B: Implementation Schedule

Proposed implementation dates will be contingent upon the timing of the plan's approval by the Ministry of Environment and the amount of resources available for the implementation of the strategies. The implementation schedule will be reviewed in line with the RDN's annual budget cycle. The PMAC will provide input into any updates to this schedule.

YEAR	Program Implementation
2018	<ul style="list-style-type: none">• On-going programs• Expanded Zero Waste Education• Household Hazardous Waste• Expanded ICI Waste Management• Expanded CD Waste Management• Consult on Waste Haulers Licensing Bylaw<ul style="list-style-type: none">○ Introduction of 0.5 FTE at Zero Waste Coordinator level
2019	<ul style="list-style-type: none">• On-going programs• Waste Hauler Licensing<ul style="list-style-type: none">○ Bylaw Development and Legal Counsel○ Develop Outreach Material○ 1 FTE at Zero Waste Coordinator level
2020	<ul style="list-style-type: none">• On-going programs• Waste Hauler Licensing<ul style="list-style-type: none">○ 2 FTE at Zero Waste Compliance Officer level○ 1 new vehicle
2021	<ul style="list-style-type: none">• On-going programs• Waste Hauler Licensing<ul style="list-style-type: none">○ 1 new vehicle
2022	<ul style="list-style-type: none">• On-going programs

Schedule C: Plan Monitoring Advisory Committee Terms of Reference

REGIONAL DISTRICT OF NANAIMO SOLID WASTE MANAGEMENT PLAN MONITORING ADVISORY COMMITTEE

TERMS OF REFERENCE

1. PURPOSE AND SCOPE

The purpose of the Plan Monitoring Advisory Committee (PMAC) is to provide input, from a variety of perspectives, on the implementation of the Solid Waste Management Plan (Plan). In accordance with the Ministry of Environment's *Guide to the Preparation of Regional Solid Waste Management Plans* a single public and technical advisory committee will act as a "sounding board" of community interests and will provide advice to the Regional Board through the Solid Waste Management Select Committee. The Regional Board is the final authority on decisions. The PMAC will remain in existence for the duration of the current Plan.

2. ROLES AND RESPONSIBILITIES

The role of the PMAC is to advise the RDN Board and staff on the implementation of the plan:

- Monitor the Plan implementation in consideration with the Plan Objectives and Guiding Principles;
- Provide advice on the delivery of programs under the Plan;
- Review information related to implementation of the plan, including waste quantities, populations, and diversion rates for each plan component;
- Advise on each major plan review which will occur every five years;
- If requested by the Board, provide recommendations regarding disputes arising during implementation of the plan; and
- Advise on the adequacy of public consultation in matters affecting the public related to plan implementation.

Recommendations of the PMAC are directed to the Solid Waste Management Select Committee for consideration before being directed to the Board.

3. COMPOSITION AND CHAIR

Chair and Vice Chair to be appointed by the Chairperson of the Board.

Voting Members:

- One representative from the Select Committee (or alternate);

Schedule C: Plan Monitoring Advisory Committee Terms of Reference

- Up to 15 members representing a diversity of community interests such as from the following groups:
 - Private sector waste management industry service providers
 - Private sector solid waste facility representatives
 - Non-profit group with an interest in solid waste management (e.g. reuse organization)
 - Large institutional solid waste generator
 - Business representatives, including one focused on the 3Rs
 - Members at large for the community (community association, youth, senior)
 - Regional Landfill area representative
 - Urban/rural geographic mix

Non-Voting Technical Advisors:

- Up to 12 members representing agencies including:
 - Regional District Staff – 3 members
 - Municipal Staff – 4 members
 - First Nations – 3 members
 - Provincial Agencies – 1 member
 - Federal Agencies – 1 member

4. RULES OF PROCEDURE

The Committee will act in accordance with the RDN Board Procedure Bylaw.

5. ADMINISTRATION

Administrative matters related to the PMAC will be conducted by RDN staff acting through the Chair.

6. TERM

The term of appointment is two years or until new members are appointed. Interested members may apply for reselection at the end of their term.

Lack of attendance may result in members having their membership revoked at the discretion of the committee. If a member resigns from the committee, their position will be filled through the application process or by appointment, as appropriate.

7. MEETINGS

The PMAC will meet at least two times per year with a provision for workshops or other presentations at the PMAC's discretion. Meetings will generally be held in the evenings but may

Schedule C: Plan Monitoring Advisory Committee Terms of Reference

be adjusted at the discretion of the Chair. Meals will be provided when committee activities coincide with meal times.

There is no remuneration for participation on the committee but the RDN will reimburse mileage expenses according to Volunteer Mileage Reimbursement Policy A2.19.

8. DECISION MAKING

Committee decisions will be made by consensus whenever possible. The chair will have discretion as to when the consensus is reached. Consensus will be recorded in the minutes of the meeting.

Committee meetings are open to the public; however only committee members have speaking and voting privileges. Delegations that wish to address the committee must seek approval from the committee through a written request. If votes are taken, minority opinions may be recorded and submitted in addition to the majority opinion to the board.

Schedule D: Plan Dispute Resolution Procedures

The Regional Solid Waste Advisory Committee, Solid Waste Management Select Committee and Regional Board all considered dispute resolution options and passed the same motion on April 20th, May 30th and June 27th 2017 respectively with both committees passing the following motion:

Solid Waste Management Plan disputes be directed to the Board for decision; and that the Board consider mediation for non-regulatory or legislative decisions.

Procedure:

Disputes that might arise in regards to the Solid Waste Management Plan that are not suitably resolved by RDN staff, shall be directed to the RDN Regional Board for resolution. Disputes could include administrative decisions related to licensing, interpretation to a statement or provision in the plan, or any other matter not related to a proposed change to the actual wording of the plan or an operational certificate.

The initiating party shall address their dispute in writing to the Chair of the Regional Board and shall state the details of the dispute and the remedy requested. The Regional Board shall consider the dispute and may undertake one or a combination of the following:

1. Grant the remedy requested by the initiating party;
2. Deny the remedy being requested by the initiating party;
3. Confirm, reverse or vary an RDN policy or decision;
4. Direct staff or seek additional information or recommendation from staff;
5. Seek a recommendation from the Plan Monitoring Advisory Committee;
6. Seek additional information or recommendation from a consultant; or,
7. Direct mediation for not for non-regulatory or legislative decisions.

Parties aggrieved by a Regional Board directed or concluded dispute resolution may apply for judicial review by the Supreme Court of BC

Schedule E: Financial Information

The current tipping fees at Church Road and the Regional Landfill sites authorized under this plan are contained in Schedule A and Schedule D of RDN Bylaw No. 1531 Regulation of Solid Waste Management Facilities.

Any changes to the tipping fee rates will follow the requirement for a bylaw amendment approved by the RDN Board.

Schedule 'A'

Charges and Procedures for use of Solid Waste Management Facilities effective April 1, 2016.

1.	Solid Waste, excluding Controlled Waste	Flat Rate	51 kg or greater
a.	Municipal solid waste, construction/demolition waste, roofing waste (asphalt/tar/gravel), medical facility waste, or material recovery facility waste	\$6.00/0-50kg	\$125.00/tonne
b.	Municipal solid waste (containing recyclables) with offence	\$6.00/0-50kg	\$250.00/tonne
c.	Construction/Demolition waste (containing recyclables) with offence	\$6.00/0-50kg	\$360.00
d.	Weighing service	\$20.00 flat rate	
e.	Surcharge for improperly covered or secured loads	\$20.00 flat rate	
f.	Surcharge for mattresses and hide-a-beds	\$10.00 flat rate	

2.	Recyclables	Flat Rate	51 kg or greater
a.	Organic waste	\$6.00/0-50kg	\$110.00/tonne
b.	Organic waste (containing mixed solid waste or recyclables) with offence	\$6.00/0-50kg	\$250.00/tonne
c.	Garden waste	\$6.00/0-100kg	\$55.00/tonne
d.	Wood waste including wood roofing	\$6.00/0-50kg	\$250.00/tonne
e.	Gypsum (Church Road Transfer Station only)	\$6.00/0-50kg	\$250.00/tonne
f.	Metal recycling, metal appliances with ODS (ozone depleting substance)	\$6.00/0-500kg	\$55.00/tonne
g.	Corrugated cardboard	\$6.00/0-50kg	\$55.00/tonne
h.	Miscellaneous recyclables including: household plastics, metal food and beverage containers, vehicle batteries and oil filters	\$6.00 flat rate	
i.	Surcharge for ODS containing appliances	\$15.00 flat rate	

3.	Controlled Waste	Flat Rate	51 kg or greater
a.	Contaminated soil, grit and screenings and bio-solids	\$6.00/0-50 kg	\$125.00/tonne
b.	Controlled waste (misc.) including large dead animals	\$6.00/0-50 kg	\$250.00/tonne
c.	Food processing waste and treatment works		\$250.00/tonne

Schedule E: Financial Information

d.	Steel cable		\$500.00/tonne
e.	Asbestos waste	\$30.00/0-50 kg	\$500.00/tonne

4. Any load containing Prohibited Waste will be charged all costs associated with any special handling or removal of the Prohibited Waste in addition to the volume rates above.
5. Where the charge is based on weight, it shall be based on the difference in weight between loaded weight and the empty weight of the vehicle.
6. In the event that the scales provided are not operational, weight shall be estimated by the Scale Clerk employed by the Regional District of Nanaimo.
7. All charges payable under this bylaw shall be paid prior to leaving the site.
8. Surcharges are in addition to the per tonne rate posted for the material type.

Schedule 'B'

Charges and procedures for use of Regional Landfill for disposing of Controlled Waste and Municipal Solid Waste which originates from the Cowichan Valley Regional District, effective April 1, 2017, are:

1.	Controlled waste originating Cowichan Valley RD	Flat rate	51 kg or greater
a.	Waste asbestos	\$30.00/0-50 kg	\$600.00/tonne
b.	Large dead animals	\$20.00/0-50 kg	\$300.00/tonne
c.	Invasive plant species	\$20.00/0-50 kg	\$300.00/tonne

2.	Solid waste under the direct control of the Cowichan Valley Regional District *	Tonne Rate
a.	Municipal solid waste	Tonne rate includes a 20% premium over the current Schedule 'A' rates

*Solid waste acceptance is contingent upon:

- 1) Prior written notice from Cowichan Valley Regional District to the General Manager explaining the reasons for, and the anticipated duration, of contingency landfilling;
- 2) The General Manager's acknowledgement of acceptance; and,
- 3) Any conditions the General Manager may specify with respect to the duration, requirements regarding acceptance or reporting.

Schedule E: Financial Information

	City of Nanaimo	City of Parksville	Town of Qualicum Beach	District of Lantzville	Electoral Area A	Electoral Area B	Electoral Area C	Electoral Area E	Electoral Area F	Electoral Area G	Electoral Area H	Average RDN Tax Rate
Solid Waste Services Tax Rate per \$100K assessed value												
Zero Waste Education	\$0.12	\$0.11	\$0.11	\$0.11	\$0.13	\$0.10	\$0.09	\$0.10	\$0.13	\$0.11	\$0.10	\$0.11
Household Hazardous Waste	\$0.30	\$0.28	\$0.27	\$0.28	\$0.32	\$0.25	\$0.23	\$0.24	\$0.33	\$0.28	\$0.26	\$0.28
ICI Waste Management	\$0.59	\$0.55	\$0.52	\$0.55	\$0.64	\$0.50	\$0.45	\$0.47	\$0.64	\$0.55	\$0.51	\$0.54
CD Waste Management	\$0.12	\$0.12	\$0.11	\$0.13	\$0.13	\$0.10	\$0.09	\$0.10	\$0.13	\$0.11	\$0.11	\$0.11
Waste Source Regulation	\$1.08	\$1.01	\$0.96	\$1.00	\$1.16	\$0.91	\$0.82	\$0.86	\$1.17	\$1.00	\$0.93	\$0.99
Waste Haulers As Agents	\$1.36	\$1.27	\$1.20	\$1.26	\$1.46	\$1.14	\$1.04	\$1.09	\$1.47	\$1.26	\$1.17	\$1.25
Zero Waste Recycling	\$0.89	\$0.83	\$0.78	\$0.82	\$0.95	\$0.75	\$0.68	\$0.71	\$0.96	\$0.82	\$0.77	\$0.81
Total New Zero Waste Program	\$4.45	\$4.18	\$3.95	\$4.16	\$4.80	\$3.76	\$3.40	\$3.57	\$4.82	\$4.13	\$3.85	\$4.10
Total Ongoing SW Programs	\$3.31	\$3.11	\$2.93	\$3.08	\$3.56	\$2.79	\$2.53	\$2.65	\$3.59	\$3.07	\$2.86	\$3.04
Total SW Services Tax Rate	\$7.76	\$7.29	\$6.88	\$7.25	\$8.36	\$6.55	\$5.93	\$6.22	\$8.41	\$7.20	\$6.71	\$7.14
Cost per \$100,000	\$7.76	\$7.29	\$6.88	\$7.25	\$8.36	\$6.55	\$5.93	\$6.22	\$8.41	\$7.20	\$6.71	\$7.14
Cost per \$200,000	\$15.53	\$14.57	\$13.76	\$14.49	\$16.72	\$13.11	\$11.86	\$12.44	\$16.82	\$14.39	\$13.42	\$14.28
Cost per \$300,000	\$23.29	\$21.86	\$20.64	\$21.74	\$25.08	\$19.66	\$17.79	\$18.65	\$25.23	\$21.59	\$20.14	\$21.42
Cost per \$400,000	\$31.05	\$29.15	\$27.52	\$28.99	\$33.44	\$26.22	\$23.72	\$24.87	\$33.64	\$28.78	\$26.85	\$28.57
Cost per \$500,000	\$38.82	\$36.44	\$34.40	\$36.24	\$41.80	\$32.77	\$29.65	\$31.09	\$42.06	\$35.98	\$33.56	\$35.71

Based on Full Implementation of the Updated Zero Waste Plan by 2020



Schedule F: Emergency Debris Management

When natural events, like floods, earthquakes or anthropogenic (human-caused) events hit a community, solid waste management is usually the last thing on anyone's mind. Safe, proper and timely management of debris is an essential but often overlooked component of an emergency response or disaster incident. Debris management is also one of many competing priorities governments must manage during such events. It is important that disaster debris be properly managed so as to protect human health, comply with regulations, conserve disposal capacity, reduce injuries, and minimize or prevent environmental impacts. It involves advance thought, planning and coordination among individuals at various levels of government and the private sector with experience and expertise in waste management. A disaster debris management plan can help a community identify options for collecting, recycling and disposing of debris. Not only does a plan identify management options and sources for help, but it also can save valuable time and resources if it is needed.

Links to current disaster debris management plans will be updated in this schedule as required.

Appendix A – Existing System Report



Maura Walker & Associates
ENVIRONMENTAL CONSULTANTS

Solid Waste Management Plan Review and Update

Stage 1: Existing System Report

Prepared for

Regional District of Nanaimo

12 December 2013

Executive Summary

The Regional District of Nanaimo (RDN) has begun a review and update of the 2004 Solid Waste Management Plan (SWMP) which will be conducted in three stages. The first stage, the subject of this report, is an assessment of the current system and the implementation status of the 2004 Plan.

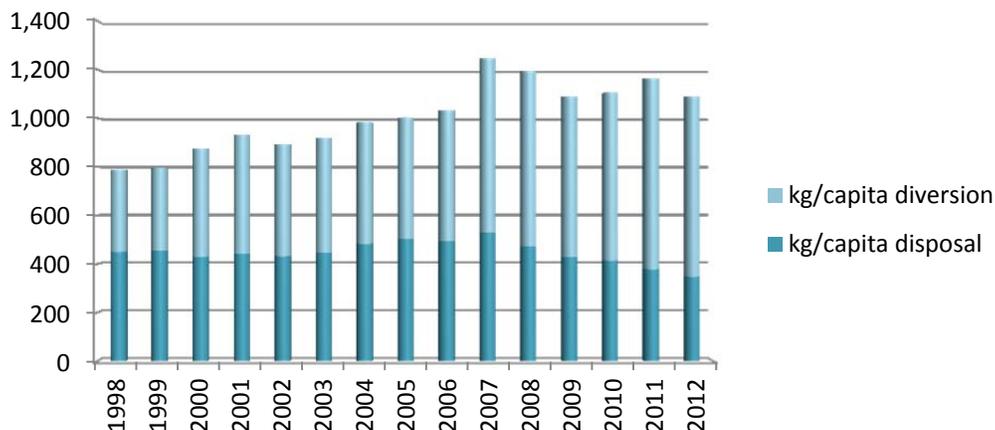
The RDN has fully implemented the key components of the 2004 SWMP, including:

- Banning commercial organic waste from disposal as garbage
- Implementation of an organics collection program for single-family homes
- Implementation of the Waste Stream Management Licensing Regulatory Bylaw
- Expansion of the capacity of the Regional Landfill within the existing property boundary through the construction of a geogrid toe berm.

The successful implementation of the SWMP has resulted in the RDN diverting a significant portion of solid waste away from landfilling to recycling and composting. In 2012, the RDN disposed 52,516 tonnes of garbage and diverted 112,853 tonnes to recycling, composting and extended producer responsibility programs, thereby achieving a diversion rate of 68%.

The per capita disposal (landfilled) rate for the RDN in 2012 was 347 kg per year, one of the lowest rates in British Columbia and across Canada.

Despite the RDN's success in increasing the amount of diversion, the overall quantity of solid waste generated (the amount landfilled + recycled + composted) continues to increase. The figure below shows per capita waste generation data from 1998 to 2012.

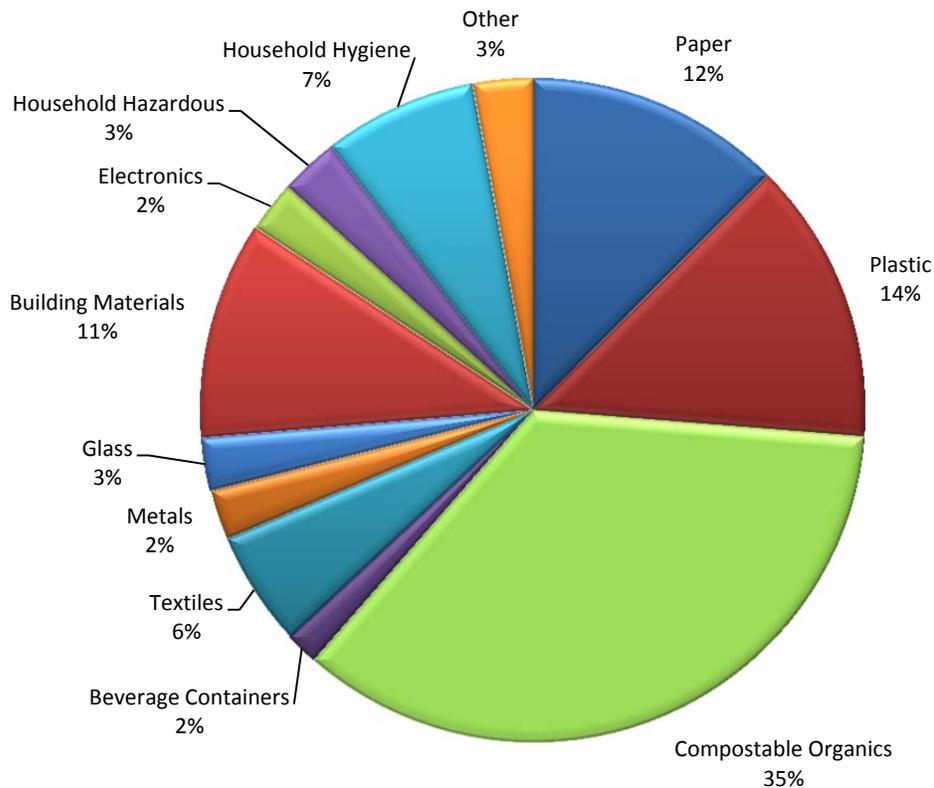


The existing solid waste management system in the RDN is diverse and reflects a mature waste management system. The key components of the existing system are:

- The adoption of “zero waste” as the waste diversion target – meaning that the RDN will continuously strive to reduce the amount of waste requiring disposal;
- A Regional Landfill that is designed and operated to maximize environmental protection;
- Curbside collection of recycling, kitchen scraps and recyclables for all single-family homes;
- User pay waste management fees for both the landfill and the curbside collection services;
- A policy of banning materials from disposal as garbage once a stable alternative use is identified
- An organics diversion strategy that enabled diversion of both residential and commercial food and yard waste;
- A Construction/Demolition Waste Strategy that banned the disposal of clean wood waste to drive the development of a recycling industry for waste from construction and demolition activities; and
- A waste stream facility licensing system that ensures that private waste management facilities operate at a high standard.

In the fall of 2012, with the zero waste target in mind, and as a first step in updating the RDN’s solid waste management plan, the RDN conducted a composition study of the waste sent to the Regional Landfill to determine what types of waste continue to be landfilled and by whom. This pie chart shows the proportion of the various waste materials being landfilled, based on weight. The data from the study indicates that roughly 35% of the waste currently landfilled could be composted and 20% could be recycled.

Solid Waste Management Plan Review and Update: Stage One Report



A review of scale house records indicates the sources of the waste received at the landfill, which are summarized in the table below. This table shows that 57% of the garbage is commercial waste generated by local businesses and institutions, and 22% is generated by homes.

Waste Source Type	Tonnes (2012)	% of waste disposed
Curbside residential waste	8,928	17%
Multi-family residential waste (estimated)	2,626	5%
Commercial waste	29,934	57%
Self-hauled waste ¹	11,028	21%
Totals	52,897	100%

The RDN's 2012 expenditure for operating the regional disposal system and undertaking a variety of zero-waste initiatives was \$17.3 million. Additionally, the 2012 combined expenditure for curbside collection services provided by the RDN, City of Nanaimo and Town of Qualicum Beach was \$7.7 million.

¹ Self-hauled waste refers to garbage brought to RDN solid waste facilities by private vehicles (passenger vehicles, pick-up trucks and vans) that manually remove waste from their vehicles. These vehicles are typically driven by residents and small contractors. For safety and efficiency purposes, unloading of self-haul vehicles is segregated from the large, commercial-scale waste collection vehicles that mechanically unload waste.

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1 Introduction

In British Columbia, each Regional District is mandated by the Provincial *Environmental Management Act* to develop a Solid Waste Management Plan that provides a long term vision for solid waste management, including waste diversion and disposal activities. Plans are to be 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.

The Regional District of Nanaimo (RDN) has begun a review and update of the 2004 Solid Waste Management Plan (SWMP) which will be conducted in three stages. The first stage is an assessment of the current system and the implementation status of the 2004 Plan. The second stage is the identification of options to address the region's future solid waste management needs, the selection of preferred options, and the development of a draft Plan. The third and final stage will be a community consultation process to obtain input into the draft plan and subsequent finalization of the updated Plan. Throughout the process, a combined public and technical advisory committee (the "Regional Solid Waste Advisory Committee") will be involved in the assessment and recommendation of options for consideration by the RDN's Board of Directors.

This report is part of the Stage 1 process and is an overview of the current (2012-2013) system to manage solid waste in the RDN. This report provides data on waste diversion and disposal and provides a description of the solid waste management policies, programs and activities happening within the RDN.

1.1 History of Solid Waste Planning in the RDN

The Province approved the RDN's first Solid Waste Management Plan (SWMP) in 1988. The main elements of this plan were a transfer station, a resource recovery facility and a sanitary landfill to manage the residuals from the facility (estimated to be 20% of the waste stream). The resource recovery plant was never built due to the inability of the facility's proponent to secure financing. Consequently, the RDN's new landfill was receiving 100% of the waste stream and was filling up much faster than anticipated at its inception. As a result, the RDN did a review of their solid waste management plan in 1992 to re-focus the plan on the reduction of waste sent to the landfill. As a result of this review, user pay garbage collection, curbside recycling and a backyard composting program and a disposal ban on cardboard were implemented.

In 1994, a full plan amendment began. This plan amendment was done in two parts. The first was the development of a "3Rs Plan" that was approved in 1996. This plan contained programs and policy initiatives to reduce the RDN's annual solid waste disposal needs by approximately 70%. The two major elements of the plan were the development of a privately built and operated composting facility for source-separated organics and a privately built and operated construction and demolition waste recycling facility.

The second part was the development of a residual waste management plan to address the portion of the waste stream that would not be eliminated or diverted through composting or recycling. The residual waste planning process assessed a wide array of processing and disposal options and conducted detailed

assessments of MSW composting (as a means of further reducing the amount of waste requiring disposal) and waste export (as an alternative to siting a new landfill in the RDN).

A new plan was approved in 2004 that brought together:

- the 3Rs Plan (now called the “Zero Waste Plan” due to the RDN adopting “zero” as their new waste diversion target in 2002);
- the outcomes of the residual waste management planning process; and
- a bylaw to license private solid waste management facilities.

1.2 Implementation Status of 2004 Solid Waste Management Plan

The key components of the 2004 solid waste management plan were:

- **Banning commercial organic waste from disposal as garbage:** This initiative supported the newly opened, privately built and operated composting facility (an objective of the original 3Rs Plan).
- **Implementation of an organics collection program for single-family homes:** This service was fully implemented throughout the RDN, including all municipal areas, by 2011.
- **Implementation of the Waste Stream Management Licensing Regulatory Bylaw:** The bylaw was implemented in 2005.
- **The export of garbage received at the Church Road Transfer Station to the Cache Creek Landfill:** The RDN exported garbage delivered to the Church Road Transfer Station through a contract with the Greater Vancouver Regional District (now called Metro Vancouver) from 1998 to 2005 as a means to preserve space at the Regional Landfill.
- **Expansion of the capacity of the Regional Landfill within the existing property boundary through the construction of a geogrid toe berm:** Construction of the first toe berm was completed in 2004. This expansion allowed for the cessation of waste export and for all RDN garbage to be disposed at the Regional Landfill.

Table 1-1 provides a list of the components of the zero waste plan and the residual waste plan, along with their implementation status at the time of preparing this report. All of the key components of the SWMP have been implemented. The Plan estimated that upon implementation, a diversion rate of 75% could be achieved; however the RDN achieved a 68% as of 2012 indicating that the 75% diversion estimate in the 2004 plan was optimistic. See Section 3.1 for more detail on the RDN’s diversion rate.

Solid Waste Management Plan Review and Update: Stage One Report

Table 1-1 Implementation Status of the 2004 Solid Waste Management Plan

2004 SWMP Zero Waste Components	Implementation Status
• Maintain compost education program	Done
• Maintain school education program	Done
• Maintain zero waste promotion and education	Done
• Maintain illegal dumping program	Done
• Continue to expand disposal bans as new diversion opportunities are established	Done. Disposal bans expanded to include commercial organic waste, yard waste, clean wood waste and products managed through EPR programs
• Conduct a waste composition study	Done. Completed in 2004 and 2012
• Provide technical assistance to waste stream management licensees	Done
• Conduct a curbside food and yard waste collection study	Done
• Maintain yard waste collection at RDN disposal facilities	Done
• Maintain recycling services at RDN disposal facilities	Done
• Maintain residential curbside garbage and recycling collection	Done
• Design and conduct a pilot organics collection program	Done
• Conduct a study on the market capacity for construction and demolition waste	Done
• Conduct a review of enhancing user pay for RDN curbside waste collection services	Done. Full user pay not implemented, but current can limit (plus tags) is close to full user pay
• Develop a RDN Zero Waste Policy to help guide RDN purchasing and operations	Not implemented.
• Implement a single family organics collection program (depending on outcome of pilot project)	Done
2004 SWMP Residual Waste Components	Implementation Status
• Export waste received at the Church Rd. Transfer Station to Cache Creek landfill until end of 2007	Done
• Export waste out of RDN for disposal once the Regional Landfill is full	Regional Landfill is not yet full
• Increase the capacity of the Regional Landfill through the construction of a geogrid toe berm (Phase 1)	Done
• Continue to develop a post-closure plan for the Regional Landfill	Done
• Acquire land for a new transfer station that will support full waste export	Done
• If needed, undertake Phase 2 of the geogrid toe berm at the Regional Landfill	Done
• Undertake a review of New and Emerging technologies that can reduce disposal needs or provide an alternative to landfilling all of the RDN's residual waste	Done

<ul style="list-style-type: none"> Continue to promote existing take-back programs operated by product stewardship organizations and encourage the establishment of new stewardship programs 	Done
<ul style="list-style-type: none"> Maintain the temporary permit for the landclearing waste burn facility on Doumont Road (subsequently renamed Weigles Rd.) until a preferable alternative is in place 	Done. Burn permit cancelled in 2006.
<ul style="list-style-type: none"> Work collaboratively with other Vancouver Island regional districts to identify cooperative strategies for waste management system improvements 	Done
2004 SWMP Other Components	Implementation Status
<ul style="list-style-type: none"> Implement Waste Stream Management Licensing Regulatory bylaw 	Done (Bylaw No. 1386, 2004)

1.3 2010 Solid Waste Management Plan Amendment

In 2009, the RDN updated the Regional Landfill Design & Operations Plan to address issues with Cell one – an area of the landfill that had been closed and capped. The remediation of cell one required that additional garbage be placed on top of the closed cell prior to conducting re-capping the cell. As the Design & Operations Plan was part of the 2004 Solid Waste Management Plan, this change to the landfill’s design required a Solid Waste Management Plan amendment. This amendment was approved by the Minister of Environment in August 2010.

2 Plan Area

2.1 Description of the RDN

The Regional District of Nanaimo is located on the central east coast of Vancouver Island. Communities within the regional district include the municipalities of Nanaimo, Lantzville, Parksville, and Qualicum Beach, as well as seven unincorporated Electoral Areas. A map showing the locations of each of these municipalities and areas is provided as Figure 2-1.

The Regional District delivers a variety of regional services that are common to both the electoral areas and municipalities, such as sewage treatment, district recreation, regional parks, solid waste disposal, and transit. The Regional District also provides local services to electoral areas, such as community planning, watershed protection, community recreation, community parks, and utilities. Member municipalities provide similar services within their own jurisdictions.

The RDN is governed by a 17-member Regional Board, comprised of ten directors from locally-elected municipal councils, and seven directors elected by Electoral Area residents.

2.2 Demographic Data

BC Stats reports the 2011 population for the Regional District of Nanaimo as 146,574. Of this number, 26% (37,550) lived in electoral areas and the remaining 74% (108,075) lived in municipalities.

Name	2011 Population ²
Lantzville	3,601
Nanaimo	83,810
Parksville	11,977
Qualicum Beach	8,687
Electoral Area A	6,908
Electoral Area B	4,045
Electoral Area C	2,834
Electoral Area E	5,674
Electoral Area F	7,422
Electoral Area G	7,158
Electoral Area H	3,509
First Nation Reserves	949
Total for RDN	146,574

² At time of writing, BC Stats reports varying numbers for RDN population, likely due to revisions happening as 2011 Census data is refined. The source of the data is: <http://www.bcstats.gov.bc.ca/StatisticsBySubject/Census/2011Census>.

Figure 2-1



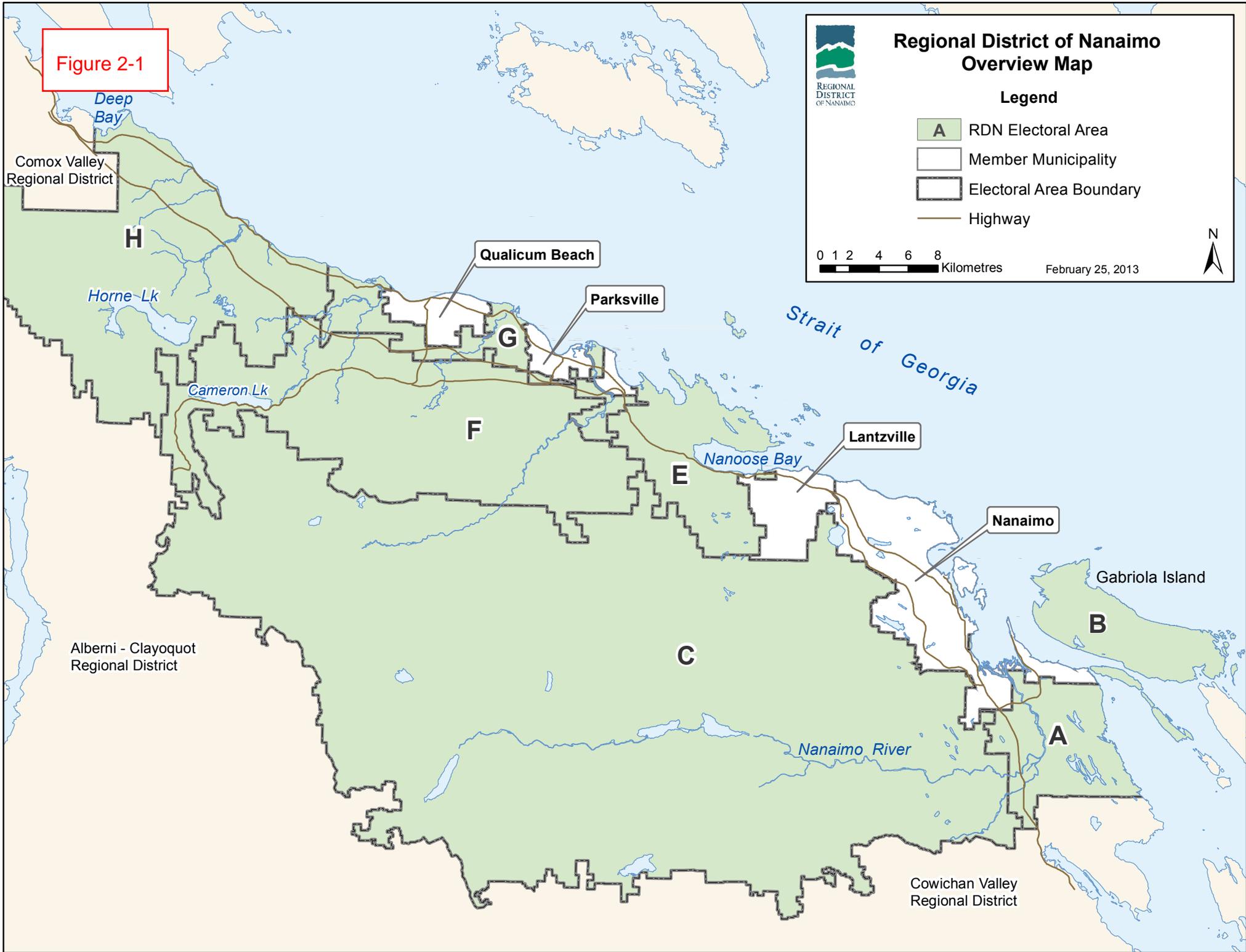
Regional District of Nanaimo Overview Map

Legend

- RDN Electoral Area
- Member Municipality
- Electoral Area Boundary
- Highway

0 1 2 4 6 8 Kilometres

February 25, 2013



The population of the region increased from 77,624 residents in 1981 to 146,574 residents in 2011. This means an increase of 89% during that time and at an average annual growth rate of approximately 3%.

A population and housing study conducted by the RDN in 2007 estimated a 2006 population of 144,317 residents and used this as the basis to calculate future population growth. The study forecasts a population increase of 60 percent from 144,317 residents in 2006 to 231,184 residents by 2036 (BC Statistics, www.bcstats.gov.bc.ca, Urban Futures, 2007).

The study forecasts that the region will "grow at a slowing annual rate from roughly two percent today (2007) to just under one percent by 2036" compared to the three to five percent growth rates in previous decades. Since this study was done, the Regional District of Nanaimo has experienced lower growth than anticipated with 138,631 residents in the 2006 Census and 146,574 residents in 2011 compared to the predicted population of 158,767. Based on the forecast study and the 2011 Census results, it is anticipated that the Region's population will increase at a slower rate over the next two decades while at the same time growing older.

The Region's population has aged significantly since 1986 with the majority of the population now over the age of 45. Between 2006 and 2011 the median age of the Region's population increased from 46.6 to 49.3. It is predicted that the population will continue to grow older with significant implications for land use, housing, services and employment.

2.3 Housing

According to Statistics Canada's 2006 Census data, there were 59,875 homes (occupied dwellings) in the Regional District of Nanaimo in 2006.³ Table 2-1 provides shows the percentage of each type of housing.

Table 2-1 Housing in the Regional District of Nanaimo

Housing Type	% of homes in the RDN
Single-detached houses	68%
Semi-detached houses	4%
Row houses	4%
Apartments, duplex	5%
Apartments in buildings with fewer than five storeys	13%
Apartments in buildings with five or more storeys	2%
Other dwellings	4%

Source: Statistics Canada. 2006 Community Profiles.

³ Statistics Canada. 2006 Community Profile for Regional District of Nanaimo

3 Characterization of the RDN’s Solid Waste Stream

This section provides information on the quantity and characteristics of discarded materials that are collected for recycling, composting and landfilling. The disposal data is further assessed to provide an understanding of the types of materials (paper, metal, organics, etc.) that currently compose the waste being landfilled and which sectors are contributing to the waste.

3.1 Waste Generation Data

The per capita disposal (landfilled) rate for the RDN in 2012 was 347 kg per year. Figure 3-1 shows the variation in the RDN per capita disposal rate from 1992 to 2012, showing a reduction trend in the amount of waste disposed, with the exception of 2004-2008 (during the housing boom).

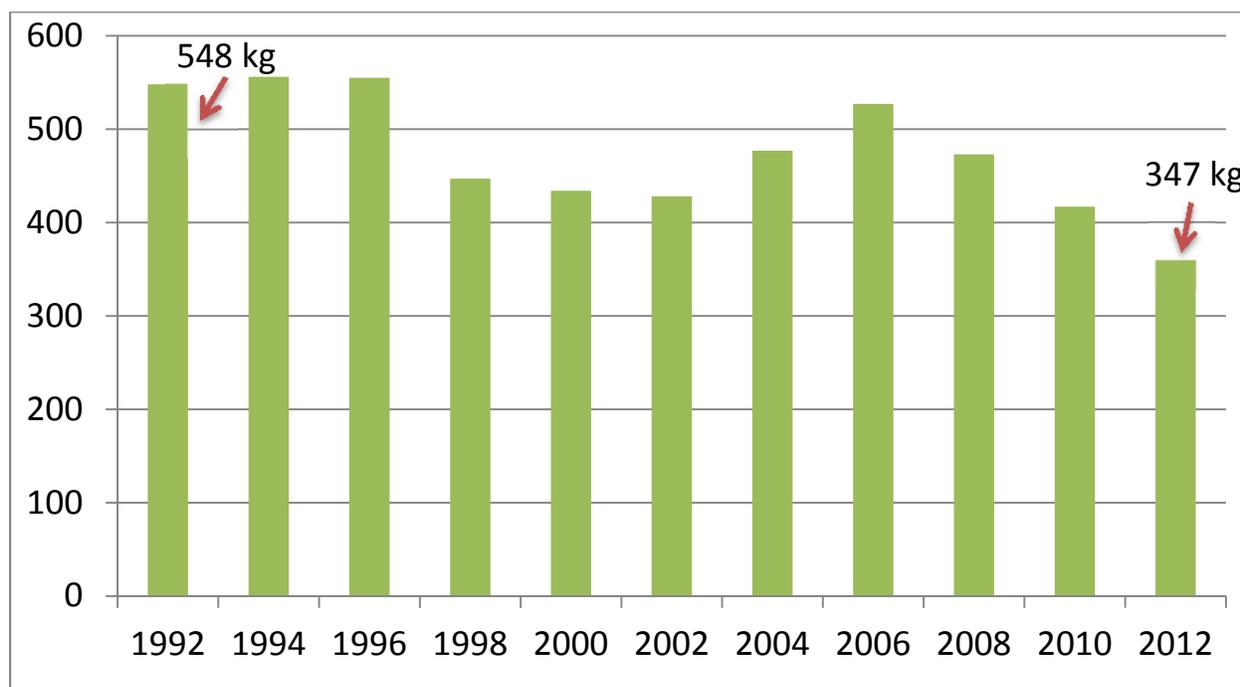


Figure 3-1 1992 – 2012 RDN Disposal Rate (kg/capita)

Disposal data collated by the BC Ministry of Environment for 2010⁴ indicates that the RDN has one of the lowest disposal rates in BC (the RDN’s disposal rate in 2010 was 410 kg/capita). Figure 3-2 shows how the RDN compared to other BC regional districts in 2010.

⁴ At the time of writing this report (May 2013), this data is draft.

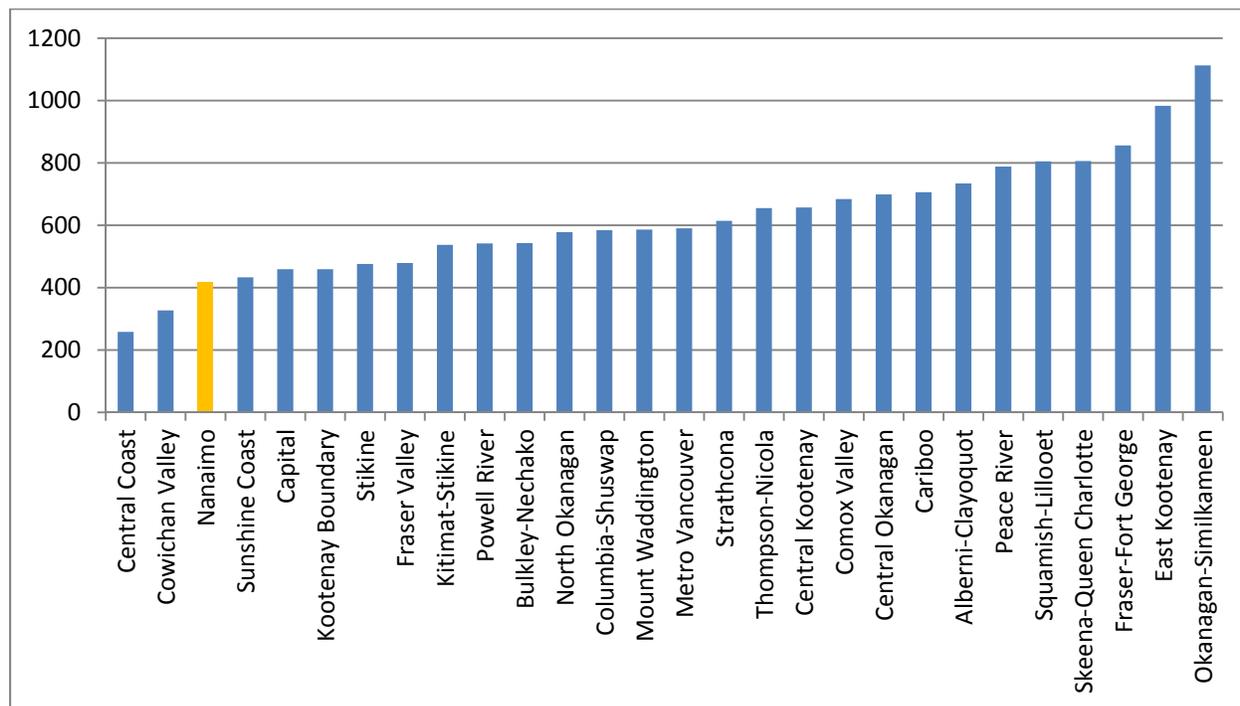


Figure 3-2 Disposal Rates (kg/capita/year) for BC Regional Districts (2010)

“Waste generation” refers to the total amount of solid waste discarded in the RDN, which is the sum of waste recycled, composted and landfilled. Table 3-1 also shows the “diversion rate”, which is the amount of waste *diverted* to recycling or composting relative to the amount of waste *generated*. Table 3-1 provides disposal, diversion and waste generation data from 1998 to 2012. In 2012, the RDN disposed 52,516 tonnes of garbage and diverted 112,853 tonnes to recycling, composting and extended producer responsibility programs, thereby achieving a diversion rate of 68%.

Table 3-1 Disposal and Diversion (1998 – 2012)

Year	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Disposal															
Municipal solid waste	51,041	50,382	48,995	52,154	51,778	57,165	62,484	68,824	66,444	71,930	67,959	61,834	60,890	54,815	52,460
Construction/demo ¹	6,815	8,237	6,552	5,258	4,853	4,257	5,307	7,692	6,515	6,624	2,110	1,284	519	129	56
Total Disposal	57,856	58,619	55,547	57,412	56,631	61,422	67,791	76,516	72,959	78,554	70,069	63,118	61,409	54,944	52,516
Diversion²															
Cardboard & Boxboard	detailed data unavailable										20,011	20,416	17,536	17,718	15,106
Commingled loads														15,733	16,951
Mixed Paper											842	1,367	2,604	916	2,429
Newspaper											13,930	13,400	5,932	4,703	1,822
Glass											1,545	2,453	732	750	1,014
Plastic											2,097	2,200	2,395	1,327	1,485
Scrap Metal ⁵											9,467	8,432	8,893	8,601	7,871
Asphalt Shingles											4,130	2,924	2,063	2,611	1,465
CD/Wood Waste ⁴											23,500	20,189	16,348	16,137	14,898
Wood Waste (Landfill cover)											1,000	1,000	1,000	550	1,105
Food Waste											3,472	3,408	4,117	7,761	9,763
Yard Waste											12,478	12,757	11,098	12,089	11,382
Landclearing											5,629	2,993	17,295	11,434	10,222
Gypsum											3,400	2,924	3,272	2,190	2,268
Textiles														1,681	1,520
Stewardship programs ⁶											450	638	7,800	7,000	9,552
Subtotal of Recycling	38,362	36,526	49,995	55,265	51,972	58,318	62,762	64,448	71,801	99,078	101,951	95,101	101,085	111,201	108,853
Backyard composting	5,400	7,700	7,400	3,700	4,500	4,900	4,700	4,500	4,000	3,500	3,200	3,200	3,200	4,000	4,000
Total Diversion	43,738	44,244	57,385	63,394	60,681	63,218	67,462	68,948	75,801	102,578	105,151	98,301	104,285	115,201	112,853
Total Generated (Disposed + Recycled)	101,594	102,863	112,932	120,806	117,312	124,640	135,253	145,464	148,760	181,132	175,220	161,419	165,694	170,145	165,369
Diversion Rate	43%	43%	51%	52%	52%	51%	50%	47%	51%	57%	60%	61%	63%	68%	68%
Population	128,912	129,062	129,069	129,828	131,322	133,502	135,099	138,248	141,246	143,020	145,870	148,042	149,665	150,635	151,508
kg/capita disposal	449	454	430	442	431	460	502	553	517	549	480	426	410	365	347
kg/capita diversion	339	343	445	488	462	474	499	499	537	717	721	664	697	765	745
kg/capita generation	788	797	875	931	893	934	1001	1052	1053	1266	1201	1090	1107	1130	1091

Note: Data reported by RDN staff. Population data does not match with data provided in Section 2.2.

3.1 Trends in Waste Generation

Figure 3-3 shows waste generation data from 1992 to 2012 and Figure 3-4 shows the change in per capita waste disposal from 1998 to 2012. Both show a trend towards increased waste diversion as a percentage of overall waste generated.

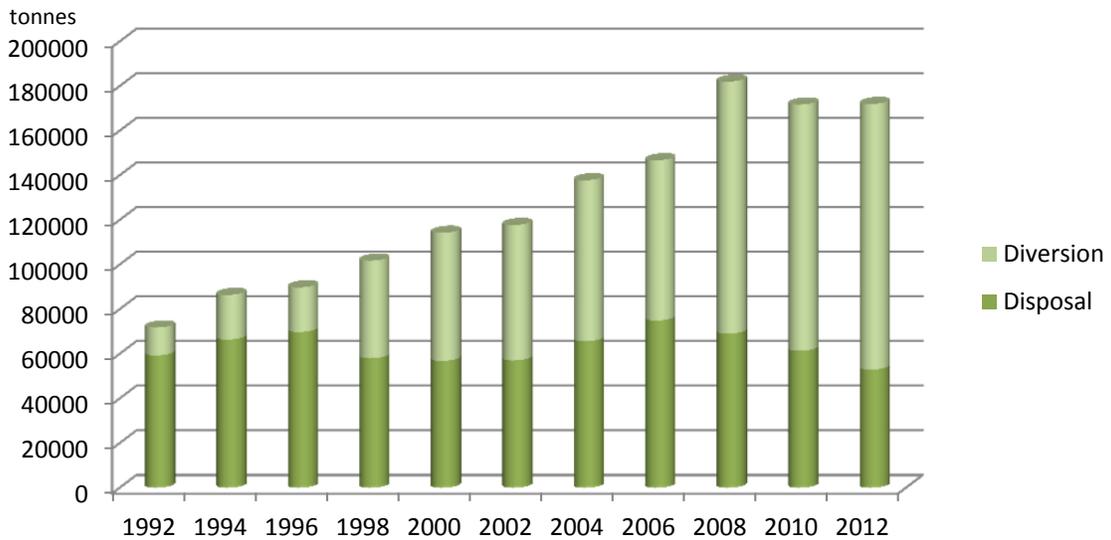


Figure 3-3 Total Waste Generation (1992 – 2012)

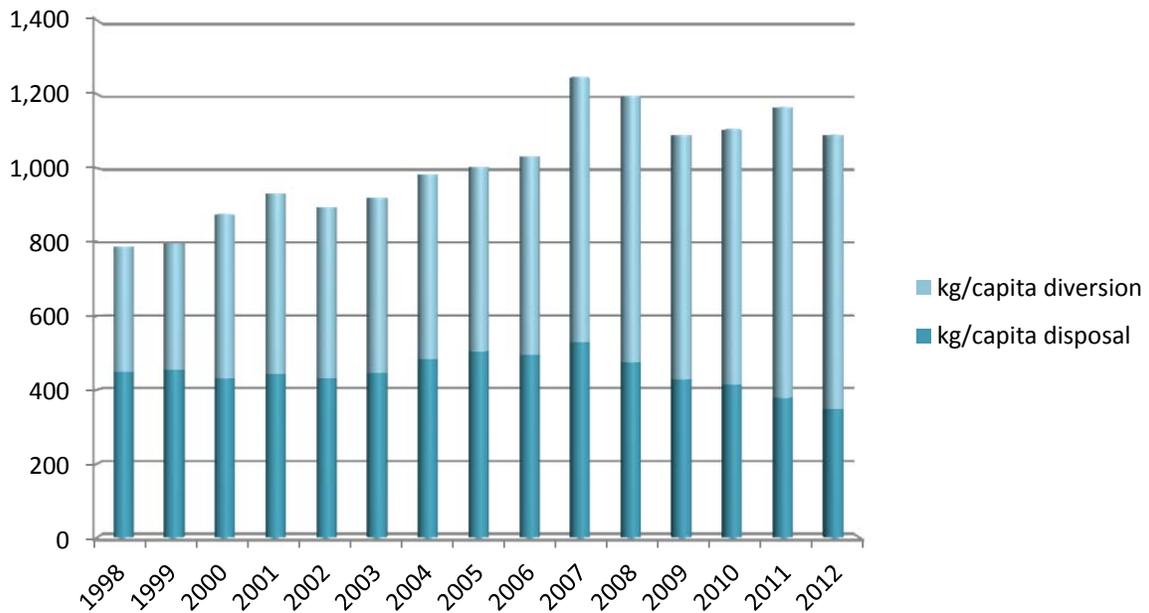


Figure 3-4 Per Capita Waste Generation (1998-2012)

3.2 Sources of Disposed Waste

Based upon scale house data collected at the RDN's disposal facilities (the Church Road Transfer Station and the Regional Landfill), an estimate of the sources of the waste sent to disposal was developed and is provided in Table 3-2.

Table 3-2 Sources of Waste Disposed in the RDN

Waste Source Type	Tonnes (2012)	% of waste disposed
Curbside residential waste	8,928	17%
Multi-family residential waste (estimated)	2,626	5%
Commercial waste	29,934	57%
Self-hauled waste	11,028	21%
Totals	52,897	100%

The quantity of waste (garbage) allocated to “curbside residential waste collection” is based on the garbage collected by municipal and RDN curbside garbage collection programs. The “commercial waste collection” refers to garbage delivered by private waste collection companies and includes garbage generated by businesses and institutions (schools, hospitals, care facilities). Multi-family residential waste refers to garbage generated by apartments and condominiums, which are not included in the curbside garbage collection programs. “Self-hauled waste” refers to garbage that was delivered to the RDN's disposal facilities in vehicles other than commercial waste collection trucks, including cars, vans and pickup trucks operated by residents and small businesses.

3.3 Composition of Disposed Waste

In 2012, the RDN conducted a waste composition study to determine what types of waste materials are being landfilled and in what proportion. The results of this study are shown in Figure 3-5, which provides the estimated composition of the solid waste landfilled in the Regional District of Nanaimo. The study data indicates that the largest components of the waste landfilled in the RDN are: compostable organics (35%), plastic (14%), paper products (13%), building materials (11%), and household hygiene (7%). A more detailed breakdown of the waste composition data can be found in Appendix A.

The composition of the waste disposed can also be viewed in terms of what materials have alternative methods of management available, including recycling, composting or EPR programs. Figure 3-6 shows that roughly 63% of the waste landfilled has an alternative waste management method available.

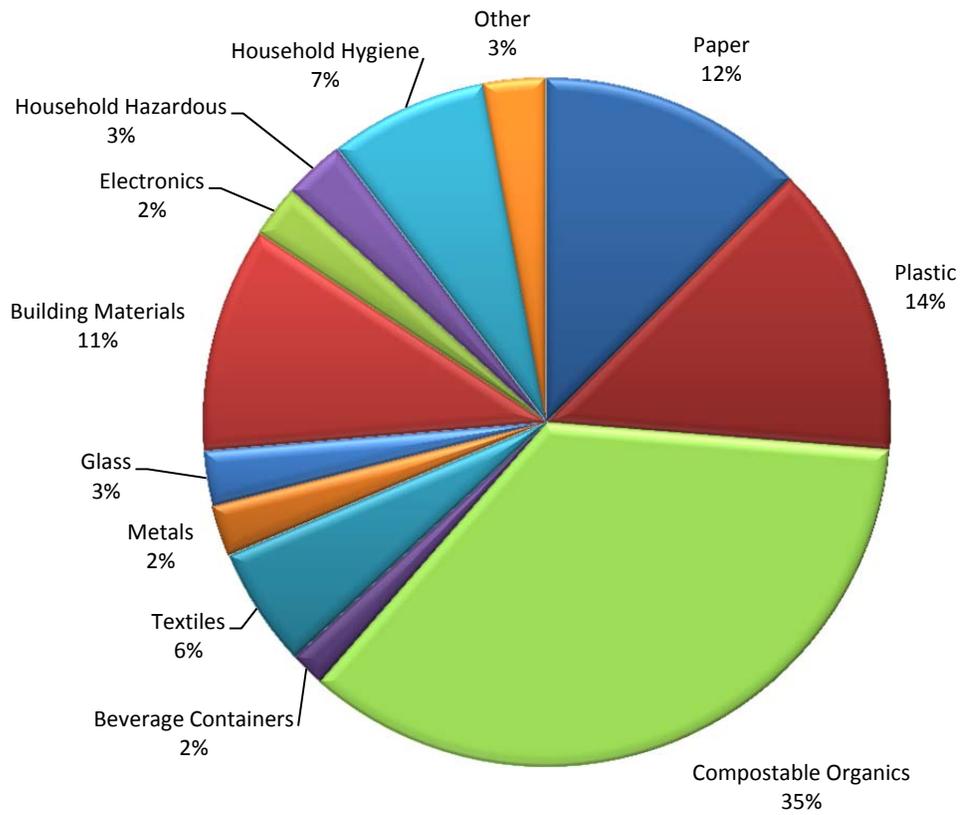


Figure 3-5 Composition of Waste Disposed, by Material (2012 data)

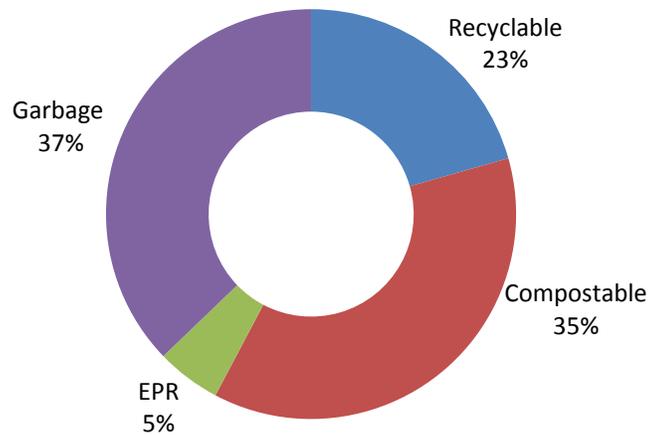


Figure 3-6 Composition of Waste Disposed, by Waste Management Alternative (2012 data)

3.3.1 Comparison of 2004 and 2012 Waste Composition

Figure 3-7 presents a comparison between the findings from the 2004 and the 2012 waste composition studies. The data is presented using kilograms per capita to provide an indication of which waste materials appear to be increasing in the waste stream, and which appears to be decreasing. The most notable change is in compostable organics, which decreased 31% from approximately 178 kg/capita in 2004 to 122 kg/capita in 2012. Metals disposed decreased 71% from 29 kg/capita to 8.5 kg/capita in 2012. Disposal of building materials also decreased from 47 kg/capita to 38 kg/capita. In contrast, household hygiene (primarily diapers) is estimated to have increased from approximately 10 kg/capita in 2004 to 26 kg/capita in 2012. Electronics disposed increased from roughly 3 kg/capita to almost 9 kg/capita in 2012.

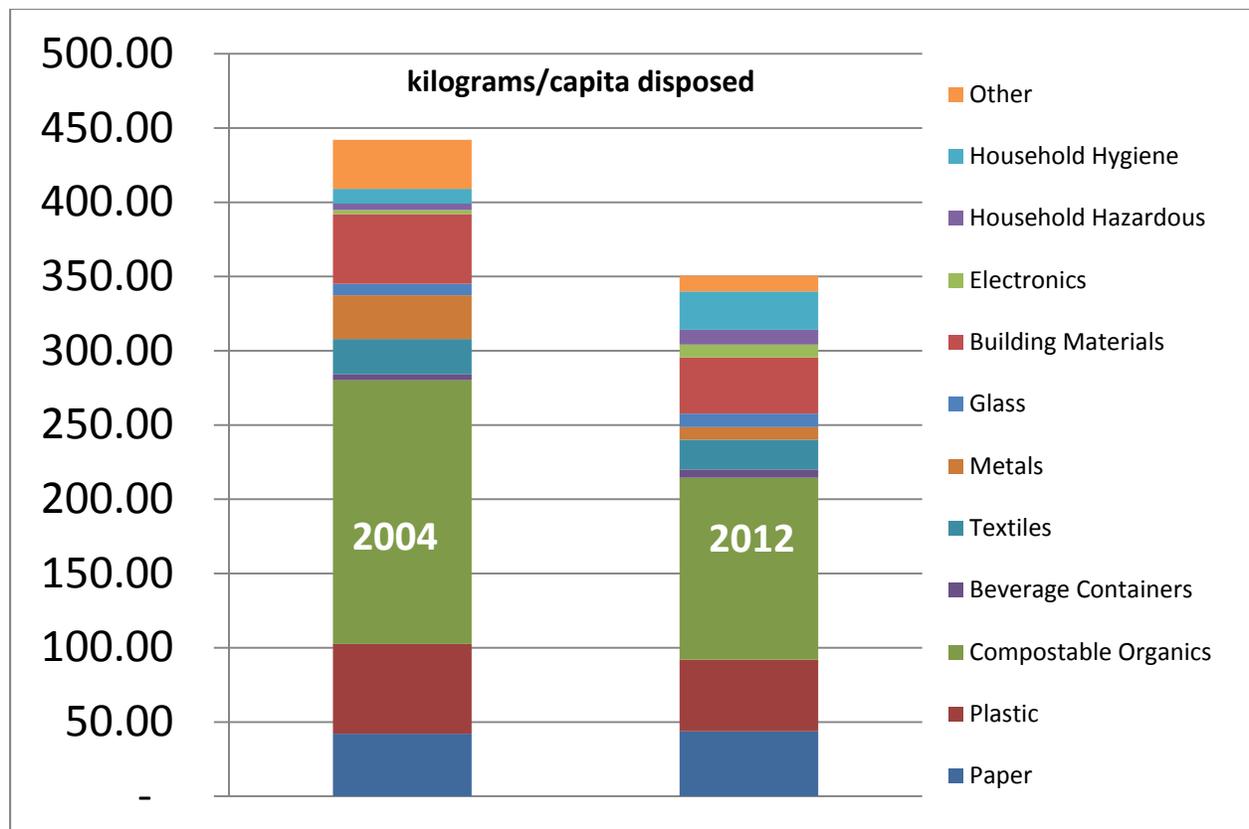


Figure 3-7 Comparison of 2004 to 2012 Waste Composition

4 Overview of Existing Waste Management System

This section provides a high-level overview of the system to manage solid waste in the RDN. There are many actors within the system providing a wide array of services. Figure 4-1 is a schematic diagram showing the breadth of activities and actors engaged with the current solid waste management system. There are a wide range of waste management activities underway that reflect both a relatively mature waste management system and significant economic activity based on secondary resources.

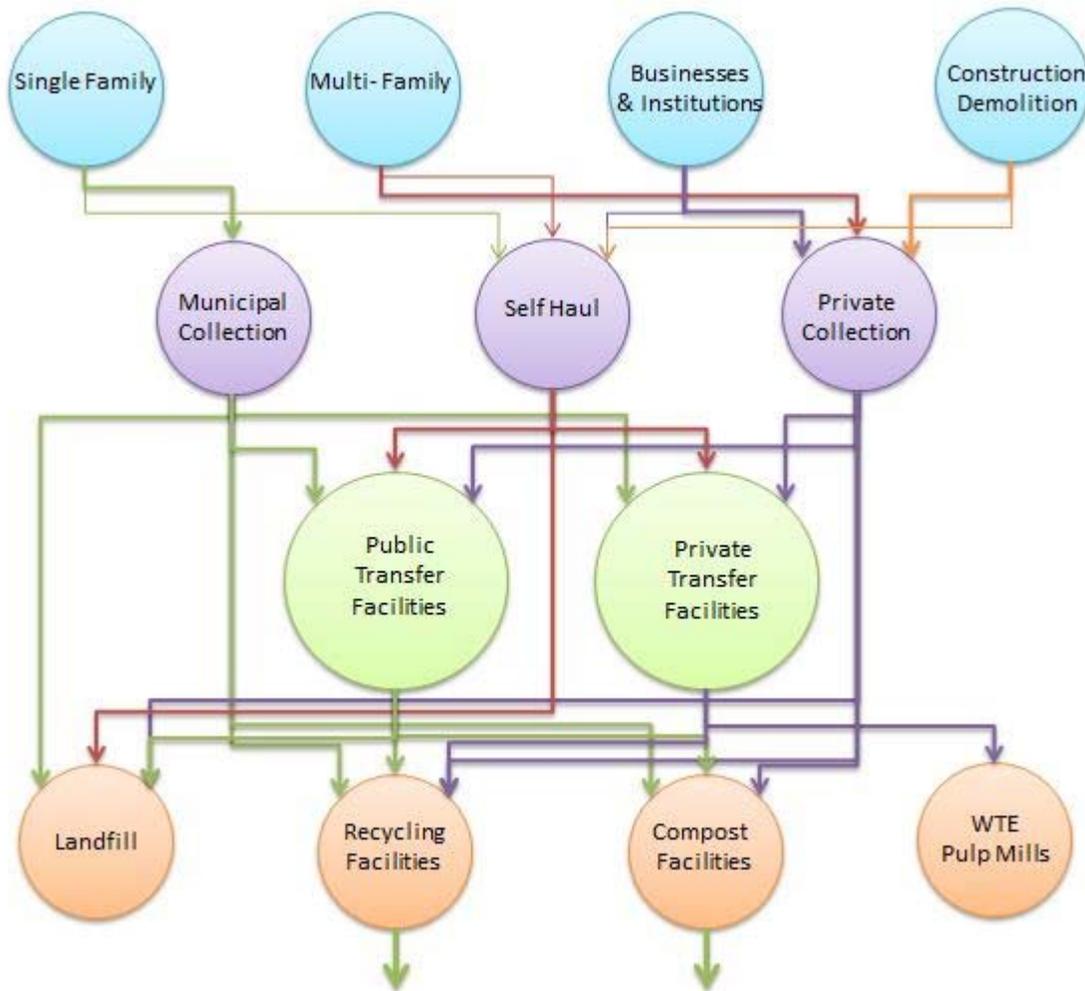


Figure 4-1 Components of the Waste Management System in the RDN

4.1 Key Facilities

The waste management system is reliant on a range of activities that deliver discarded materials to waste management facilities. These facilities include:

- The RDN's Church Road Transfer Station;
- Licensed private transfer stations;
- Licensed private and non-profit recycling and composting facilities; and
- The RDN's Regional Landfill site.

These facilities are mapped on Figure 4-2 and described in sections 12 through 17. There are many other smaller facilities that contribute to the solid waste management system, including bottle depots and other businesses and non-profits involved in providing EPR (extended producer responsibility) services. A list of all solid waste facilities and the materials managed at each facility is provided as Appendix B.

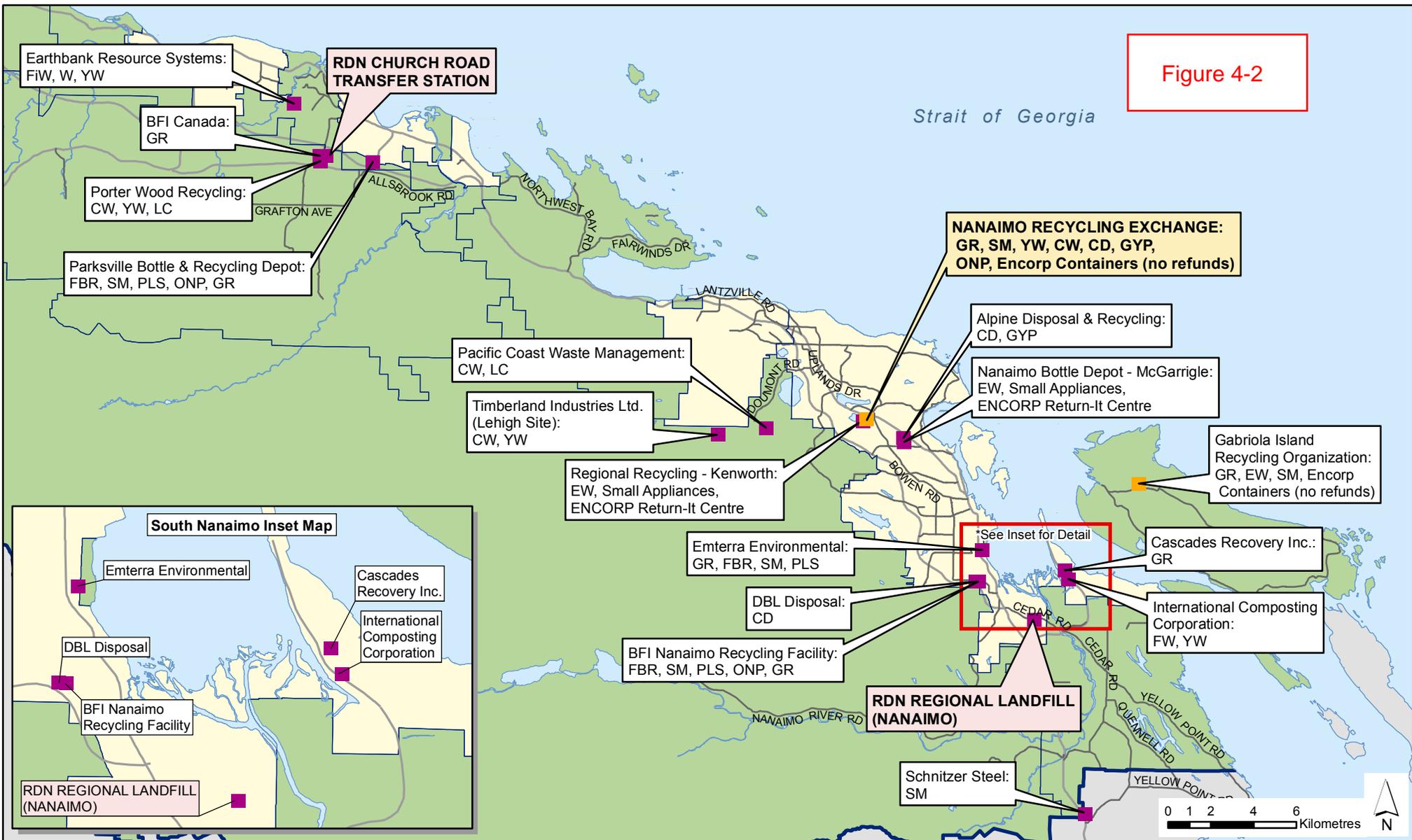
4.2 Policy Framework

The RDN's waste management system is being driven by a number of foundational policies:

- The adoption of "zero waste" as the waste diversion target – meaning that the RDN will continuously strive to reduce the amount of waste requiring disposal;
- Ensuring that the Regional Landfill is designed and operated to maximize environmental protection and that the cost of this facility be reflected in the tipping fees charged. (The relatively high tipping fees in the RDN encourage the establishment of recycling and composting businesses);
- The RDN's policy of banning materials from disposal as garbage once a stable, alternative use is identified;
- An organics diversion strategy that set the right conditions for the private sector to invest in food waste composting and collection services (see Section 4.3);
- A construction/demolition waste strategy to drive the development of a recycling industry for waste from construction and demolition activities; and
- A waste stream facility licensing system that ensures that private waste management facilities operate at a high standard.

A description of the Regional Landfill design and operation are provided in Section 16.2. The other three foundational policies are described below, in sections 4.1, 4.2 and 4.3. Other solid waste policies, activities and infrastructure are described in Sections 5 through 18.

Figure 4-2



RDN Solid Waste & Recycling Facilities

Legend

- Licenced
- Application in Process
- Highway
- Electoral Area
- Municipality
- RDN Boundary

Materials

General Recycling (Blue Box Materials, Re-used Items)	GR	Scrap Metal Fibre	SM FBR	Construction Demolition Food Waste	CW FW	Gypsum Biosolids	GYP BS
News Print	ONP	Land Clearing	LC	Yard Waste	YW	E Waste	EW
Plastics	PLS	Clean Wood	CW	Asphalt Shingles	ASHG	Fish Waste	FW

4.3 Organics Diversion Strategy

A cornerstone of the RDN's 2004 solid waste management plan was the diversion of organic waste from landfilling. In 2004, organic waste represented 50 % of the RDN's residential waste stream by weight and 40% of the ICI waste stream; therefore a focus on the diversion of organics was determined to be the single most effective means of increasing diversion of waste from landfilling.



The 2004 waste composition study indicated that the diversion of yard waste through drop-off depots was effective, so the organics diversion strategy focused on the diversion of food waste. The strategy targeted ICI food waste and residential food waste separately.

The Organics Diversion Strategy targeted both commercial and residential food waste diversion. The diversion of ICI-generated food waste was the first priority because of the large volumes generated at a relatively small number of locations (compared to residential organics). The RDN committed to banning ICI food waste from disposal in the landfill as long as a local alternative was available. With the development of a private in-vessel composting facility that could manage ICI food waste in the region, the RDN banned commercial food waste in 2005.

The next priority, residential food waste diversion, required a multi-stepped approach:

1. An initial assessment of residential organics diversion programs in other jurisdictions (completed in 2005);
2. Based on the successes experienced in other jurisdictions, a residential food waste collection pilot project ran from October 2007 to October 2008; and
3. Based on the success of the pilot project, both in terms of diversion and community acceptance, a full-scale residential food waste collection program was implemented in 2011.

4.4 Construction/Demolition Waste Strategy

In February 2007 the Regional Board approved a Construction/Demolition (CD) Waste Strategy. Key initiatives in the strategy include:

- Increasing the tipping fee for clean wood waste at RDN Solid Waste Facilities to create incentives to divert this material to licensed recycling facilities;

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- A ban on disposal of clean wood waste in the Regional Landfill and roll-off containers of wood waste at RDN Solid Waste Facilities; and
- Arranging contracts with third party wood waste recycling facilities to manage wood waste received at the landfill and transfer station from small self-haulers.
- Effective January 1, 2008, the RDN banned clean wood waste from disposal in the Regional Landfill and roll-off containers of wood waste at RDN Solid Waste Facilities.

As a result of the strategy there are currently several CD waste management facilities in RDN and clean wood waste is no longer buried as garbage in the regional landfill. Additional information on CD waste management and a list of CD waste recycling facilities can be found in Section 15.

4.5 Waste Stream Management Licensing Bylaw

RDN Bylaw 1386 requires most solid waste management facilities operating in the RDN to maintain a Waste Stream Management License (WSML)⁵. A similar bylaw is in place in the Cowichan Valley Regional District. The authority to license and regulate solid waste facilities is given to regional districts through BC's Environmental Management Act and the RDN's licensing bylaw was enacted under the 2004 Solid Waste Management Plan.

The RDN's licensing bylaw (Bylaw # 1386) was established to fulfill the following objectives:

1. Create a high standard of operation for waste management facilities located in the RDN.
2. Encourage and protect legitimate waste management operations within the RDN.
3. Establish a reporting system for the flow of waste materials within the RDN to assist in tracking our waste reduction rate.
4. Protect and enhance the waste reduction rate achieved in both regional districts.
5. To provide a level playing field in the two regional districts.

All facilities that handle municipal solid waste (MSW) in whole or part are included in the licensing system: with the exception of those facilities noted under "exclusions" below. This means that transfer stations, recycling depots, composting facilities, material recovery facilities and brokers are subject to the licensing system. Facilities that are excluded from obtaining a license are:

- disposal facilities such as landfill and incinerators (because these facilities are regulated by the Province);
- soil facilities;
- stewardship program depots;
- concrete and asphalt recycling operations and auto wreckers; and
- municipally owned facilities.

Currently there are 12 waste stream management licenses in place in the RDN and 2 applications under review. A list of currently licensed facilities and facilities currently undergoing application review is provided in the Table 4-1.

⁵ The WSML bylaw can be found at <http://www.rdn.bc.ca/cms/wpattachments/wplD224atID652.pdf>.

Table 4-1 RDN Waste Stream Management License Holders

Waste Stream Management License Holders (as of April 2013)	
1.	Schnitzer Steel Pacific
2.	Parksville Bottle & Recycling Depot
3.	International Composting Corporation
4.	BFI Nanaimo Recycling Facility
5.	Emterra Environmental
6.	Earthbank Resource Systems
7.	Alpine Disposal & Recycling (ADR)
8.	Pacific Coast Waste Management (PCWM)
9.	Porter Wood Recycling Ltd.
10.	DBL Disposal Service Ltd.
11.	BFI Canada, Springhill
12.	Cascades Recovery Inc.
Waste Stream Management Applications Under Review (as of April 2013)	
13.	Gabriola Island Recycling Organization
14.	Nanaimo Recycling Exchange

4.6 Disposal Bans

The practice of banning the disposal of specific wastes from the landfill, when viable recycling alternatives are in place, has been used by the RDN since 1991. Current landfill bans on recyclable/compostable materials include drywall (implemented in 1991), cardboard (1992), paper, metal and tires (1998), commercial food waste (2005), yard and garden waste (2007) wood waste (2007) and EPR materials designated under BC's recycling regulation (2007), household plastic containers (2009) and metal food and beverage containers (2009). Disposal bans are considered to be a critical policy mechanism to drive diversion activities, particularly in the ICI and construction/demolition sectors.

Table 4-2 provides a detailed list of materials currently banned from disposal at the Regional Landfill and the Church Road Transfer Station.

Table 4-2 “Prohibited Waste” at RDN Solid Waste Disposal Facilities

At the Regional Landfill	At Church Road Transfer Station
<ul style="list-style-type: none"> • Biomedical Waste • Commercial Organic Waste • Concrete or asphalt pieces, or rocks greater than 0.03m³ or 70 kg • Corrugated Cardboard • Drums • Garden Waste • Gypsum • Hazardous Waste • Ignitable Wastes • Land Clearing Waste • Liquids • Metal • Motor vehicle bodies and farm implements • Municipal Solid Waste that is on fire or smouldering • Radioactive Waste • Reactive Wastes • Recyclable Paper • Stewardship Materials • Special waste, as defined in the Special Waste Regulation (British Columbia) except asbestos • Tires • Wood Waste 	<ul style="list-style-type: none"> • Same items as the Regional Landfill plus: <ul style="list-style-type: none"> ○ Controlled Waste

5 Reduction and Reuse Activities



Both the RDN and the City of Nanaimo encourage residents to “reduce and reuse.”

Both organizations promote backyard composting through providing information on their websites on how to backyard compost and grasscycle. Since the mid-1990s, the RDN has sold roughly 16,000 low-cost backyard composters to residents. In recent years, the RDN has stopped distributing composters and instead encourages residents to build their own or purchase one from a local retailer. Backyard composting is believed to have a significant impact on reducing the waste that requires collection and subsequent management. A typical backyard composter is estimated to divert 250 kg per year. Assuming that only the RDN-distributed composters are being used, an estimated 4,000 tonnes of organic waste materials is being diverted each year.

The City of Nanaimo holds a reuse-focused event each spring called “Reuse Rendezvous.” This event promotes reuse through a weekend long curbside swap meet for residents to put out items that they no longer want and that may be useful to others.

REUSE RENDEZVOUS 2013: *Give Unwanted Household Items a Second Chance*



In addition to the Regional District's and City's reduction and reuse activities, there are several other organizations involved in reuse in the RDN, including several private and non-profit retailers and many on-line classified services such as Craigslist and UsedNanaimo.com that are actively involved in the sale and purchase of used goods.

6 Single Family Collection



All single-family homes in the RDN (approximately 53,500 homes) receive curbside collection of garbage, recyclables and kitchen scraps (food waste and compostable paper). Within the City of Nanaimo, the City's in-house staff collect garbage and kitchen scraps and a contractor collects the recyclables. In the RDN service area, all collection services are provided through a contractor, with the exception of garbage collection in the Town of Qualicum Beach, where garbage is collected by the Town.

Curbside garbage and recycling for all single-family homes has been in place since the early 1990s; the collection of kitchen scraps was fully implemented by 2011. Figure 6-1 and Table 6-1 show the proportion of household discards that are being collected as garbage, recycling and kitchen scraps. In 2012, each household set out an average of 400 kg of discards, of which roughly 60% were diverted to recycling or composting. Figure 6-1 also shows that the total amount of single-family discards collected decreased by roughly 10% from 2006 to 2012.

Figure 6-1 Total Single-Family Discards 2006-2012

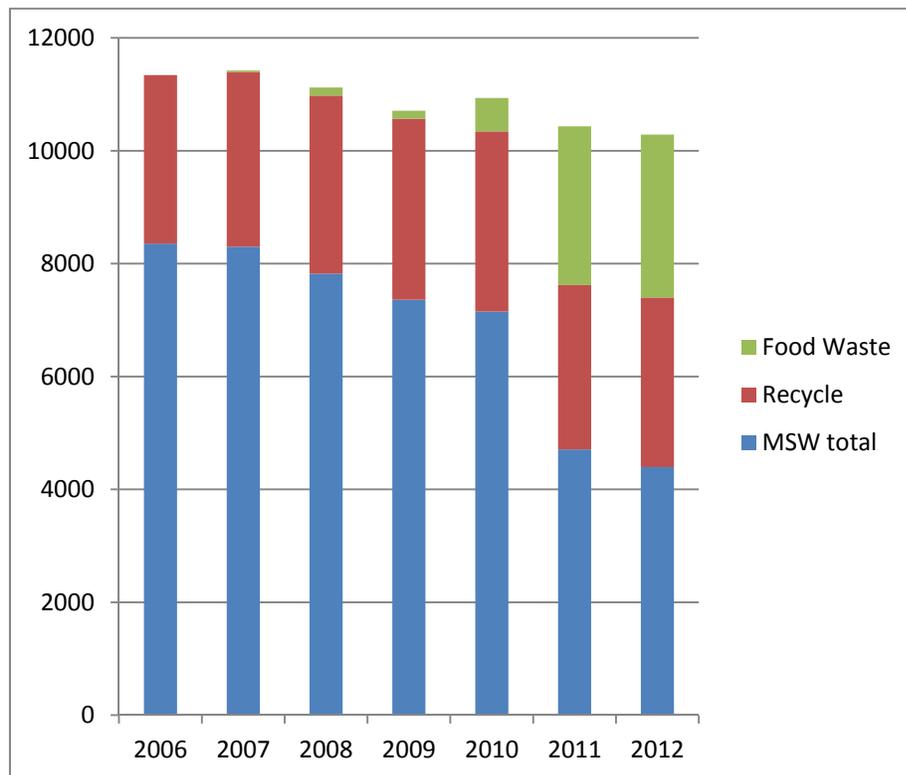


Table 6-1 2012 Single Family Discards: City of Nanaimo and RDN

	City of Nanaimo Curbside Collection	Regional District of Nanaimo Curbside Collection	Total Single Family Residential (tonnes)
Garbage (kg/home/year)	156	163	8,416
Recycling (kg/home/year)	132	111	6,749
Kitchen Scraps (kg/home/year)	132	107	6,247
Total (kg/home/year)	420	381	21,412
Diversion of Single-Family Discards to Recycling and Composting	60%	57%	61%

Figure 6-2 shows total discards on a per household basis. This diagram shows that the average amount that each household sets out at the curb (garbage + recycling + kitchen scraps) has been on the decline. This reduction is very positive from a zero waste goal perspective. This trend could be attributed to a slowing of economic activity in recent years, but may also be influenced by waste reduction initiatives happening locally, provincially and nationally.

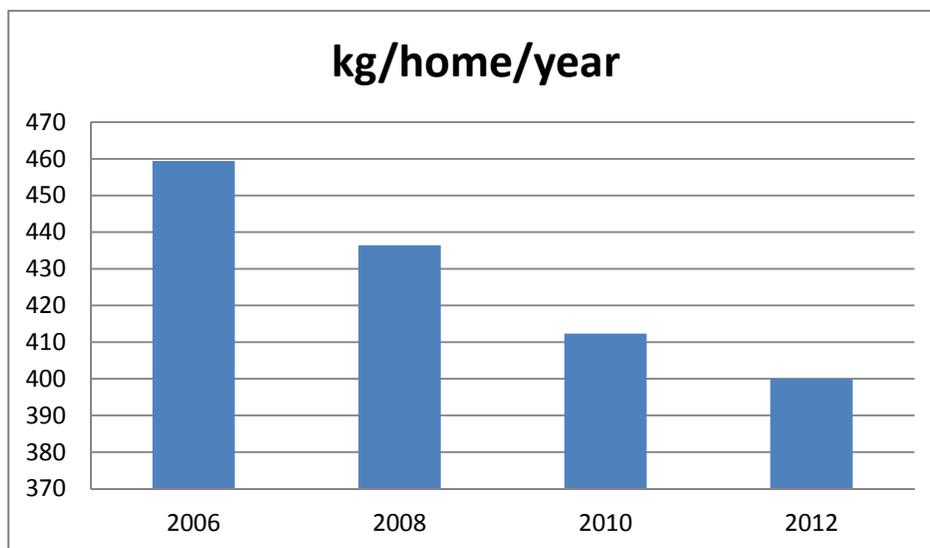


Figure 6-2 Single Family Waste Generation (Garbage + Blue Box +Green Bin)

The diversion rates achieved by the single-family curbside collection services are supported by:

- Limits on the amount of garbage that can be set out: The basic service each household receives provides for one container of garbage collected once every two weeks.⁶ Tags for extra containers of garbage may be purchased by residents for \$2 each. A maximum of two additional containers can be put out on the garbage collection day.
- Promotion and education: Each household receives a collection schedule calendar and a regular newsletter keeping them informed about the program, in addition to having information available on-line.
- Collection bans: The City of Nanaimo has banned recyclables and kitchen scraps from collection as garbage. Periodic inspections ensure compliance – garbage found to contain banned materials are not collected and an information notice is left with the garbage container.

Single-family residential waste disposal in 2012 was approximately 9,000 tonnes, about 17% of all of the waste landfilled. Figure 6-3 illustrates the estimated composition of the single-family residential sent to landfill. The composition data indicates that the five primary components of residential garbage are: compostable organics (36% of garbage), household hygiene (20%), plastic (14%), paper (7%) and textiles (6%). The compostable component was made up of food scraps (26%), compostable paper⁷(8%) and yard waste (2%). Household hygiene consisted of diapers (15%) and pet waste (5%) and represents approximately 1,800 tonnes of disposed waste. The plastics category consisted of film packaging (5%) such as plastic bags, granola bar wrappers and plastic wrap, rigid containers such as shampoo bottles and yogurt tubs (3%), and durable plastics such as toys and plastic lawn chairs (2%).

Based on the waste composition of the garbage collected from single family homes, approximately 47% of residential waste sent to landfill could have been included in the recycling or kitchen scrap collection streams. An additional 3% could be diverted to existing EPR programs. This diversion potential is shown as a subset of Figure 6-3.

⁶ In the RDN service area, 1 can = 100L. In the City of Nanaimo service area, 1 can = 70 L.

⁷ Compostable paper refers to non-recyclable paper such as tissue, paper towels, and food-contaminated paper.

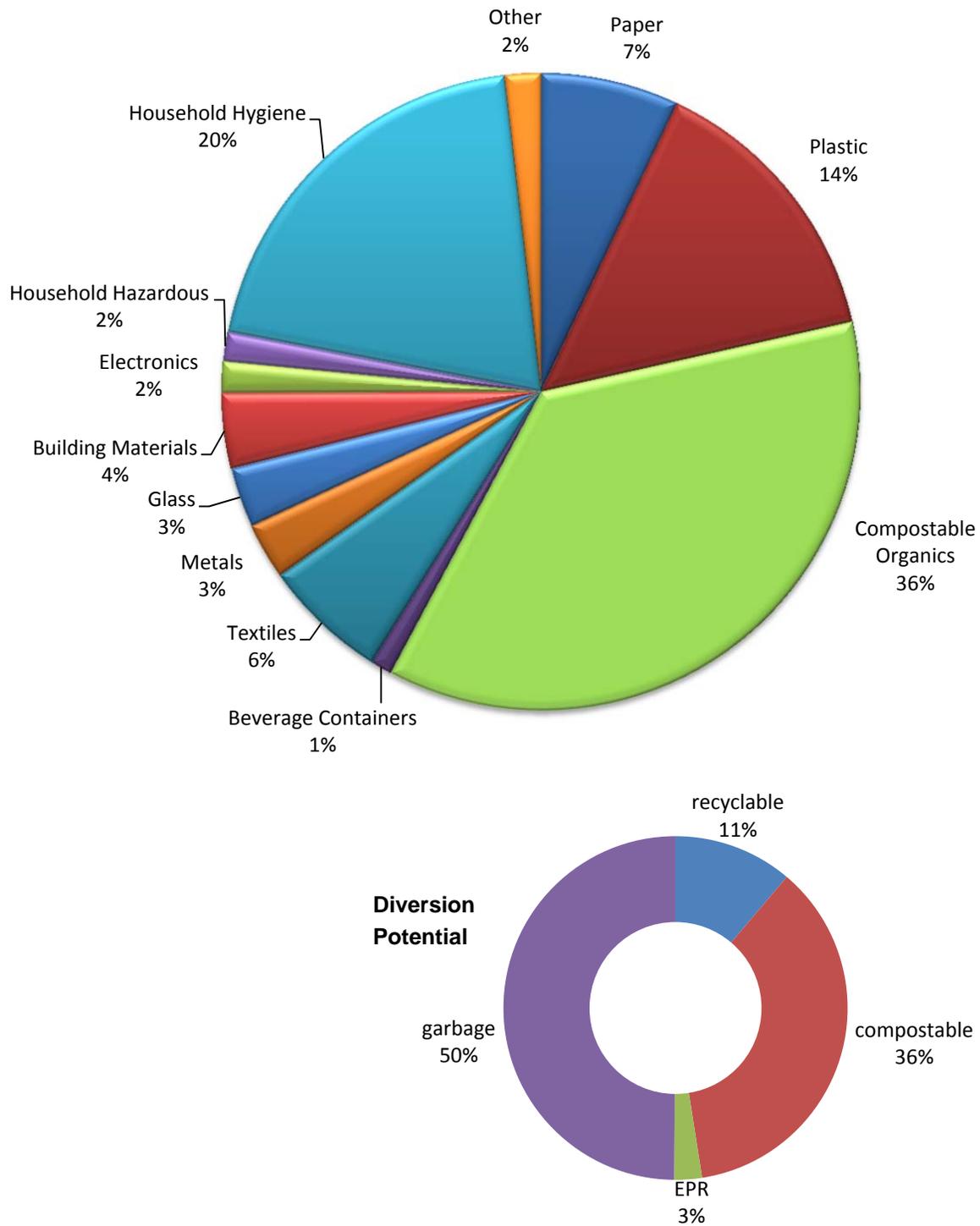


Figure 6-3 Estimated Composition Single-Family Garbage (2012)

7 Multi-Family Collection

There are 13,430 multi-family residential units in the RDN, with approximately 12,000 of these units located in the City of Nanaimo⁸. Collection services to multi-family buildings are privately managed in the RDN. Each building is responsible for hiring their collection services for garbage and recycling.

Since 2008, the RDN has had a Multi-family Diversion Strategy aimed at increasing the level of recycling activities available to multi-family residents living in townhouses, mobile homes, apartments and condominiums. In 2008, RDN staff estimated that 75% of multi-family buildings had recycling services on-site, but that those services were primarily for cardboard and paper collection. In 2012, the service levels were found to have significantly improved since 2008, with 94% of multi-family buildings reporting that they had recycling services for cardboard, paper and plastic and containers. The primary mechanism by which the RDN encourages recycling in multi-family buildings is their landfill bans that prohibit the landfilling of residential recyclables such as household plastic containers, recyclable paper, cardboard, and metal.

Because garbage and recyclables generated at multi-family buildings are generally collected by trucks servicing businesses and institutions, no data is available on the specific quantities disposed or recycled by the multi-family building sector. Research done in other jurisdictions has been used as the basis to estimate waste generation by the multi-family sector in the RDN, as shown in Table 7-1. The research indicates that recycling rates in multi-family buildings are typically much lower than those associated with single-family recycling programs. For example, Metro Vancouver reports that only 16% of waste from multi-family homes is recycled and the City of Toronto reports an 18% recycling rate.⁹ Comparatively, single-family homes in the RDN recycle 30% of their discards through the curbside recycling program (not including kitchen scraps collection).

Table 7-1 Estimate of Waste Generation by the Multi-family Sector in the RDN

	Estimated tonnes for all Multi-Family Buildings (2012)	Estimated Kg Per Unit/Year (2012)
garbage	2,836	211
recycling	709	53
generation	3,545	264

The lower recycling rate in multi-family buildings is often attributed to:

- There is no restriction on how much garbage each residential unit can dispose of;

⁸Multi-Family Housing Diversion Strategy Progress Report; RDN staff memorandum by S. Horsburgh to C.McIver; February 2, 2012.

⁹<http://www.metrovancouver.org/region/dialogues/Reports%20and%20Issue%20Summary%20Notes/Multi-FamilyWaste-NS-Summary20110419.pdf> and <http://www.toronto.ca/garbage/pdf/2010-graph.pdf>

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- There is no direct financial signals to each residential unit regarding how they manage their household waste; and
- There is limited or no opportunity to identify and communicate with residents that place recyclables in the garbage.

During the RDN's 2012 waste composition study, a load of garbage from multi-family buildings was sampled to provide a rough estimate of the composition of the waste being discarded by multi-family buildings. The data from this sampling exercise is provided in Figure 7-1. This composition data suggests that the majority of waste disposed as garbage in multi-family buildings is recyclable (26%) or compostable (44%).

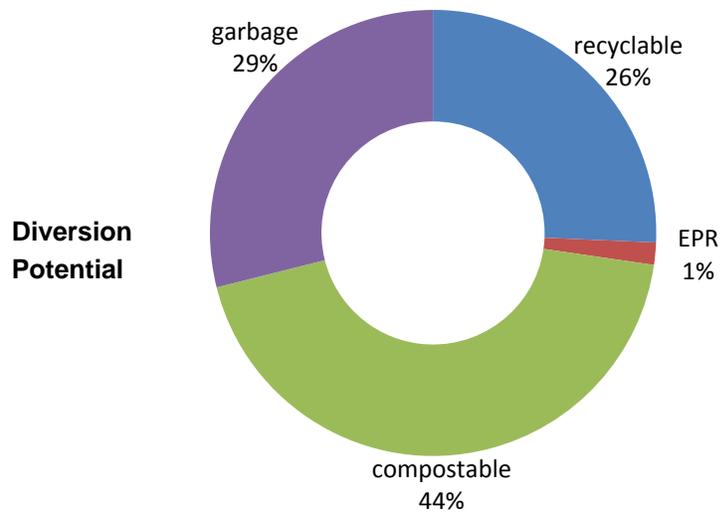
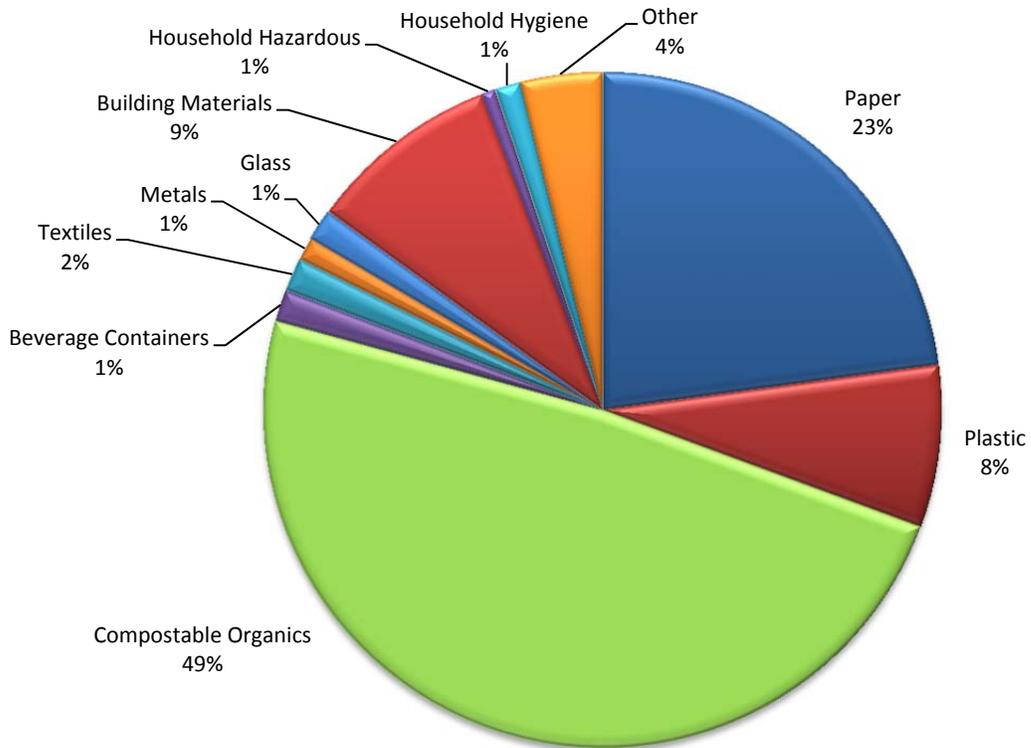


Figure 7-1 Estimated Composition of Multi-Family Garbage (2012)

8 Industrial, Commercial and Institutional Collection

Similar to multi-family residential buildings, collection services to industrial, commercial and institutional (ICI) properties are privately managed. Each business and institution is responsible for hiring their own collection services for garbage and recycling. The RDN encourages recycling by the ICI sector through their landfill bans which prohibit the landfilling of recyclables, food waste and yard waste.

Table 8-1 Estimated ICI Disposal and Diversion (2012)

ICI Disposal and Diversion	Estimated tonnes (2012)
Disposal	29,960
Diversion	84,974
Generation (disposal + diversion)	114,934
% Diversion	74%

In 2012, roughly 30,000 tonnes of ICI garbage was landfilled, approximately 57% of all of the waste landfilled. During the same period the ICI sector is estimated to have diverted roughly 85,000 tonnes of discarded materials to recycling and composting, giving the ICI sector an impressive diversion rate of 74%, as calculated in Table 8-1.

An assessment of the garbage disposed by the ICI sector was done as part of the RDN's 2012 waste composition study (Figure 8-1). The data estimates that approximately 42% of the garbage disposed is compostable, including food scraps (28%), yard waste (8%) and compostable paper products (6%). An estimated 16% is considered recyclable and consists primarily of paper and cardboard (12%), with metal, pallet wrap and drywall making up the remainder of the recyclable portion of the ICI garbage.

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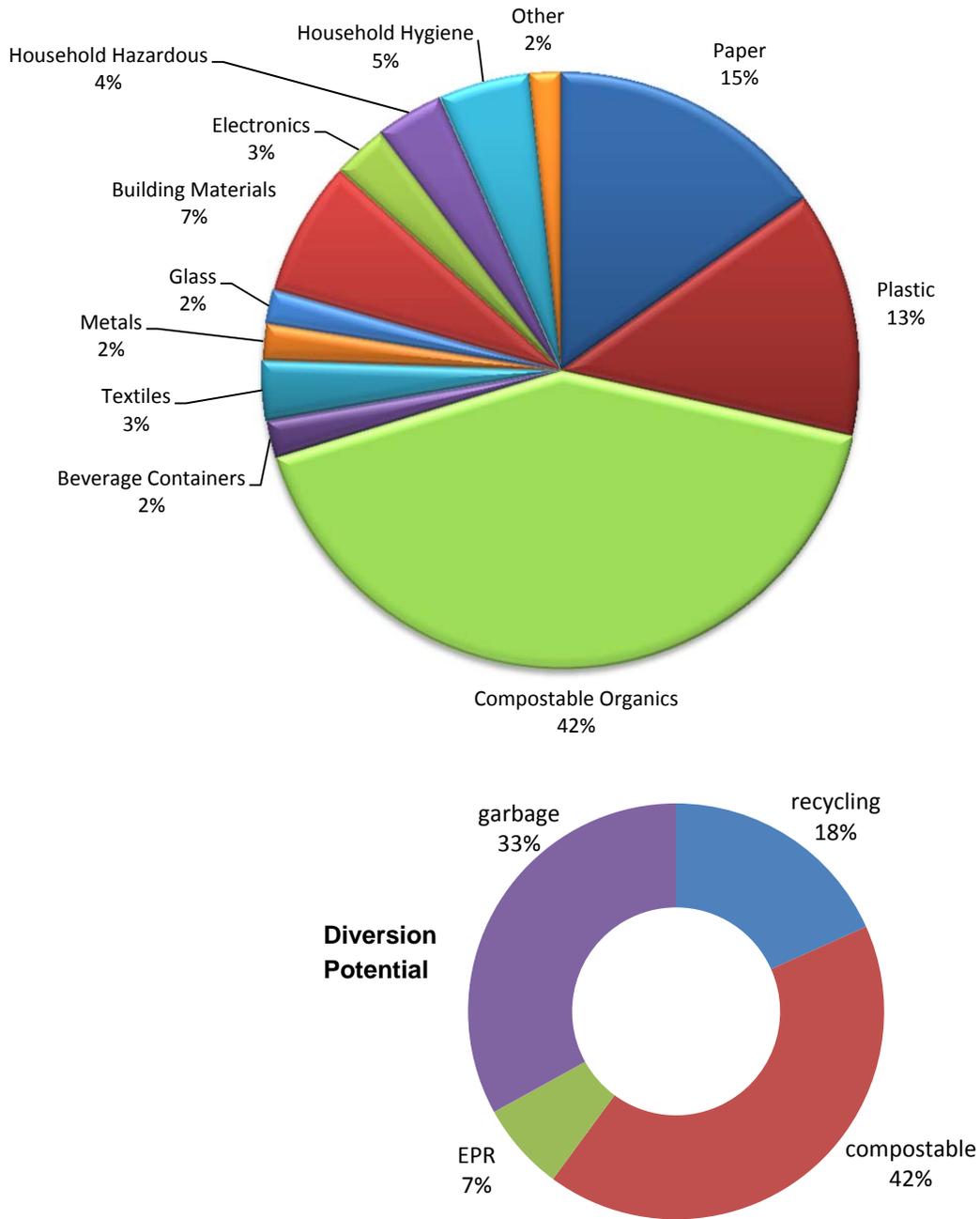


Figure 8-1 *Estimated Composition of the ICI Sector Garbage (2012)*

9 Yard Waste Collection

Yard waste such as leaves and grass clippings are not collected as part of residential waste collection services. Residents and businesses are encouraged to manage their yard waste in one of the following manners:

- Reduce the amount of yard waste through practices such as grasscycling and xeriscaping¹⁰
- Backyard or on-site composting
- Self-hauling to one of several yard waste depots in the RDN. Currently, depots are located at:
 - Church Road Transfer Station
 - DBL
 - Nanaimo Recycling Exchange
 - Pacific Coast Waste Management
 - Porter Wood Recycling
 - Regional Landfill
- Hiring a yard waste removal service
- Include yard waste removal in landscaping contracts.



Use of these yard waste management practices and services is encouraged by a variety of policies, including:

- A ban on yard waste disposed as garbage at the landfill site and transfer station
- A ban on the inclusion of yard waste in the City of Nanaimo's and RDN's residential garbage collection service
- Not providing yard waste collection as part of the single-family residential curbside service
- Promoting the yard waste management alternatives.

This approach to yard waste management has been successful at minimizing the amount of yard waste being landfilled. The 2012 waste composition study indicated that yard waste is roughly 2.5% of the residential waste sent to landfill and 5% of overall waste landfilled. The estimated disposal and diversion for yard waste is presented in Table 9-1 below.

Table 9-1 Estimated Yard Waste Disposal and Diversion (2012)

Yard Waste	Tonnes
Disposal	2,700
Diversion	11,300
Total Generation	14,000
Diversion rate	81%

¹⁰ Xeriscaping is a form of landscaping using plant species that require minimal water and consequently generate less yard waste.

10 Collection Depots

Throughout the RDN there are public, private and non-profit depots used by residents and small businesses that accept recyclable materials, ranging from residential recyclables like paper to scrap metal to drywall. Use of these facilities is supported through:

- Disposal bans on recyclable materials
- High tipping fees for garbage
- Promotion through the RDN's on-line Recycling Directory.

The following are the main collection depots in the RDN. In addition to this list there are several businesses that accept one or more recyclable materials pertinent to their business, such as cell phone retailers that take back used cell phones and cell phone batteries.

- Nanaimo Recycling Exchange
- Gabriola Island Recycling Organization
- Schnitzer Steel Pacific
- Parksville Bottle & Recycling Depot
- RDN's Regional Landfill
- Progressive Waste Solutions (formerly BFI)
- Emterra Environmental
- DBL Disposal Service Ltd.
- RDN's Church Road Transfer Station
- Regional Recycling (2 locations)

11 Extended Producer Responsibility

In British Columbia, EPR (formerly referred to as Industry Product Stewardship) is an environmental policy approach in which the producer's responsibility for reducing environmental impact and managing the product is extended across the whole life cycle of the product, from selection of materials and design to its end-of-life¹¹. In terms of solid waste management, EPR puts the onus of end-of-life product management on the producer and consumers of a product rather than the general taxpayer or local government.

EPR programs play an integral and increasingly significant role in the management of municipal solid waste in BC. Most existing EPR programs have been established by producers and brand owners of products in accordance with requirements set out in the BC Recycling Regulation. Other programs have been set up voluntarily by individual companies and industries (e.g. for milk containers). Table 11-1 lists the current regulated and voluntary EPR programs in BC. The term “stewardship organization” used in the table refers to the agency responsible for operating the EPR program on behalf of producers and brand owners.

Table 11-1 BC's EPR Programs¹²

Mandated EPR Programs			
Product Category	Product Details	Stewardship Organization	Program Status
Antifreeze and Oil	Antifreeze, used lubricating oil, filters and containers	BC Used Oil Management Association (BCUOMA)	Ongoing since 1992 (oil) and 2011 (antifreeze)
Batteries	Dry cell batteries under 5kg (rechargeable and non-rechargeable) and cell/mobile phones	Rechargeable Battery Recycling Corporation (RBRC)	Ongoing since 2010
Batteries - Lead Acid	All lead-acid batteries	Canadian Battery Association (CBA)	Ongoing (industry-led) since 2011
Beverage Containers	<i>Non-Alcohol</i> - soft drinks, juice, water and sports drinks <i>Alcohol</i> - wine, spirits, import beers/ coolers sold in non-refillable containers	Encorp Pacific (Canada)	Ongoing (industry-led) since 1994
Beverage Containers	Beer cans, standard brown beer bottles and certain clear refillable beer bottles	Brewers Distributor Ltd. (BDL)	Ongoing since 1997

¹¹ As defined by BC Ministry of Environment

¹² The information in this table was adapted from the B.C. *Product Stewardship Programs Summary* web page found on the Recycling Council of BC website. (<http://rcbc.bc.ca/education/product-stewardship/table>)

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Mandated EPR Programs			
Product Category	Product Details	Stewardship Organization	Program Status
Cell Phones	Cell phones, smart phones, wireless PDAs, external aircards, pagers and accessories (chargers etc.)	Canadian Wireless Telecommunications Association (CWTA)	Ongoing since 2009
Electronics	Portable and non-portable electronics - see here for a full list of products accepted	Electronic Products Recycling Association (EPRA)	Ongoing since 2007 (Phase 1), 2010 (Phase 2) and 2012 (Phase 5)
Lamps and Fixtures	All residential-use lamps and fixtures - see here for a full list of products accepted	Product Care Association	Ongoing since 2010 (CFL, fluorescent tubes) and July 2012 (all lamps). ICI sources and ballasts will be added October 2012
Large Appliances	Major appliances designed for use in <i>homes</i> including refrigeration, laundry and cooking appliances	Major Appliance Recycling Roundtable (MARR)	Ongoing since August 2012
Outdoor Power Equipment (OPE)	Lawn tractor, and hand-held, walk behind and free-standing OPE	Outdoor Power Equipment Institute of Canada (OPEIC)	Ongoing since July 2012
Packaging and Printed Paper	Residential packaging and printed paper with text or graphics (news papers, flyers etc. with the exception of bound books)	Multi-Materials BC (MMBC)	Added to the Recycling Regulation in May 2011. Program to be operational in May 2014
Paint, Flammable Liquids, Solvents, Pesticides, Gasoline	Paint, fuels, solvents, pesticides	Product Care Association	Ongoing since 1994 (paint), 1997 (flammables) and 1998 (aerosols)
Pharmaceuticals	Prescription drugs, non-prescription medicine, mineral and vitamin supplements, throat lozenges	Post Consumer Pharmaceutical Stewardship Association (PCPSA)	Ongoing since 1997
Small Appliances and Electrical Power Tools	Portable electrical appliances and power tools designed for use in homes	Canadian Electrical Stewardship Association (CESA)	Ongoing since 2011 (small appliances) and July 2012 (electrical tools)
Smoke Alarms	Commercial and residential smoke and carbon monoxide alarms	Canadian Hardware and Housewares Manufacturers Association (CHHMA)	Ongoing since 2011
Smoke Alarms	Commercial and residential smoke and carbon monoxide alarms	First Alert Canada	Ongoing since 2011
Thermostats	Electromechanical (mercury containing) and electronic thermostats	Summerhill Impact	Ongoing since 2010
Tires - Automobile	Most passenger, commercial and agricultural equipment tires	Tire Stewardship BC (TSBC)	Ongoing (industry-led) since 2007
Toys	Electronic or electrical toys	Canadian Brandowner	Ongoing since August

Mandated EPR Programs			
Product Category	Product Details	Stewardship Organization	Program Status
		Residual Stewardship Corporation (CBRSC)	2012

Voluntary EPR Programs			
Product Category	Product Details	Administration	Program Status
Beverage Containers - Milk	Empty milk, cream, and milk substitute (soy, rice, almond, hemp) beverage containers.	Encorp Pacific (Canada)	Ongoing since 2007
Tires - Bicycle	All types of bike tires and tubes, with the exception of tubular tires	Tire Stewardship BC (TSBC)	Ongoing since 2011

In the RDN, the current collection infrastructure for existing EPR programs consists of return-to-retail and take-back depots. The RDN's Recycling Directory can be used by residents to find the most convenient take back location for EPR products. The Recycling Council of BC operates a similar service through their toll-free Recycling Hotline (1-800-667-4321) and their on-line searchable database "Recyclopedia".

In accordance with the BC Recycling Regulation, the costs of collection and management of EPR programs are to be borne by producers and consumers, not by local governments or their tax payers. Many stewardship programs charge separate fees at the point of purchase to cover the costs of managing the discarded product, and the fee is shown on the sales receipt as an "eco-fee". These fees are applied by producers / brand owners as part of the price of the product; they are not government-applied taxes. The stewardship agencies are responsible for educating consumers regarding their programs and for providing information about collection options, fees, and handling practices.

The latest addition to list of materials regulated under the Recycling Regulation is residential packaging and printed paper (PPP). This EPR program is scheduled to begin in May 2014. This particular EPR program is unique in that most homes in BC already have access to residential recycling services through curbside programs or depots. The impacts of this program on homes in the RDN are anticipated to be:

- A reduction in the cost of curbside collection services since the program will provide funding to the RDN and City of Nanaimo to off-set the cost of collecting PPP
- An increase in the types of packaging that can be recycled in the curbside collection program
- An increase in the types of packaging that can be recycled through recycling depots provided by the RDN, private companies and non-profit recycling organizations.

12 Processing of Recyclables



“Processing” refers to the receipt of recyclables from generators and then sorting and preparing those materials for the end-market use or subsequent processing. The RDN has 3 material recycling facilities (referred to as MRFs) that are owned and operated by private waste management companies: Progressive Waste, Emterra and Cascades. All 3 MRFs are located in the City of Nanaimo.

13 Organics Management

In the RDN there is reuse of leftover and excess food through food banks and other food redistribution services. Additionally some food scraps are picked up by area farmers for use as animal feed. However, the majority of organics are sent to centralized composting facilities. There are two licensed composting facilities in the RDN: International Composting Corporation (ICC) and Earthbank Resource Systems. The following table lists the types of materials each of these facilities manages:

International Composting Corporation	<ul style="list-style-type: none"> • Residential “green bin” kitchen scraps and soiled paper • Commercial food waste • Yard waste • Fish waste • Clean wood
Earthbank	<ul style="list-style-type: none"> • Farmed and wild fish offal • Farmed salmon mortalities • Ground up bark from the forestry industry • Ground up land clearing debris (exclusively local forest materials)

ICC is the only facility processing food waste in the RDN. This facility opened in Nanaimo in 2004 with a drum-style in-vessel composting system. The compost product is sold as a bulk product for blending into soil mixes. Recently, ICC modified the plant to convert organic waste into synthetic biofuel (biodiesel & jet fuel).



International Composting Corporation (ICC)



ICC Finished Compost Product

Earthbank operates an aerated static pile composting system near Parksville. They sell their finished compost product in bulk and in bags.

14 Education and Outreach

Both the RDN and the City of Nanaimo undertake promotion and education related to solid waste management.

The RDN:

- Has information related to the solid waste management planning, bylaws and zero waste programs on the Solid Waste and Recycling pages of the RDN's website (www.rdn.bc.ca).
- Distributes a "Zero Waste Beyond Composting" Newsletter three times per year to all homes receiving RDN curbside collection.
- Has a searchable on-line recycling directory for users to find out where they can bring their reusable, recyclable and compostable items.
- Has a zero waste school education program which provides free classroom workshops to schools throughout the RDN. This service has been contracted out to Nanaimo Recycling Exchange.

The City of Nanaimo:

- Distributes their "Waste Lines" newsletter to all City addresses in the spring and fall of each year.
- Has a dedicated web page on the City's website (www.nanaimo.ca) that includes information related to the City's residential collection services, a link to the RDN recycling directory, and a list of reuse and recycling organizations operating in the City.

15 Construction/Demolition Waste Management

Construction and demolition and renovation projects (CD) projects generate a wide range of materials, most of which are reusable or recyclable. These include concrete, asphalt, wood, gypsum wallboard, metal, cardboard, asphalt roofing and plastic.

The RDN promotes diversion of these materials through disposal bans on cardboard, gypsum (drywall), metal and wood, and high tipping fees on loads of CD waste arriving at the Regional Landfill (loads of CD waste cannot be delivered to the Church Road Transfer Station).

There are several facilities in the RDN that accept source-separated discarded CD materials for recycling, as listed in Table 15-1.

Table 15-1 Construction/Demolition Waste Management Operations in the RDN

Material	Facility Name
Asphalt	Haylock Bros. Hub City Paving
Asphalt Shingles	Pacific Coast Waste Management
Concrete	DBL Hub City Paving Haylock Bros. Mayco Mix Pacific Coast Waste Management Parksville Heavy Equipment
Metal	Alpine Annex Auto Bull Dog Auto Parts Carl's Metal Salvage DBL Nanaimo Recycling Exchange Porter Wood Regional Recycling Schnitzer Steel
Wood (lumber)	Alpine DBL Gabriola Island Recycling Organization Nanaimo Recycling Exchange Pacific Coast Waste Management Porter Wood

The majority of CD waste is recycled or used as a fuel substitute, including:

- Wood waste is chipped and used as hog fuel at pulp mills on Vancouver Island and Washington State
- Drywall (gypsum) is recycled
- Metal is recycled
- Concrete and asphalt are recycled

- Asphalt shingles are recycled on a limited basis.

There is also significant reuse of building materials and fixtures through salvage operations and retail stores such as Demxx and Habitat for Humanity's ReStore.

16 Residual Waste Management

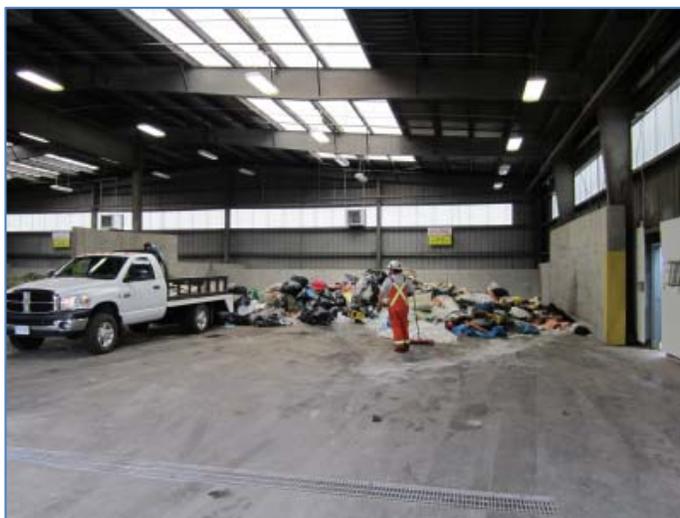
Residual waste refers to discarded materials that are not diverted to reuse, recycling, composting or energy recovery and therefore require landfilling. In 2012, there was roughly 53,000 tonnes of residual waste landfilled in the RDN. The residual waste management infrastructure in the RDN includes the Church Road Transfer Station and the Regional Landfill.

16.1 Church Road Transfer Station

The Church Road Transfer Station (CRTS) is located on Church Road, in Electoral Area F, about four kilometres southwest of downtown Parksville. The facility opened in 1991, and is approximately two hectares in size. CRTS receives garbage, yard waste, wood waste, construction/demolition waste, and recyclables from communities in northern portion of the Regional District of Nanaimo: Parksville, Qualicum Beach, and Electoral Areas E, F, G, and H. In recent years, with the growth of Nanaimo, this facility has also started to receive waste generated in parts of Nanaimo. In 2012, approximately 30% of the region's garbage was delivered to CRTS.

Garbage brought to the CRTS is transferred to the Regional Landfill in Nanaimo. Recyclables are transferred to various recycling processors, and food waste, kitchen waste, and yard waste are transferred to the International Composting Corporation Composting Facility in South Nanaimo.

In 2010, the site was re-designed to accommodate population growth to 2030, include a food waste transfer area and to segregate large commercial-sized waste vehicles from small passenger-sized vehicles and trucks. The new transfer station was built in accordance with the RDN Green Building Policy, and has received LEED Gold® accreditation, the first in Canada for a transfer station.



16.2 Regional Landfill

The Regional Landfill is located about 5 kilometres south of downtown Nanaimo and is owned and operated by the Regional District of Nanaimo. The landfill site opened in the 1940s and is approximately 37 hectares in size. The original unlined “dump” is on an 8.8-hectare portion of the site and was closed and capped with clay in 1996. Next to this site a new landfill with an engineered liner system was constructed. The landfill operates on 13.7-hectares and has been receiving municipal solid waste from the Regional District of Nanaimo since 1991. The photograph below shows the whole property, including the closed and capped unlined portion.



Figure 16-1 Regional Landfill

The Regional Landfill is regulated by the Province of BC and operates under an operational certificate issued by the BC Ministry of Environment. Through the landfill’s environment protection measures, landfill gas and leachate are collected from both the lined and unlined areas of the landfill site. Leachate is directed into the sanitary sewer system for treatment at the Greater Nanaimo Pollution Control Centre. The landfill gas (LFG) is collected and managed through a public-private partnership. The LFG is used to produce green power which is sold to BC Hydro. The RDN receives a royalty from these sales. Excess

gas is flared to reduce its greenhouse gas impacts. These environmental protection measures, how the site is designed and operated, and the tipping fees charged to use the site are described in more detail below.

16.2.1 Environmental Protection

The Regional Landfill's environmental protection measures reflect a comprehensive approach to monitoring, evaluating and mitigating the impacts of the landfill's operations on the environment.

Leachate Monitoring Program

When solid waste decomposes it produces leachate, which is accelerated by the percolation of water through the waste in the landfill. Landfill leachate is a complex mixture of organic and inorganic compounds produced from refuse materials by a combination of physical, chemical and biochemical processes.

The Regional Landfill has an extensive leachate containment system, consisting of a high-density plastic liner and perforated pipes to collect leachate for treatment at the regional sewage treatment plant (Greater Nanaimo Pollution Control Centre).

Leachate monitoring is conducted regularly and includes inspection of landfill slopes for leachate breakouts, sampling of leachate for chemical analysis, and measuring leachate elevations in the refuse mass. These tests are important for determining impacts to surface and groundwater, mitigating odours and monitoring for leachate mounding. The chemical analysis is also a requirement by the Ministry of Environment and the RDN Wastewater Department.

Water Quality Monitoring

Migration of leachate from the landfill can affect ground and surface quality. The Regional Landfill's groundwater, surface water, and residential groundwater well monitoring program is designed to ensure landfill operations do not adversely affect water quality.

The water quality monitoring program consists of the collection and analysis of groundwater and surface water samples. Groundwater monitoring wells are located along the perimeter of the site for the purpose of monitoring groundwater quality at the property boundary. Surface water monitoring sites are also located around the perimeter of the site at streams and ditches.

Water samples are analysed for various physical parameters, geo-chemical indicators, dissolved metals and dissolved inorganics. This program allows for early detection and mitigation should leachate be found migrating off the site.

Landfill Gas

Landfill gas is generated as a result of the biological decomposition of organic waste material. In general it is composed of 50% methane and 50% carbon dioxide by volume. Landfill gas, if not captured and

managed can migrate through the landfill cover or adjacent soil and enter the atmosphere. Potential impacts from landfill gas include:

- Greenhouse gas issues (Methane is 20 times more potent of a greenhouse gas than carbon dioxide¹³);
- Health and toxic effects;
- Nuisance odour;
- Explosive hazard; and
- Vegetative stress.

The landfill gas collection system is designed to extract the majority of landfill gas produced. Initially, all of the collected gas was flared to reduce the above noted impacts. However, starting in 2006, Cedar Road Bioenergy, a private company, entered into an agreement with the RDN to build and operate a modular landfill gas utilization plant which is currently producing energy from the landfill gas by converting the gas into 1.2MW of electricity, which is sold into the BC Hydro grid. A photograph of the plant is shown in Figure 16-2.



Figure 16-2 Cedar Road Bioenergy Landfill Gas Utilization Plant at the Regional Landfill

16.2.2 Design and Operations Plan

The Regional Landfill has a Design and Operations Plan (D&O Plan) that details how the landfill development will progress on the site and how it will be operated on a day-to-day basis. One of the D&O Plan's goals is to optimize the use of the space so that the landfill can be a regional asset for as long as possible. The plan incorporates surface water, leachate, and landfill gas management controls into the

¹³ From the US EPA Climate Change webpage (<http://epa.gov/climatechange/ghgemissions/gases/ch4.html>) : The comparative impact of CH₄ on climate change is over 20 times greater than CO₂ over a 100-year period.

long-term landfill development plan and also includes a progressive closure strategy to mitigate potential landfill impacts.

D&O Plans are updated regularly through the life of a landfill. The current plan is a landfill development plan as well as a remedial action plan to address leachate management issues recently identified in a hydrogeological study of the site. The key objectives of the current D&O Plan are to:

- Provide an updated fill plan which addresses the need to reduce leachate generation and optimize surface water controls;
- Address leachate management issues;
- Enhance the collection efficiency of the landfill gas collection system and reduction of fugitive greenhouse gas emissions;
- Update and revise the environmental monitoring program;
- Undertake progressive closure of the site in support of the post-closure nature park concept.

16.2.3 Post Closure Plan

The RDN has prepared a detailed plan for closure and post closure of the Regional Landfill, which has been approved by the BC Ministry of Environment and the Regional Board. Funds are being set aside for closure and monitoring costs and post-closure plans to rehabilitate the site as a community resource. After closure of the landfill, the RDN must operate and maintain pollution mitigation programs and infrastructure for at least 25 years.

In 2004, the RDN completed a study of post-closure options for the Regional Landfill. After consulting with the community in the vicinity of the landfill and City of Nanaimo municipal staff, creation of a nature park was identified as the preferred post-closure use. The vision is to have a park with open areas for recreation opportunities, plantings that enhance wildlife habitat and provide a nature experience for users, hiking trails that integrate into the surrounding area's trail network, and picnic areas and scenic viewpoints.



Figure 16-3 Post Closure Plan for the Regional Landfill: Nature Park

As the landfill will continue to operate for a number of years, the park is to be developed in phases, with the first phase installed on the closed and capped 9-hectare area of the old landfill. A detailed design of the first phase of the nature park is under development by by Nanaimo-based Archadia Landscape Architecture Ltd. and will be the first of its kind on a working landfill in BC.

16.2.4 Estimated Lifespan

When the current D&O plan was prepared in 2011, the remaining available airspace was estimated to be 2.4 million cubic metres. Based upon population growth projections and fill rate assumptions, it is estimated that the site will reach design capacity in 2030.

16.3 Disposal Charges

The RDN charges tipping fees based on the weight of materials brought to the landfill or transfer station. The tipping fees are intended to cover the capital and operating costs of the facilities and the services provided at the sites. Table 16-1 lists the 2013 rates, the most notable being that garbage (referred to in the table as municipal solid waste) is charged at \$120 per tonne.

Table 16-1 Accepted Materials and Rates, Effective January 1, 2013

Municipal Solid Waste, excluding Controlled Waste	
Municipal solid waste, construction/demolition waste, roofing waste (asphalt/tar/gravel) 0 - 50 kg 51 kg or greater	\$6.00 flat rate \$120.00/tonne
Municipal solid waste containing recyclables 0 - 50 kg 51 kg or greater	\$6.00 flat rate \$230.00/tonne
Construction/demolition waste containing recyclables 0 - 50 kg 51 kg or greater	\$6.00 flat rate \$360.00/tonne
Weighing service Improperly covered or secured load	\$20.00 each \$20.00 each
Recyclables	
Garden Waste 0 - 100 kg 101 kg or greater (roll-off bin loads not accepted)	\$6.00 flat rate \$55.00/tonne
Wood Waste (includes wood roofing) 0 - 50 kg 51 kg or greater (roll-off bin loads not accepted)	\$6.00 flat rate \$240.00/tonne
Gypsum (Accepted only at Church Road Transfer Station) 0 - 50 kg 51 kg or greater	\$6.00 flat rate \$240.00/tonne
Organic Waste (Accepted only at Church Road Transfer Station) 0 - 50 kg 51 kg or greater	\$6.00 flat rate \$105.00/tonne
Organic Waste (Containing mixed solid waste or recyclables) 0 - 50 kg 51 kg or greater	\$6.00 flat rate \$210.00/tonne
Metal Recycling , metal appliances 0 - 500 kg 501 kg or greater	\$6.00 flat rate \$55.00/tonne
Miscellaneous Recyclables (includes non-deposit glass, paper, household plastic containers, metal food and beverage containers, vehicle batteries and oil filters)	\$6.00 flat rate
Corrugated cardboard 0 - 50 kg 51 kg or greater	\$6.00 flat rate \$55.00/tonne
Controlled Waste (Accepted at Regional Landfill only)	
Contaminated soil (Accepted only at Regional Landfill)	\$120.00/tonne
Large dead animals and asbestos waste (Accepted only at Regional Landfill)	\$240.00/tonne
Steel cable	\$500.00/tonne

16.4 Resource Recovery

Recovery is defined as the reclamation of energy or recyclable materials from the residual waste prior to landfilling.

16.4.1 Waste to Energy

Over the past decade, the RDN has continued to assess the role of waste-to-energy (WTE) as a means of further reducing the amount of residual waste requiring landfilling and generating local energy. A number of studies have reviewed the state of the various WTE technologies and their anticipated capital and operating costs. Those studies include:

- 2004 – *New and Emerging Residual Waste Management Technologies Update* by Gartner Lee Ltd. This study was done for the RDN and Cowichan Valley Regional District (CVRD) and was a preliminary review of new and emerging residual waste management technologies to determine if any of these technologies might have some applicability to the regional districts in the foreseeable future. The review indicated that there may be some promise for residual waste processing in the future depending on available waste quantities, the change in composition of waste, availability of proven technology, and energy markets. The study recommended that the regional districts continue to monitor the development of the technologies that have proven to be technically viable, including refuse derived fuel, anaerobic digestion, waste-to-energy, gasification and pyrolysis. The study also suggested that for the time being traditional diversion activities may be preferable since it was plausible that a conventional but aggressive waste reduction strategy to divert up to 70% of the solid waste stream.
- 2006 – *Assessment of New Treatment Technologies* by Gartner Lee Ltd. This study was also a collaboration between RDN and CVRD to determine if and when additional waste treatment in the form of thermal processing would be feasible for recovering energy from the residual waste stream. Conventional and advanced thermal technologies were reviewed, as well as refuse derived fuel (RDF). This study reported that the cost of thermal processing of residual waste is about 40% above that of landfilling (\$100 per tonne at the time) and therefore not financially attractive, but might become competitive in the near future if energy costs rise, funding assistance becomes available, and low cost financing can be found.
- 2008 – *Assessment of New Treatment Technologies* by Gartner Lee Ltd. This report was an update of the 2006 study and included an expansion of the initial thermal technology review, and an update on some of the environmental issues and costs.
- 2012 – *Tri-Regional Waste to Energy Study* by AECOM. This study was a collaborative effort of the RDN, CVRD and Capital Regional District. The study reviewed the applicability of available technologies in light of the increase tonnage of waste available through the inclusion of the Capital Regional District's residual waste. This study considered the use of mass-burn, gasification and plasma gasification technologies. Mass-burn was confirmed as the most proven, reliable and lowest

cost WTE technology. The study concluded that a single WTE facility would have adequate economies of scale to employ mass-burn; however it would not be at an optimum size from a pricing perspective, which would need to be roughly 3 times larger.

16.5 Closed Landfills

There are two permanently closed municipal solid waste landfills in the RDN. Both the City of Parksville and the Town of Qualicum Beach closed and capped their landfills but continue to monitor the closed sites and provide annual reporting to the BC Ministry of Environment. The permits for these sites have been “abandoned” at the request of the municipalities, meaning that the permits have been rescinded by the Ministry.

There are two private disposal facilities that have also abandoned their permits. These permits were held by J. Milner Trucking and Lussier and Son Contracting for the landfilling of inert wastes and wood waste. Both disposal facilities were located in Nanaimo and permits for both of these sites have been cancelled.

17 Landclearing Waste Management

Land clearing waste refers to trees and stumps removed when land is cleared for development. Because of the large and bulky nature of this material, it is difficult to manage at municipal solid waste landfills and composting facilities. All of the municipalities and the community of French Creek have banned open burning of land clearing waste. In these areas, land clearing debris is generally ground on site using a mobile grinder and left on the property, or the land clearing waste is transported to a facility for storage and subsequent grinding for use as hog fuel. There are two private operations in the RDN that receive and process land clearing waste: Pacific Coast Waste Management and Porter Wood Recycling.

In areas of the RDN where land clearing waste can be disposed of through on-site burning, all fires must be managed in accordance with the BC Open Burning Smoke Control Regulation and a reference number must be obtained from the Ministry of Forests. In Extension and East Wellington, a permit to burn landclearing waste must be obtained from the local fire department.

18 Illegal Dumping Prevention Strategy

Illegal dumping on private and public lands has been a long-standing concern in the Regional District of Nanaimo. In 2010, 41 tonnes of illegally dumped material was removed through clean-up initiatives and disposed of appropriately.

Although it represents only .0002% of the total solid waste generated in the region, illegally dumped material can have serious effects on the environment, wildlife habitat and the ability of others to use and enjoy outdoor recreational areas.

The RDN has implemented an Illegal Dumping Prevention Strategy that includes:

- Prevention of illegal dumping through education;
- Funding the clean-up of illegal dump sites; and
- Illegal dumping surveillance and enforcement activities.

The RDN's Waste Stream Management Licensing (WSML) Bylaw includes a section to enforce the proper disposal of waste. The WSML bylaw requires those who generate waste be responsible for its proper disposal. If a generator's waste is found to be abandoned, the generator can be subject to a fine of up to \$200,000. This component of the WSML bylaw is the backbone to the RDN's Illegal Dumping Prevention Strategy.

The RDN has a Zero Waste Compliance Officer staff position to carry out illegal dumping prevention and Waste Stream Management License bylaw enforcement and education duties. This position undertakes complaint response, records management, inter-agency/media contacts, establishes the posting of signage in areas subject to illegal dumping activities and conducts historic site monitoring.



In instances where the officer is able to identify the generator, a written warning is issued with a request to clean up the abandoned waste. In most cases this action is sufficient to achieve compliance. In instances where a generator fails to take responsibility, the officer can charge the clean-up costs to the generator and levy a fine. In some cases the RDN will work with the RCMP and/or the Ministry of Environment.

The RDN also works with several organizations that are frequent users of backroads and trails including Vancouver Island University (VIU) woodlot staff, VIU's Resource Management Officer Technology Program, Island Timberlands security, Emcon Services staff and various recreational groups/users. These organizations have volunteered to observe and report illegal dumping activities and sites to assist the RDN in monitoring activities and enhancing enforcement. The RDN also maintains a website page where any member of the public can "Observe, Record and Report" illegal dumping that they come across. All complaints, regardless of the source, result in the opening of a file and an investigation.

In 2012, the RDN responded to 115 incident complaints with 43 tonnes of waste cleaned up by RDN contractors or community groups. A total of 18 files resulted in names being located and individuals directed to clean up or warned about their actions. Two individuals were uncooperative and were scheduled for court appearances and were subsequently fined in 2013. Five additional illegal dumping signs were erected in historical illegal dumping areas as well as a problematic RDN park sites (for a total of 60 signs throughout the RDN). All signs are GPS mapped. Community groups were supported in clean-ups with 15 disposal waivers issued. The illegal dumping program is promoted through Shaw Cable, radio, newspaper and Facebook.



19 Financing of RDN Solid Waste Services

Table 19-1 lists the costs for the various solid waste management related services provided by the RDN, City of Nanaimo and Town of Qualicum Beach. Together, the government costs for solid waste management in 2012 were \$17.3 million.

Table 19-1 RDN and Municipal 2012 Solid Waste Expenditures

Service Area	Budget
Residential Collection	
RDN Curbside Collection	\$3,775,651
CON Curbside Collection	\$3,769,634
TQB Garbage Collection	\$173,859
Sub-Total	\$7,719,144
Region-Wide Disposal	
Overhead & Administration	\$1,162,920
Zero Waste Programs	\$514,394
Scale & Transfer Services – Cedar	\$1,507,215
Scale & Transfer Services - CRTS	\$2,008,190
Disposal Operations	\$4,387,105
Sub-Total	\$9,579,824
Total	\$17,298,968

Table 19-2 lists how the Regional District of Nanaimo pays for the solid waste services it provides. As shown, almost all of the RDN's costs (97%) are covered by user fees including tipping fees charged at the landfill and transfer station, and utility fees charged for residential curbside collection services.

Table 19-2 RDN 2012 Solid Waste Revenue Sources

Revenue Source	Amount	Percentage
Tax Requisition	\$342,035	2%
Tipping Fees	\$9,237,789	53%
Utility Fee	\$7,719,144	47%
Total	\$17,298,968	100%

20 Provincial Policies and Legislation

In general, the responsibility for solid waste management belongs to the Province and local governments. Municipalities and regional districts provide solid waste collection, diversion and disposal operations; regional districts are responsible for preparing long-range plans on a regional level; and the Province is responsible for approvals and monitoring of operations such as landfills and waste-to-energy facilities, as well as providing regulations, guidelines and policies to protect the environment and encourage waste minimization. The federal government plays a minor role in solid waste management; occasionally conducting Canada-wide studies on solid waste practices.

The following is a list of BC legislation that influences how solid waste (residual waste, recyclables and compostable waste) is managed by the public, private and non-profit sectors in BC.

- Environmental Management Act
- Contaminated Sites Regulation
- Hazardous Waste Regulation
- Landfill Gas Management Regulation
- Organic Matter Recycling Regulation
- Ozone Depleting Substances and Other Halocarbons Regulation
- Recycling Regulation
- Storage of Recyclable Material Regulation

21 Linkages to Regional Plans

The Regional Growth Strategy and the RDN Board's Strategic Plan are coordinating documents that link land use planning and servicing plans. The RDN Board's Strategic Plan is a three year plan that establishes broad strategic goals for the region and identifies actions and programs for implementation.

The purpose of these two plans is to ensure that regional and local service delivery remains consistent with regional objectives, manages the impacts of growth, and creates livable communities.

This section provides the solid waste-related actions from each of these documents. As these are guiding documents for RDN servicing, this information provides guidance for updating the Solid Waste Management Plan.

21.1 RDN Board's Strategic Plan (2013-2015)

Strategic goals and Actions for 2013-2015 for Solid Waste from the Board's Strategic Plan are:

1. Review and update the 2004 Solid Waste Management Plan (SWMP).
 - a. Undertake a new waste composition study to determine changes in the regional solid waste stream resulting from the implementation of the Zero Waste Plan.
 - b. Identify further opportunities to reduce waste and establish a new diversion target beyond the 70% currently achieved.
 - c. Undertake a comprehensive public consultation process on the SWMP review and update to ensure that the public is engaged and supportive of new policies and programs.
 - d. Explore new treatment technologies for residual wastes that save landfill capacity and investigate the need for additional future landfill capacity.
2. Continue to implement the Zero Waste Program on the basis of regulation, collaboration, education, and enforcement.
 - a. Ensure private and non-profit waste management and recycling facilities licensed under the Waste Stream Management Licensing Regulation are operating in accordance with approved operating plans.
 - b. Expand the commercial food waste ban to include front-of-operations food waste collection systems at fast food restaurants and cafeterias.
 - c. Extend the green bin food waste program into multi-family residential developments.
 - d. Support provincial product stewardship programs for electronics, small appliances, printed paper and packaging, ensuring a smooth transition to extended producer responsibility.
 - e. Explore opportunities for satellite recycling stations or one-stop eco-depots that handle the full range of products regulated by provincial stewardship programs.
3. Implement education and outreach programs to influence behavior and reduce waste.
 - a. Participate on the proposed National Zero Waste Marketing Council to develop and implement national strategies designed to reduce the solid waste stream in Canada.
 - b. Collaborate with other local governments on Zero Waste campaigns using free advertising copy and graphic designs.
 - c. Enhance communications and public education on the importance of waste management, composting, and recycling.
 - d. Collaborate with Vancouver Island regional districts and the Lower Mainland in their waste management efforts.

4. Implement the Design & Operations Plan at the Regional Landfill.
 - a. Complete a Nature Park on the closed portion of the Regional Landfill.
 - b. Examine the feasibility of new capital projects, and implement necessary projects incrementally to optimize costs while meeting the needs of a growing population.
 - c. Continue with landfill gas collection and energy distribution initiatives.
 - d. Explore opportunities to encourage industry, municipalities, and stakeholders to develop a regional eco-industrial network pilot project to reduce waste and increase economic performance by turning waste into resources.

21.2 Regional Growth Strategy

The Regional Growth Strategy lists the following actions for solid waste management (sections 10.9 to 10.13 of the strategy):

- Pursue an approach to solid waste management that focuses on waste reduction, with the ultimate goal of eliminating the need for waste disposal (i.e. a “Zero Waste” approach).
- Ensure that all new high density developments are designed to support full recycling that includes food waste collection and materials prohibited from entering the RDN landfill.
- Recognize the benefit of integrating solid waste and wastewater disposal streams with private sector initiatives for the recovery of resources, where appropriate. The Solid Waste Management Plan may co-locate solid waste facilities with compatible industries to promote partnerships that recover resources from solid waste disposal.
- Recognize the impact solid waste disposal and processing may have on adjacent land uses and locate future recycling, composting and residual waste disposal sites in locations that minimize the impact on residential communities and the natural environment.
- Consider the potential for aggregate mining sites to be reclaimed for future solid waste disposal sites, if necessary.

Appendix A

Detailed Waste Composition Data (2012)

RDN Waste Composition Study Data (2012)

Material Category	Residential		Commercial		Self-Haul		Totals	
	Waste Stream Percentage	Estimated Tonnes Disposed						
Paper	1.2%	637	9.5%	5,049	1.8%	969	12.5%	6,655
Newsprint	0.1%	76	1.3%	690	0.3%	134	1.7%	900
Cardboard (recyclable)	0.2%	105	2.4%	1,271	0.3%	143	2.8%	1,519
Cardboard (waxed)	0.0%	0	0.0%	1	0.0%	0	0.0%	1
Cardboard (non-recyclable)	0.0%	0	0.2%	108	0.0%	0	0.2%	108
Boxboard / Cores	0.4%	191	1.3%	709	0.2%	128	1.9%	1,028
Office Paper	0.4%	198	2.5%	1,324	0.7%	368	3.5%	1,889
Magazines and Catalogues	0.0%	1	0.2%	106	0.1%	59	0.3%	166
Molded Paper Containers	0.0%	20	0.4%	237	0.0%	25	0.5%	282
Hardcover Books	0.0%	7	0.2%	91	0.2%	87	0.3%	186
Takeout Cups	0.1%	30	0.7%	360	0.0%	23	0.8%	413
Composite Can	0.0%	8	0.0%	21	0.0%	2	0.1%	31
Other Paper	0.0%	1	0.2%	130	0.0%	0	0.2%	131
Plastic	2.5%	1,313	8.3%	4,421	3.0%	1,599	13.8%	7,334
Bags - Retail (carry-out and grocery)	0.2%	124	0.2%	115	0.1%	44	0.5%	284
Bags - Packaging (film and overwrap)	0.9%	468	2.2%	1,173	0.2%	127	3.3%	1,768
Bags - Non Packaging (ziploc)	0.2%	113	0.7%	379	0.1%	46	1.0%	538
Other Plastic Film (pallet wrap)	0.1%	27	0.9%	473	0.0%	0	0.9%	500
PETE #1	0.1%	71	0.2%	99	0.1%	33	0.4%	202
HDPE #2	0.1%	65	0.4%	235	0.1%	58	0.7%	357
PVC #3	0.0%	0	0.0%	7	0.0%	1	0.0%	8
LDPE #4	0.0%	0	0.0%	6	0.0%	0	0.0%	6
PP #5	0.1%	37	0.2%	131	0.1%	29	0.4%	198
PS #6	0.2%	98	0.8%	450	0.1%	45	1.1%	593
Mixed Resin #7	0.0%	25	0.4%	210	0.0%	25	0.5%	260
Other uncoded plastics	0.2%	104	0.7%	391	0.5%	291	1.5%	786
Durable plastic (non-packaging)	0.3%	180	1.4%	753	1.7%	901	3.4%	1,833
Compostable Organics	6.2%	3,301	26.0%	13,879	2.7%	1,453	34.9%	18,632
Food Waste	4.5%	2,381	17.6%	9,386	2.4%	1,297	24.5%	13,065
Yard and Garden	0.4%	223	4.7%	2,490	0.0%	12	5.1%	2,725
Compostable Paper	1.3%	696	3.7%	1,987	0.3%	141	5.3%	2,824
Tree Based Wood	0.0%	0	0.0%	16	0.0%	3	0.0%	19
Beverage Containers	0.2%	98	1.3%	681	0.2%	86	1.6%	865
Aseptic Containers (deposit)	0.0%	8	0.0%	19	0.0%	1	0.1%	29
Aseptic Containers (non-deposit)	0.0%	4	0.0%	9	0.0%	0	0.0%	14
Beverage Pouches (deposit)	0.0%	0	0.0%	11	0.0%	0	0.0%	11
Gable Top Containers (deposit)	0.0%	0	0.0%	8	0.0%	1	0.0%	9
Gable Top Containers (non-deposit)	0.0%	22	0.1%	59	0.0%	15	0.2%	96
Plastic Beverage Containers (deposit)	0.0%	6	0.2%	110	0.0%	18	0.3%	133
Plastic Beverage Containers (non-deposit)	0.0%	25	0.0%	25	0.0%	17	0.1%	67
Plastic Beverage (takeout cups)	0.0%	8	0.1%	72	0.0%	2	0.2%	82
Metal Beverage (deposit)	0.0%	9	0.1%	65	0.0%	4	0.1%	78
Metal Beverage (non-deposit)	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Glass Containers (deposit)	0.0%	16	0.6%	303	0.1%	28	0.7%	347
Glass Containers (non-deposit)	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Textiles	1.1%	576	2.0%	1,080	2.6%	1,380	5.7%	3,037
Clothing	0.1%	45	0.0%	16	0.1%	64	0.2%	126
Composite Textiles	0.1%	74	0.1%	37	0.3%	167	0.5%	278
Leather	0.0%	5	0.0%	12	0.1%	49	0.1%	66
Natural Fibre Textiles	0.7%	380	1.4%	727	1.3%	690	3.4%	1,798
Synthetic Textiles	0.1%	72	0.5%	288	0.8%	410	1.4%	770
Metals	0.5%	260	1.2%	656	0.7%	375	2.4%	1,291
Metal Packaging (food)	0.2%	120	0.4%	213	0.0%	25	0.7%	358
Aluminum Foil and Trays (packaging)	0.0%	10	0.0%	4	0.0%	0	0.0%	14
Aluminum Foil and Trays (non-packaging)	0.1%	79	0.2%	89	0.0%	12	0.3%	180

RDN Waste Composition Study Data (2012)

Material Category	Residential		Commercial		Self-Haul		Totals	
	Waste Stream Percentage	Estimated Tonnes Disposed						
Non-consumables mixed metals (<0.5kg)	0.1%	51	0.3%	169	0.0%	25	0.5%	245
Non-consumables mixed metals (>0.5kg)	0.0%	0	0.3%	181	0.6%	313	0.9%	494
Glass	0.5%	275	1.1%	611	0.9%	500	2.6%	1,386
Glass Packaging (food)	0.4%	188	0.6%	299	0.3%	182	1.3%	669
Other Glass and Ceramics	0.2%	86	0.6%	313	0.6%	318	1.3%	717
Building Materials	0.7%	347	4.6%	2,438	5.6%	2,963	10.8%	5,748
Clean Wood	0.3%	145	1.0%	509	0.8%	403	2.0%	1,057
Treated or Painted Wood	0.2%	88	1.4%	759	0.0%	6	1.6%	853
Gypsum/drywall/plaster	0.0%	0	0.3%	186	1.2%	652	1.6%	838
Masonry/bricks	0.0%	0	0.2%	91	0.5%	241	0.6%	332
Asphalt products	0.0%	0	0.1%	52	0.0%	0	0.1%	52
Carpet & Underlay	0.0%	0	0.8%	437	1.9%	1,004	2.7%	1,441
Flooring (non-wood)	0.0%	0	0.0%	0	0.1%	54	0.1%	54
Other (fiberglass insulation)	0.2%	114	0.8%	404	1.1%	604	2.1%	1,122
Electronics	0.3%	144	1.9%	997	0.3%	182	2.5%	1,323
Computers and Peripherals	0.0%	0	0.5%	274	0.0%	2	0.5%	276
Televisions and Audio Visual Equipment	0.1%	36	0.5%	257	0.1%	40	0.6%	333
Telephones and Telecommunications Equipment	0.0%	0	0.3%	137	0.0%	9	0.3%	146
Small Kitchen Appliances and Floor Care	0.1%	36	0.5%	243	0.2%	123	0.8%	402
Electronic Toys	0.0%	3	0.0%	3	0.0%	0	0.0%	6
Smoke and CO Detectors	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Other Electronics	0.1%	69	0.2%	83	0.0%	7	0.3%	160
Household Hazardous	0.3%	135	2.3%	1,220	0.3%	162	2.8%	1,516
Batteries	0.0%	13	0.1%	31	0.0%	1	0.1%	46
Medical/Biological	0.1%	42	0.7%	383	0.0%	0	0.8%	425
Stains/Preservatives	0.0%	0	0.0%	0	0.0%	10	0.0%	10
Latex Paint	0.0%	12	0.3%	163	0.2%	103	0.5%	278
Oil Based Paint	0.0%	0	0.1%	31	0.0%	0	0.1%	31
Aerosols	0.0%	24	0.1%	38	0.1%	35	0.2%	97
Solvents	0.0%	0	0.1%	34	0.0%	0	0.1%	34
Pesticides/Herbicides/Fungicides	0.0%	0	0.0%	3	0.0%	0	0.0%	3
Motor Oil	0.0%	3	0.0%	17	0.0%	0	0.0%	20
Oil Filters	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Anti-Freeze	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Pharmaceuticals	0.0%	1	0.0%	10	0.0%	13	0.0%	23
Other Petroleum Based Products	0.0%	0	0.0%	16	0.0%	0	0.0%	16
Mercury Containing Items	0.0%	0	0.0%	5	0.0%	0	0.0%	5
Other HHW	0.1%	39	0.9%	488	0.0%	0	1.0%	527
Household Hygiene	3.4%	1,829	3.1%	1,633	0.9%	470	7.4%	3,932
Diapers / Personal Hygiene	2.6%	1,394	2.2%	1,187	0.4%	205	5.2%	2,786
Pet Waste	0.8%	435	0.8%	446	0.5%	266	2.1%	1,146
Other	0.3%	169	1.1%	572	1.6%	859	3.0%	1,599
Cosmetics / Soaps	0.1%	61	0.1%	75	0.0%	26	0.3%	162
Fines	0.2%	102	0.5%	261	0.0%	7	0.7%	370
Furniture	0.0%	0	0.4%	196	1.5%	825	1.9%	1,021
Rubber/Tires	0.0%	6	0.1%	40	0.0%	0	0.1%	46
White Goods	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Totals	17%	9,083	62%	33,239	21%	10,998	100%	53,319

Appendix B

Solid Waste Management Facilities in the RDN

Program	Material	NRE	Curbside	Return-to-Retail	District 68	Alpine	BFI-10th	Cascades	DBL	Enterra	GIRO	International Composting	Nanaimo Bottle	PCWM	Reg. Landfill	Regional Recycling	Schnitzer Steel	District 69	Church Rd. Transfer Stn	Parkville Bottle Depot	Porter Wood	Qualicum Beach Bottle Depot
Packaging and Paper Products	Beverage cont.	X	X			X		X				X			X			X	X		X	
	Cardboard	X	X			X	X	X	X	X		X	X	X				X	X		X	
	Glass	X							X	X	X			X				X	X			
	Milk jugs	X	X				X		X	X	X		X	X	X			X	X			X
	Mixed paper	X	X				X	X	X	X	X			X				X				
	Newsprint	X	X				X	X	X	X	X			X				X				
	Plastic 1-7	X	X				X	X		X	X			X				X				
	Plastic bags	X						X		X			X						X			X
	Waxed cartons	X	X				X		X	X	X		X	X	X				X			X
	Styrofoam	X																	X			
Extended Producer Responsibility	Small appliance	X								X		X			X	X			X			
	Electronics	X								X		X			X	X			X			
	Paint/Solvent	X													X				X			
	Gasoline	X													X				X			
	Pesticide	X													X				X			
	Antifreeze	X								X					X							
	Used Oil	X								X												
	Batteries	X								X		X			X							
	Car battery	X								X				X		X			X	X	X	
	Cellphone	X										X			X							
	Fluores. Tubes	X								X												
	Lg Appliances	X							X	X				X	X	X			X	X	X	
	Medications			X																		
	Smoke alarm	X																				
Tires	X																					
Construction/Demo	CD					X			X					X								
	Wood Waste	X				X			X	X	X	X	X					X		X		
	Yard Waste	X				X			X		X	X	X					X		X		
	Land Clearing					X			X			X									X	
	Gypsum					X			X										X			
Asphalt Shingles					X			X				X	X					X				
Misc	Textiles*	X	X			X																
	Scrap Metal	X				X	X		X				X			X		X	X	X		

* Textiles are collected in the RDN program.

Appendix B – Stage 2 SWMP Report



Regional District of Nanaimo Solid Waste Management Plan

Stage 2 Report

Evaluation of Options Report

Revised April 2017

Executive Summary

The Regional District of Nanaimo (RDN) is updating the Solid Waste Management Plan (referred here after as the “Plan”) which sets out strategies for managing municipal solid waste within the Region. This will be the third update since the original Plan was developed in 1988.

The original Plan, and its subsequent updates, has been highly successful in guiding the RDN to achieve some of the highest waste diversion and lowest per capita disposal rates in the world. The RDN’s 2014 per capita disposal rate was 347 kg/person/year. Comparatively, the BC average for the same period was 520 kg/person/ year and the 2012 California average was 712 kg/person/year. The proposed target for the next plan amendment is 90% waste diversion with an unprecedented per capita disposal rate of 109kg/person/year.

The purpose of this report is to explain proposed future solid waste management strategies and seek community input. The community input will be used in further refining or modifying these strategies. Subsequently, the Solid Waste Management Plan will be updated to include the new strategies and presented to the Regional Board of Directors for adoption and the BC Minister of Environment for approval.

This document serves to present the strategies that are proposed to be adopted in the updated Plan to promote increased waste diversion and to manage the residual waste stream. A Regional Solid Waste Advisory Committee (RSWAC) was established to guide the identification and selection of preferred options presented in this report. The RSWAC was made of a cross section of community representatives from agencies, businesses and the public. Area First Nation representatives were encouraged to participate in the process. The proposed 90% diversion target reflects the strong waste diversion commitment being advocated by the RSWAC. Furthermore, the Committee also strongly supported strengthening the RDN’s long term vision of Zero Waste.

Strategies outlined in this report include:

1. Zero Waste
2. Multi-Family Diversion
3. Industrial, Commercial, Institutional Waste
4. Regulatory Authorities
5. Construction/Demolition Waste
6. Household Hazardous Waste
7. New and Emerging Technologies

Any comments or questions regarding the Plan or the contents of this report should be directed by email to zerowaste@rdn.bc.ca or phone (250) 390-6560.

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1. Introduction

In British Columbia, regional districts are mandated by the Provincial *Environmental Management Act* to develop a Plan that is a long term vision of how each regional district would like to manage their solid waste, including waste diversion and disposal activities. The RDN prepared their first Plan in 1988 and amended that plan in 1996 and 2004. The Plan is again being updated with a 10-year planning horizon.

The process to update the Plan is being conducted in three stages. The first stage involved a review of the current system and preparation of a report on the implementation status of the 2004 Plan. The second stage involved a review of options to address the region's future solid waste management needs and the selection of preferred management options. This document is the conclusion of the Stage 2 process and presents the recommended options for solid waste management. The third stage will set out the implementation schedule for the preferred options and will form the revised Plan.

This document serves to present the preferred options for public review and input. Following consultation, the preferred options will be modified or adopted and, Stage 3, the amended Plan will be prepared for adoption by the Regional Board and approval by the Minister of the Environment.

Once the Plan is approved by the Province (along with any approval conditions), it becomes a regulatory document for solid waste management and serves to guide solid waste management related activities and policy development in the RDN. In conjunction with regulations and operational certificates that may apply, the Plan regulates the operation of storage and disposal facilities that make up the region's waste management system (see Section 2.2).

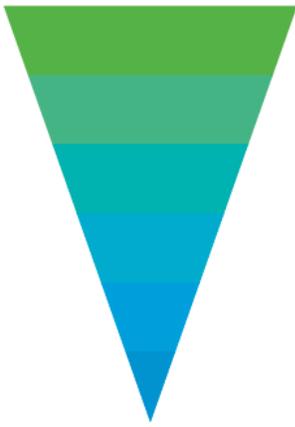
1.1 Guiding Principles

In line with BC Ministry of Environment's provincial standards, the principles guiding the development and implementation of the Plan are:

1. Promote the Zero Waste Hierarchy of highest and best uses and support a circular economy.
2. Maximize use of waste materials and manage residuals appropriately.
3. Support polluter and user-pay approaches and manage incentives to maximize behavior outcomes.
4. Prevent organics and recyclables from going in the garbage.
5. Collaborate with other regional districts wherever practical.
6. Develop collaborative partnerships with interested parties to achieve regional targets set in plans.
7. Level playing field within regions for both private and public solid waste management facilities.

1.2 Pollution Prevention Hierarchy

The future solid waste system will build on the existing framework of services and programs while seeking to improve the delivery of those services and continue to reduce the quantity of waste sent to disposal. The proposed programs, infrastructure and policies for the updated Plan are outlined in Sections 4 through 5 of this report and are presented in accordance with waste management hierarchy as shown in Figure 1.



ZW Hierarchy of Highest & Best Uses

- Reduce, Refuse & Return
- End Subsidies for Wasting
- Product & Packaging Redesign
- Clean Production & Takebacks
- Reuse, Repair & Remanufacture
- Recycle, Compost & Digest
- Regulate (Bans, Biological energy recovery, landfills with pre-processing)
- Not OK: Incineration, Bioreactor Landfills

Figure 1 Waste Management Hierarchy adopted from the Zero Waste International Alliance

1.3 Targets and Key Programs

There are two targets proposed for the updated plan:

1. The ultimate goal of Zero Waste. Zero Waste as defined by Zero Waste International Alliance defined as:

“Zero Waste is a goal that is ethical, economical, efficient and visionary, to guide people in changing their lifestyles and practices to emulate sustainable natural cycles, where all discarded materials are designed to become resources for others to use.

Zero Waste means designing and managing products and processes to systematically avoid and eliminate the volume and toxicity of waste and materials, conserve and recover all resources, and not burn or bury them.

Implementing Zero Waste will eliminate all discharges to land, water or air that are a threat to planetary, human, animal or plant health.”¹

2. Introduce programs/strategies to move the Region towards 90% diversion by 2027 and a per capita disposal of 109 kg/year.

2. Background

2.1 Plan Area

The RDN covers an area of approximately 207,000 hectares on the southeast coast of Vancouver Island. The RDN includes four incorporated municipalities and eight unincorporated electoral areas. A map of the RDN is provided as Figure 2.

¹ Adopted from the Zero Waste International Alliance



Figure 2 Electoral Areas in the RDN

BC Stats reports the 2011 population for the RDN as 146,574. Of this number, 26% (37,550) lived in electoral areas and the remaining 74% (108,075) lived in municipalities. The four municipalities in the region are the City of Nanaimo, the District of Lantzville, the City of Parksville, and the Town of Qualicum Beach. The eight electoral areas in the region are:

- A: Cassidy, Cedar, Yellowpoint, South Wellington;
- B: Gabriola, Decourcy and Mudge Islands;
- C: Extension, Arrowsmith-Benson, East Wellington, Pleasant Valley;
- E: Nanoose Bay;
- F: Coombs, Hilliers, Errington;
- G: French Creek, Dashwood, Englishman River; and
- H: Shaw Hill, Qualicum Bay, Deep Bay, Bowser.

Four First Nations Indian Reserves are also located within the region:

- Nanaimo Town 1 & Nanaimo River (Snuneymuxw First Nation);
- Nanoose (Nanoose First Nation); and
- Qualicum (Qualicum First Nation).

Table 1 Population By Area

Area	Population 2016
Electoral Area A	7,058
Electoral Area B	4,045
Electoral Area C	2,808
Electoral Area E	6,125

Electoral Area F	7,724
Electoral Area G	7,465
Electoral Area H	3,884
Sub-Total	39,109
City of Nanaimo	90,504
District of Lantzville	3,605
City of Parksville	12,514
Town of Qualicum Beach	8,943
Sub-Total	115,566
Nanaimo Town 1 Indian Reserve	360
Nanaimo River Indian Reserve	371
Nanoose Indian Reserve	230
Qualicum Indian Reserve	74
Sub-Total	1,035
Total Population (RDN)	155,710

Population Growth

The population of the region increased from 84,819 in 1986 to 146,574 in 2011. As of 2016 Census data the population of the region was 155,710. Forecasts predict the population will increase to 207,646 by 2026 and 231,184 by 2036.²

2.2 Waste generation and management

The base line figure for waste generation in the RDN is 1,084 kg/capita per year from 1980's disposal estimates. Over the past 36 years, the RDN waste disposal rate has been reduced by approximately 50% to 550kg/capita/year in 1990 and, by 68% to 347 kg/capita/year in 2014. The target for the amended Plan is to further drive diversion to 90% and a per capita disposal rate of 109 kg/year by 2027. Appendix A has more information regarding projected waste generation in the region based on the Solid Waste Generation in British Columbia: 2010-2025 Forecast report. Table 2 provides some comparable waste disposal rates for reference regarding the RDN disposal target.

² Regional District of Nanaimo, Regional Growth Strategy, November 22, 2011

Table 2 Jurisdictional Scan on Per Capita Disposal Rates³

Location	Reporting Year	Per Capita Disposal kg/year	Comment
RDN	2027	109	Based on a 90% diversion target
RDN	2014	347	Based on 68% diversion achievement
BC Average	2014	520	Municipal Solid Waste Disposal in B.C. (1990-2014), Environmental Reporting BC
California Average	2012	712	California's per capita disposal rates may not capture all waste and per capita disposal may be higher.
San Francisco	2012	482	Claimed to have the highest waste diversion rate in the US
Germany	2012	220	Highest reported diversion rate of European countries. Accounts for <u>municipal waste</u> only. The European Environmental Agency notes that municipal waste only accounts for around 10% of the waste stream.
Capannori, Italy	2012	146	Accounts for <u>household</u> waste only.

The jurisdictional scan of North American and Europe carried out by RDN staff has shown that there are two potential paths being taken by communities striving for high levels of diversion:

1. Lower priority on source separation with the emphasis on energy recovery of the waste. The City of Edmonton provides an example of this strategy and they are targeting a 90% diversion rate.
2. Maximizing source separation by moving beyond voluntary waste diversion and introducing regulatory instruments (e.g. mandatory waste separation and fines) or monetary incentives (e.g. "pay as you throw".) San Francisco and Capannori, Italy provide examples of communities using these strategies.

The RDN favors the second strategy, maximizing source separation. It is recognized that to achieve high levels of diversion it is necessary to move beyond the largely voluntary programs that currently exist in the RDN. For the RDN to introduce further economic or regulatory provisions to promote source separation, additional authorities are required from the province. Strategies involving additional authorities are discussed further in Section 4.7.

³ RDN Staff Report: *Jurisdictional Scan Regarding Waste Diversion Program*, Sharon Horsburgh January 5, 2016

2.3 Waste Characterization

The most recent waste characterization study completed for the region in 2012 showed 17% of the volume is attributed to residential, 63% of the volume is attributed to the institutional, commercial, construction, renovation and demolition (including multi-family) and 20% of the volume attributed to self-haul customers

RDN Waste Disposal by Sector 2012

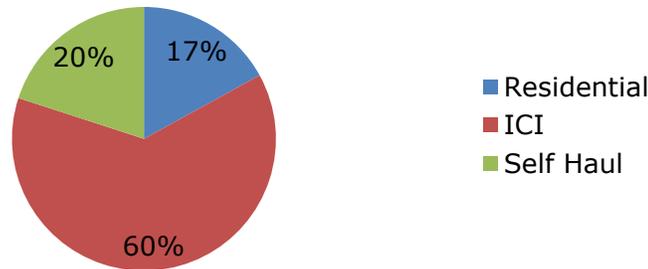


Figure 3 RDN Waste Disposal at Regional Landfill By Sector, 2012

It is estimated that approximately 8% or 4,300 tonnes of waste was moved out of the region in 2014 and can be attributed to the following three circumstances which includes both demolition and municipal solid waste.

1. It is believed a nominal amount of waste is transported in and out of region in areas near the regional boundaries as people look for the most convenient disposal location. For example, there are a few known occasions where Ladysmith residences have brought waste to the Regional Landfill in Cedar because of the close proximity. Similarly, anecdotal comments suggest that RDN residents in the Qualicum area on occasion hauled waste to the Comox Strathcona Regional District for disposal. Again, the amount of waste is considered minor.
2. It is known that there have been large demolition projects in recent years where waste has been hauled out of region for disposal. Two examples are: 1) 2015 City of Nanaimo Ferry Dock Demolition - 476 tonnes disposed of at a private landfill in the Capital Regional District; and, 2) 2015 Wellington School Demolition - approximately 250 tonnes disposed of at a private landfill in Chilliwack. The contractor advised that disposal cost waste less than half of the cost of RDN disposal and they were not required to source separate recyclables. It is impossible to predict to what extent similar circumstances will exist in the future. However, the examples do demonstrate the propensity to seek out the lowest cost option which is often contrary to waste diversion.
3. In 2013, there was a sudden reduction of approximately 25% of the commercial waste that had previously been shipped to the RDN landfill with the waste being shipped to the USA for disposal. The average reduction for 2013 and 2014, excluding the large demolition projects noted above, is estimated at 3,600 tonnes each year⁴. In 2015, there was a reduction in the amount of waste being exported for USA disposal. This was likely a consequence for the lower

⁴ RDN Waste Export Analysis, Prepared by Carey McIver & Associates Ltd., February 10, 2015

value of the Canadian dollar as compared to the USA dollar. No doubt future trends for export will fluctuate and will be influenced by the value of the Canadian/US dollar, transportation costs and business decisions.

2.4 Roles in Waste Management

In the RDN, the following organizations contribute to municipal solid waste management.

Who	Roles in Solid Waste Management
Federal Government	<ul style="list-style-type: none"> • Regulates waste management facilities under federal jurisdiction • Regulates the safety, labelling and sale of consumer products
Provincial Government	<ul style="list-style-type: none"> • Various ministries have regulatory authority related to waste management • Regulates product stewardship/extended producer responsibility in BC
Regional District (Board and Staff)	<ul style="list-style-type: none"> • Develops plan to provide big picture oversight of waste management in the region • Through plans and plan implementation (including bylaws), works to meet waste disposal goals and targets and ensures that community has access to waste management services that are environmentally sound and cost effective • Ensures that legislative and policy requirements are followed, including monitoring and reporting • Chairs committees/ coordinates with municipalities in service delivery • Operates the Regional Landfill and Church Road Transfer Station (CRTS) • Provides residential curbside collection of food waste, garbage and recycling in all Electoral Areas, District of Lantzville, City of Parksville and food waste and recycling in the Town of Qualicum Beach • Supports Extended Producer Responsibility (EPR) programs in jurisdiction • Incorporates the Zero Waste Hierarchy within operations and those of member municipalities • Develops policies which promotes a level playing field within the waste management sector
Municipalities (council and staff)	<ul style="list-style-type: none"> • May provide/ coordinate waste management service, or own/operate facilities • May make bylaws dealing with waste collection • Municipal enforcement officers part of enforcement team
First Nations	<ul style="list-style-type: none"> • May provide waste management services or may participate in regional waste management system

Product Stewards	<ul style="list-style-type: none"> • Collect/ process stewarded products • Coordinate local government delivery of service where applicable • Provide and/or fund education and marketing • Provide deposit refunds to consumers (where applicable) • Monitor/ report on recovery rates
Private sector involved in waste management (e.g. haulers, facility operators)	<ul style="list-style-type: none"> • May provide recycling and waste management services and own/operate facilities • Generally, services multi-family residential buildings, commercial and institutional sources, and construction, demolition and land clearing sectors • Regulated by local government through Waste Stream Licensing Bylaw
Neighbouring jurisdictions	<ul style="list-style-type: none"> • May send waste to Regional Landfill or accept waste from RDN • Synergies, consistencies in waste management with neighbouring jurisdictions
Residents and businesses	<ul style="list-style-type: none"> • Responsible for carrying out proper waste reduction, recycling and disposal activities

3. Existing Solid Waste Management System and Waste Characterization

This section provides an overview of the solid waste management system. A detailed description of the Existing Solid Waste Management System can be found in Stage 1: Existing System Report in Appendix B.

3.1 Waste Flows

There are many participants within the system providing a wide array of services. Figure 4 is a schematic diagram showing the breadth of activities and participants engaged with the current solid waste management system. There are a wide range of waste management activities underway that reflect both a relatively mature waste management system and significant economic activity based on secondary resources.

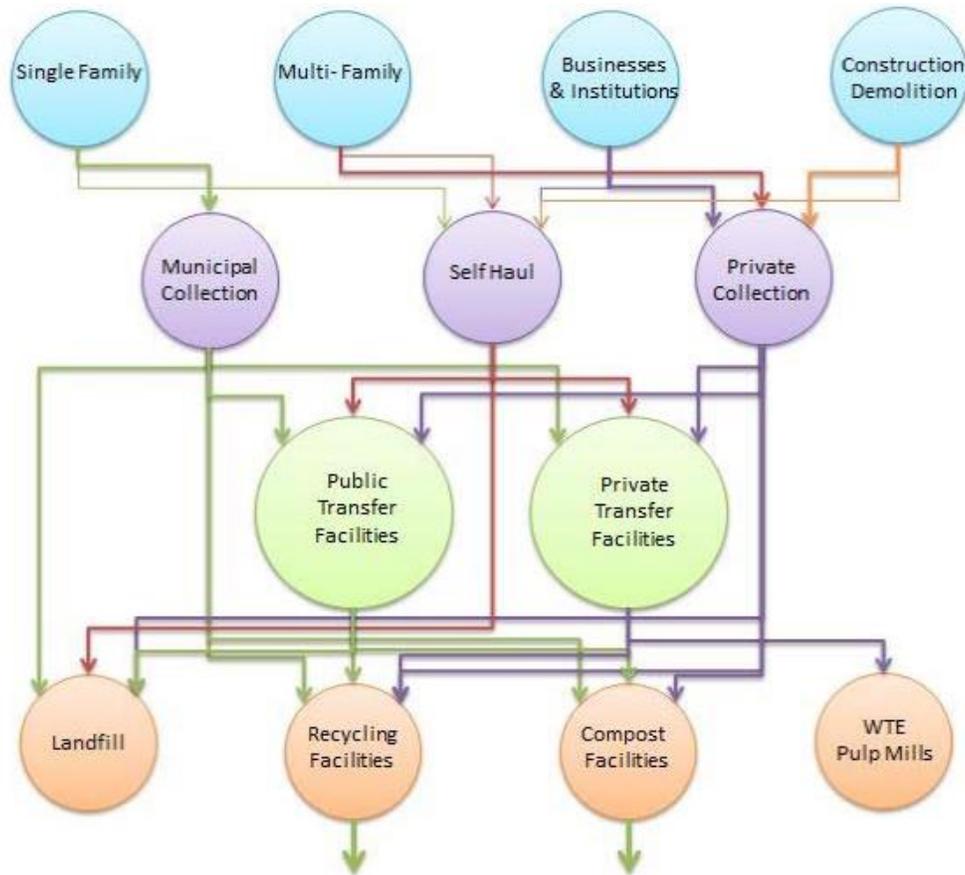


Figure 4 Components of the Waste Management System in the RDN

3.2 Overview of the Solid Waste Management System

The RDN has a broad range of solid waste management programs and infrastructure. This section describes the major infrastructure, services, programs and policies.

The 2004 Plan introduced the Zero Waste strategy and expanded on policies and programs to increase diversion. This strategy has effectively increased recyclable commodities and transferred the management of those items to the private sector. Examples of this cross the waste stream spectrum and include wood waste, commercial/demolition waste, yard waste, food waste and EPR products.

This movement of waste to the private sector has resulted in reduced cost of government and growth in the waste management business sector. With the growth in business, the whole community benefits from this sector's increased employment opportunities and their contribution of taxes. These policies have created a robust waste management industry in the region and has resulted in world class waste diversion levels.

This model of transferring the waste management activities to the private sector ensures "user pay" where the full cost of waste management is born by the generator. Conversely, many other communities rely much more on taxation in providing waste management services and the true cost of waste management is hidden.

In May 2013, the report “Zero Waste Business Case, Draft for Expert Review”, Innes Hood Consulting Inc., was prepared for the Ministry of the Environment.⁵ The report concluded that there is a positive business case for implementing a Zero Waste Strategy for BC. Depending on how aggressively it is implemented (i.e., 62% vs 81% diversion), by 2025 a Zero Waste Strategy will produce between \$56 million and \$126 million of annual net economic benefit; will create between \$27 million and \$89 million in new annual GDP and generate between \$755,000 and \$2.5 million in new annual income tax revenue for BC. The report also states that the business case for Zero Waste is strengthened if supporting policies are developed that encourage the creation and retention of remanufacturing facilities within BC, and prevent leakage to other jurisdictions. The RDN’s current policies which move waste to the private sector are in harmony with the findings of this study. The preferred options for the amended Plan set out in Section 4 further strengthen this model. As a result, the RDN is expected to continue to see increased diversion coupled with further economic growth in the waste management sector.

3.2.1 Education and Outreach

Both the RDN and the City of Nanaimo undertake promotion and education related to solid waste management.

The RDN:

- Has information related to the solid waste management planning, bylaws and Zero Waste programs on the Solid Waste and Recycling pages of the RDN’s website (<http://www.rdn.bc.ca/>)
- Distributes a “Zero Waste” Newsletter to all homes two to three times per year.
- Has a searchable on-line recycling directory for users to find out where they can bring their reusable, recyclable and compostable items.
- Has a Zero Waste school education program which provides free classroom workshops to schools throughout the RDN.

The City of Nanaimo:

- Distributes their “Waste Lines” newsletter to all City addresses in the spring and fall of each year.
- Has a dedicated web pages on the City’s website (www.nanaimo.ca) that includes information related to the City’s residential collection services, a link to the RDN recycling directory, and a list of reuse and recycling organizations operating in the City.

In the RDN, the current collection infrastructure for existing EPR programs consists of return-to-retail and take-back depots. The RDN’s Recycling Directory can be used by residents to find the most convenient take back location for EPR products. The Recycling Council of BC (which the RDN is a member of) operates a similar service through their toll-free Recycling Hotline (1-800-667-4321) and their on-line searchable database and app “Recyclopedia”. BC Stewards also recently rebranded their website which provides an online look up feature at www.bcrecycles.ca.

⁵ http://www2.gov.bc.ca/assets/gov/environment/waste-management/zero-waste/zero-waste/zero_waste_business_case_draft.pdf

3.2.2 Reduction and Reuse Activities

Both the RDN and the City of Nanaimo encourage residents to “reduce and reuse”.

Both organizations promote backyard composting through providing information on their websites on how to backyard compost and grasscycle. The City of Nanaimo holds a reuse-focused event each spring called “Reuse Rendezvous”. This event promotes reuse through a weekend long curbside swap meet for residents to put out items that they no longer want and that may be useful to others.

In addition to the RDN’s and City’s reduction and reuse activities, there are several other organizations involved in reuse in the RDN, including several private and non-profit retailers and many on-line classified services such as Craigslist and UsedNanaimo.com that are actively involved in the sale and purchase of used goods. The Repair Café Nanaimo holds repair workshops where residents can bring in their broken items and receive help from local repair experts.

3.2.3 Recycling

Curbside collection of recyclables is provided to single family homes to residents of all electoral areas, City of Nanaimo, City of Parksville, District of Lantzville and Town of Qualicum Beach.

Both regional facilities (Regional Landfill and CRTS) accept limited recyclable material including scrap metal, paper, cardboard, household plastic containers, metal food and beverage containers, vehicle batteries, oil filters, wood waste, and gypsum.

There are 3 material recycling facilities (referred to as MRFs) that are owned and operated by private waste management companies in the RDN: Progressive Waste, Emterra and Cascades. All 3 MRFs are located in Nanaimo.

Figure 5 shows the locations of both the private and not-for-profit recycling depots throughout the region which accept EPR material and other recyclables from private businesses and residents.

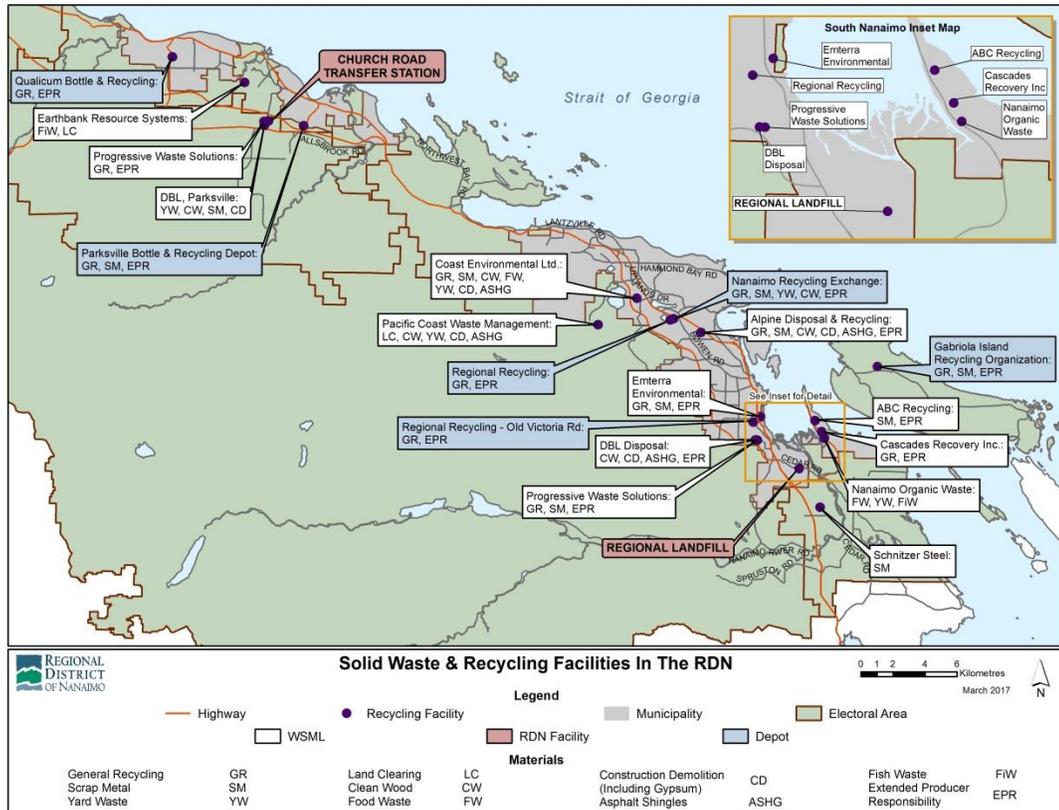


Figure 5 Solid Waste & Recycling Facilities in the RDN

3.2.4 Organics Management

In the RDN there is reuse of leftover and excess food through food banks and other food redistribution services. Additionally some food scraps are picked up by area farmers for use as animal feed. However, the majority of organics are sent to centralized composting facilities. There are two licensed composting facilities in the RDN: Nanaimo Organic Waste (formerly International Composting Corporation) and Earthbank Resource Systems. The following table lists the types of materials each of these facilities manages:

Nanaimo Organic Waste	<ul style="list-style-type: none"> Residential “green bin” kitchen scraps and soiled paper Commercial food waste Yard waste Fish waste Clean wood
Earthbank	<ul style="list-style-type: none"> Farmed and wild fish offal Farmed salmon mortalities Ground up bark from the forestry industry Ground up land clearing debris (exclusively local forest materials)

Nanaimo Organic Waste is the only facility processing food waste in the RDN. This facility opened in Nanaimo in 2004 with a drum-style in-vessel composting system. The compost product is sold as a bulk product for blending into soil mixes.

In 2005, the RDN introduced a commercial organics ban. Based on waste characterization studies carried out in before and after the ban, 2004 and 2012 respectively, the per capita tonnage of compostable organics in the waste stream only dropped from 95.5kg/capita to 91.2 kg/capita. These findings indicate that the current organics ban has only had modest success and there is significant opportunity for further diversion with organic waste.

In 2011, more than 52,000 single family homes in Nanaimo, Lantzville, Parksville, Qualicum Beach and the RDN Electoral Areas received weekly curbside food waste collection service.

3.2.5 Yard Waste Collection

Yard waste such as leaves and grass clippings are not collected as part of residential waste collection services in the RDN. Residents and businesses are encouraged to manage their yard waste in one of the following manners:

- Reduce the amount of yard waste through practices such as grasscycling and xeriscaping.
- Backyard or on-site composting.
- Self-hauling to one of several yard waste depots in the RDN. Currently, depots are located at:
 - Church Road Transfer Station
 - DBL Disposal
 - Nanaimo Recycling Exchange
 - Pacific Coast Waste Management
 - Regional Landfill
- Hiring a yard waste removal service.
- Include yard waste removal in landscaping contracts.

Use of these yard waste management practices and service is encouraged by a variety of policies including:

- A ban on yard waste disposed as garbage at the landfill site and transfer station.
- A ban on the inclusion of yard waste in the City of Nanaimo's⁶ and RDN's residential garbage collection service.
- Not providing yard waste collection as part of the single-family residential curbside service.
- Promoting the yard waste management alternatives.

⁶ The City of Nanaimo is currently changing over their residential curbside collection program to an automated system and may include yard waste as part of their curbside collection service.

This approach to yard waste management has been successful at minimizing the amount of yard waste being landfilled. The 2012 waste composition study indicated that yard waste is roughly 2.5% of the residential waste sent to landfill and 5% of overall waste landfilled.

3.2.6 Waste Collection

Residential curbside garbage, recycling and food waste collection service is provided to single family homes in all Electoral Areas of the RDN, City of Parksville and District of Lantzville by a private collection contractor. Town of Qualicum Beach staff provide garbage collection to some ICI buildings and all single family homes, while recycling and food waste collection is provided by the RDN through a contracted waste hauler for single family homes. City of Nanaimo staff provide garbage and food waste collection to single family homes while recycling is provided by a contracted waste hauler.

Throughout the RDN, for those in the multi-family and ICI sectors that desire a waste collection, there are a number of private waste haulers that provide this service.

3.2.7 Transfer Stations

The CRTS is located on Church Road, in Electoral Area F, about four kilometres southwest of downtown Parksville. The facility opened in 1991, and is approximately two hectares in size. CRTS receives garbage, yard waste, wood waste, construction/demolition waste, and limited recyclables from communities in northern portion of the RDN: Parksville, Qualicum Beach, and Electoral Areas E, F, G, and H. In recent years, with the growth of Nanaimo, this facility has also started to receive waste generated in parts of Nanaimo. In 2012, approximately 30% of the region's garbage was delivered to CRTS.

Garbage brought to the CRTS is transferred to the Regional Landfill in Nanaimo. The limited recyclables such as cardboard and metal are transferred to various recycling processors, and food waste, kitchen waste, and yard waste are transferred to the Nanaimo Organic Waste Facility in South Nanaimo.

In 2010, the site was re-designed to accommodate population growth to 2030, include a food waste transfer area and to segregate large commercial-sized waste vehicles from small passenger-sized vehicles and trucks. The new transfer station was built in accordance with the RDN Green Building Policy, and has received LEED Gold® accreditation, the first in Canada for a transfer station.

3.2.8 Landfills and Other Disposal Facilities

The Regional Landfill is located approximately 5 kilometres south of downtown Nanaimo and is owned and operated by the RDN. The landfill operates on a 21-hectare section of a 38-hectare property, approximately 2.7 hectares of which have been permanently closed. In accordance with Ministry of Environment-approved Design and Operations Plan, a North Berm Lateral Expansion currently underway and will add approximately 10 years of capacity to the site. One final expansion in the south east area of the site is planned when the North Berm area is filled. The site has been receiving municipal solid waste from the RDN since 1971 and given the current tonnages of wastes received, the operation life of the landfill is expected to continue until 2040.

There are two closed landfills in the RDN: the Parksville Landfill and the Qualicum Beach Landfill. These sites are the responsibility of their respective municipality.

Waste disposal facilities on First Nations' land are regulated by the federal Indian Reserve Waste Disposal Regulations. Currently, there are no federally authorized waste management facilities on First Nations land within the RDN. The RDN's Waste Stream Management Licensing Bylaw does not apply to activities on First Nations' land.

3.2.9 Policies and Regulations

Five main policies influence the RDN solid waste management system: the user-pay system; variable tipping fees; disposal and collection bans; private sector waste management and open burning restrictions. The first four policies fall within the scope of the Plan while burning restrictions are applied through a combination of provincial regulation (e.g. Open Burning Smoke Control Regulation) and augmented by RDN and municipal bylaws.

Provincial product stewardship programs that significantly influence the management of specific waste materials generated in the RDN. Each of these local and provincial policies is discussed below:

User Pay

Both the RDN and the City of Nanaimo have user pay curbside garbage collection programs. All households have a one can per week limit on waste volume. Separate tags that presently cost \$3.00 each are required to set out additional cans. The vast majority of homes set out one can of waste or less per week. The RDN curbside program is fully funded by user fees and is not augmented by taxation.

The RDN solid waste program, other than curbside waste collection discussed in the previous paragraph, is primarily funded by landfill tipping fees augmented by a small tax requisition. In 2016 the split was approximately 93% tipping fee revenue and 7% taxation. These revenues are applied to solid waste program costs including operation of the landfill and transfer station, organics waste management, illegal dumping mitigation, education, policy and regulatory work. Other revenues such as grants, sale of asbestos bags and licensing fees associated with the Waste Stream Licensing program are insignificant relative to the overall budget.

Variable Tipping Fees

The RDN tipping fees vary depending upon the materials. The 2016 base tipping fee for municipal solid waste is \$125 per tonne. Fees for other materials are varied on the basis of cost to handle the material and/or to motivate diversion. For example, the 2016 tip fee for asbestos waste is \$500/tonne and is based on the landfill airspace consumption and the direct handling costs for management of the material. In the case of construction and demolition material containing recyclables, the 2016 tip fee is \$360/tonne and potential of imposition of a fine. The intention with this latter example is to provide an incentive to source separate and divert waste.

Material Disposal Bans

The first material ban was introduced by the RDN in 1991 to encourage the recycling of drywall. Since that time, a number of other materials have been banned. A full list of banned material and the implementation date of the ban is provided in Section 3.2.10. Enforcement of the bans to date at the Regional Landfill and at the CRTS has been applied to the most egregious cases of contamination. Minor amounts of banned materials such as paper, food waste or recyclable plastic is not uncommon.

Private Sector Waste Management

As the RDN waste management system has matured, the trend has been away from government provided service to an increase in services provided by the private sector. The three policies described above, aided by burning bans and provincial initiatives discussed in the following section, have created a positive business climate for this trend.

Many communities have developed government run eco-depots that accept a wide range of recyclable items. For those residents located in close proximity, these facilities typically provide a high level of convenience as a “one-stop” drop off. Commonly, the cost of operating these facilities is augmented by taxation. As a result, there is typically a loss of private sector enterprise given the challenge to compete with a government subsidized facility.

In the case of the RDN, government services have been reduced where the private sector is providing the service. RDN facilities typically do not accept products covered under the provincial stewardship programs. Where materials are accepted, there is a drop off fee. In this way, consumers/generators are encouraged to use the private facilities. The net result has been robust private sector waste management in the region, high waste diversion and reduced cost of government to directly provide services.

Burning Bans

Most developed areas of the RDN have burning restrictions for landclearing waste, construction/demolition debris and yard waste. In most developed areas, burning of these wastes is prohibited year-round, but in some areas yard waste can be burned only during a limited time frame annually (usually a small window of time is given in the spring and fall). In undeveloped areas, burning of landclearing waste and yard waste is generally allowed, provided any local fire restrictions and the BC Open Burning Smoke Control regulation are being met. With restrictions in place, generators of these materials must find alternative disposal options and are encouraged to select options such as composting, re-use (of construction/demolition materials) or recycling.

Provincial Initiatives

BC has implemented several product stewardship programs over the past decade. Product stewardship is defined as a management system based on industry and consumers taking life-cycle responsibility for the products they produce and use. As a result, the materials covered under a stewardship program are less likely to enter the RDN’s waste management system. There are province-wide stewardship programs currently in place for:

- Lead-acid batteries
- Used motor oil
- Paint
- Pesticides
- Solvents
- Tires
- Medications
- Fuel
- Cell Phones
- Outdoor Power Equipment
- Lighting Products
- Household Batteries
- Gasoline
- Antifreeze
- Thermostats
- Small Appliances
- Electronic Toys
- Beverage Containers
- Printed Paper and Packaging
- Electronics
- Large Appliances
- Smoke alarms
- Carbon monoxide alarms
- Beer Containers
- Power Tools

The RDN has actively encouraged the Province and product manufacturers to undertake stewardship initiatives and continues to promote the expansion of stewardship initiatives.

3.2.10 Waste Stream Management Licensing Bylaw

RDN Bylaw No. 1386 requires most solid waste management facilities operating in the RDN to maintain a Waste Stream Management License (WSML). The authority to license and regulate solid waste facilities is given to regional districts through BC's Environmental Management Act and the RDN's licensing bylaw was enacted under the 2004 Plan.

The RDN's licensing bylaw (Bylaw No. 1386) was established to fulfill the following objectives:

1. Create a high standard of operation for waste management facilities located in the RDN.
2. Encourage and protect legitimate waste management operations within the RDN.
3. Establish a reporting system for the flow of waste materials within the RDN to assist in tracking our waste reduction rate.
4. Protect and enhance the waste reduction rate achieved in both regional districts.
5. To provide a level playing field in the two regional districts.

All facilities that handle municipal solid waste (MSW) in whole or part are included in the licensing system: with the exception of those facilities noted under "exclusions" below. This means that transfer stations, recycling depots, composting facilities, material recovery facilities and brokers are subject to the licensing system. Facilities that are excluded from obtaining a license are:

- Disposal facilities such as landfill and incinerators (these facilities will remain under the regulatory jurisdiction of the Province).
- Soil manufacturing facilities (unless they are composting MSW-based materials on-site).
- private on-site depots (such as the centralized recycling areas used by office buildings and mall tenants).
- Stewardship program depots.
- Reuse businesses.
- Concrete and asphalt recycling operations and auto wreckers since the material handled by these operations has not traditionally been handled as MSW.
- Municipally owned facilities including the CRTS.

The updated plan should reconsider the wording of these exemptions to provide further clarity. For instance, the intent of not regulating disposal facilities under the regulatory jurisdiction of the Province is intended to avoid duplication of regulation. Consideration should be given to clarifying this exemption to apply to facilities operating under a Ministry of Environment Permit or Operational Certificate.

Currently there are 13 waste stream management licenses in place in the RDN and 2 applications under review. A list of currently licensed facilities and facilities currently undergoing application review is provided in Table 3.

Table 3 RDN Waste Stream Management License Holders

Waste Stream Management License Holders (as of September 2016)
1. Schnitzer Steel Pacific
2. Parksville Bottle & Recycling Depot
3. International Composting Corporation
4. BFI Nanaimo Recycling Facility
5. Emterra Environmental
6. Earthbank Resource Systems
7. Alpine Disposal & Recycling
8. Pacific Coast Waste Management
9. DBL Disposal Service Ltd. – Church Road
10. DBL Disposal Service Ltd.
11. BFI Canada, Springhill
12. Cascades Recovery Inc.
13. Coast Environmental Ltd.
Waste Stream Management Applications Under Review (as of September 2016)
13. Nanaimo Recycling Exchange
14. ABC Recycling

3.2.11 Disposal Bans

The practice of banning the disposal of specific wastes from the landfill, when viable recycling alternatives are in place, has been used by the RDN since 1991. Current landfill bans on recyclable/compostable materials include drywall (implemented in 1991), cardboard (1992), paper, metal and tires (1998), commercial food waste (2005), yard and garden waste (2007) wood waste (2007) and EPR materials designated under BC’s recycling regulation (2007), household plastic containers (2009) and metal food and beverage containers (2009). Disposal bans are considered to be a critical policy mechanism to drive diversion activities, particularly in the ICI and construction/demolition sectors.

3.2.12 Illegal Dumping

Illegal dumping on private and public lands has been a long-standing concern in the RDN. In 2016, approximately 35 tonnes of illegally dumped material was removed through clean-up initiatives and disposed of appropriately.

Although it represents less than 1% of the total solid waste generated in the region, illegally dumped material can have serious effects on the environment, wildlife habitats and the ability of others to use and enjoy outdoor recreational areas.

The RDN has implemented an Anti-Illegal Dumping program that includes:

- Prevention of illegal dumping through education;
- Funding the clean-up of illegal dump sites; and
- Illegal dumping surveillance and enforcement activities.

The RDN spends approximately \$60,000 annually combating illegal dumping. Pursuant to RDN Bylaw No. 1386, those who generate (own), deliver or abandon waste illegally can be subject to a fine of up to \$200,000.

4. Future Solid Waste Management System

The future solid waste system will build on the existing framework of services and programs while seeking to improve the delivery of those services and continue to reduce the quantity of waste sent to disposal. The proposed programs, infrastructure and policies for the updated Solid Waste Management Plan are outlined in Sections 4.1 through 4.7.

4.1 General Strategies

As part of the Stage 2 process of the Solid Waste Management Plan review, the Regional Solid Waste Management Advisory Committee (RSWAC) short listed a number of options for inclusion in the updated plan. The full list of short listed options reviewed can be found in Appendix C. Through this process six key focus areas emerged:

1. Zero Waste
2. Multi-Family Diversion
3. ICI Waste
4. Regulatory Authorities
5. Construction/Demolition Waste
6. Household Hazardous Waste
7. New and Emerging Technologies

4.2 Zero Waste

In 2002, the RDN committed to “Zero Waste” as its long-term waste reduction and diversion target.

Zero Waste focuses on reducing the region’s environmental footprint by minimizing the amount of waste that must be landfilled through reduction, reuse, recycling, redesign, composting, and other actions. The RDN was the first jurisdiction on Vancouver Island and one of several forward looking local governments in Canada and around the world to move beyond recycling and adopt a Zero Waste approach to eliminating waste.

The RDN and its member municipalities, residents and businesses have led the way in innovative approaches to reducing the amount of garbage that must be landfilled. In 1991, the RDN introduced Canada's first user pay residential garbage collection system. Since then, the RDN and its partners have expanded curbside recycling programs, banned paper, metal, commercial food waste, clean wood waste and other recyclable materials from the landfill, and successfully promoted composting throughout the region.

As part of the RDN's commitment to Zero Waste as an integral part of the region's Plan, the Zero Waste International Alliance (ZWIA) definition of Zero Waste has been adopted. See Section [1.3 Targets and Key Programs](#).

4.2.1 Education

The RDN and the City of Nanaimo produce most of the solid waste management promotion and education materials provided in the Regional District.

The objectives of the RDN program are to:

- Increase waste diversion;
- Educate all generators about the solid waste management priorities of the Regional District;
- Promote participation in waste diversion programs;
- Promote the "Zero Waste" concept;
- Encourage proper participation in garbage and recycling collection programs; and
- Encourage compliance with Regional District material bans.

Education activities include: staffing at public events and speaking engagements; mall displays; articles in the Regional newsletter "Regional Perspectives"; the region-wide "Zero Waste" newsletter; a Zero Waste school education program; garbage and recycling program brochure (for RDN contract areas); brochures for various waste diversion programs (backyard composting, grasscycling, disposal bans, etc.); and a web site featuring a recycling database, Zero Waste tool kit and program information.

A greater emphasis is proposed to be targeted at adult audiences through traditional and social media, as well as being more active in a variety of public events.

In addition to existing solid waste education programs, enhancing public education regarding solid waste management in the region will cost in the range of \$20,000-\$40,000 in administrative and delivery costs.

4.2.2 Advocacy

The RDN continues to advocate for greater waste diversion in the region by engaging with federal, provincial and local government agencies as well as BC stewardship groups such as Multi-Material British Columbia. The costs and responsibilities of waste management have historically been borne by local governments and taxpayers. The responsibility for the costs and risk to manage end-of-life products should progressively transfer to the manufacturers of goods and the consumers that use them to provide the appropriate market mechanism to encourage more sustainable manufacturing and consumer choices.

Costs associated with the RDN's current activities regarding advocacy are difficult to determine given the broad range of activities carried out by political and staff representatives. These range from support for organizations such as the Recycling Council BC, active participation in organizations such as the Coast Waste Management Association, to engaging with the Province on policy and regulation development. The continued role of advocacy will remain variable depending on level of participation and costs related to the engagement opportunities (e.g. association dues, travel expenses).

Advocacy role may include:

- Petition Provincial/Federal Government to act on matters outside local jurisdiction in an effort to minimize waste
 - Petition senior governments on an on-going basis, and in a variety of ways, including: writing letters, arranging meetings at a senior staff and political level and alerting the media.
 - Consider partnerships with other organizations for joint advocacy initiatives.
- Encourage, demonstrate and advocate for consumers and producers to move towards a closed loop (cradle to cradle) system.
 - Educate the public on the Zero Waste Hierarchy.
 - Demonstrate how to build a closed loop system.
 - Advocate for producers to ensure their products and their products packaging end of life is consistent with the Zero Waste Hierarchy.
- Petition Provincial/Federal Government for the expansion/addition of EPR programs
 - Petition senior governments and other related influential organizations, including the Union of BC Municipalities, Federation of Canadian Municipalities and the Local Government Management Association, on an on-going basis, and in a variety of ways, including: writing letters, arranging meetings at a senior staff and political level and alerting the media.
 - Insist that new EPR programs must meet or exceed current recycling collection programs and offer consistency of services.
 - Collaborate with the BC Product Stewardship Council, EPR Stewards, the Canadian Council of Ministers of the Environment and the Recycling Council of BC.
 - Partner with neighbouring regional districts and other organizations to ensure a broader, more unified message is expressed when shared concerns are brought forward.

4.2.3 RDN Purchasing Policy

Using existing municipal models, develop an internal Purchasing Policy to ensure that the environmental impact of RDN purchasing and operations of the RDN is minimized. Environmental purchasing policies developed by other municipalities, such as the City of Richmond, will be used as a template.

The development and implementation of an RDN Purchasing Policy will require staff time to write and present the new policy to the Regional Board. The 2004 Plan budgeted \$4,000 for this task however; it was not completed during the term of the plan.

An RDN Purchasing Policy will have a minimal waste diversion impact however; it demonstrates leadership and is consistent with the RDN Boards strategic goals.

4.3 Multi-Family Diversion

There are approximately 13,430 multi-family residential units in the RDN, with approximately 12,000 of these units located in the City of Nanaimo.⁷ Collection services to multi-family buildings are privately managed throughout the RDN including the City of Nanaimo. Each building is responsible for hiring their own collection services for garbage and recycling.

Since 2008, the RDN has had a Multi-Family Diversion Strategy aimed at increasing the level of recycling activities available to multi-family residents living in townhouses, mobile homes, apartments and condominiums. In 2008, RDN staff estimated that 75% of multi-family buildings had recycling services on-site, but that those services were primarily for cardboard and paper collection. In 2012, the service levels were found to have significantly improved since 2008, with 94% of multi-family buildings reporting that they had recycling services for cardboard, paper and plastic and containers. The primary mechanism by which the RDN encourages recycling in Multi-Family buildings is through landfill bans that prohibit the landfilling of residential recyclables such as household plastic containers, recyclable paper, cardboard and metal.

Because garbage and recyclables generated at multi-family buildings are generally collected by trucks servicing businesses and institutions, no data is available on the specific quantities disposed or recycled by the multi-family building sector. Research done in other jurisdictions indicates that recycling rates in multi-family buildings are typically much lower than those associated with single-family recycling programs. For example, Metro Vancouver reports that only 16% of waste from multi-family homes is recycled and the City of Toronto reports an 18% recycling rate.⁸ Comparatively, single-family homes in the RDN recycle 30% of their discards through the curbside recycling program (not including kitchen scraps collection).

During the RDN's 2012 waste composition study, a load of garbage from multi-family buildings was sampled to provide a rough estimate of the composition of the waste being discarded by multi-family buildings. The composition data suggests that the majority of waste disposed as garbage in multi-family buildings is recyclable (26%) or compostable (44%).

Challenges to achieving a high degree of source separation in the multi-family sector include inconvenience, cost, available space for separation and often a lack of a site champion to promote diversion.

RDN Multi-Family residences are serviced by private haulers. The service is typically provided in conjunction with, and using the same equipment as used to serve the industrial, commercial and

⁷ Multi-Family Housing Diversion Strategy Progress Report; RDN staff memorandum by S. Horsburgh to C. McIver; February 2, 2012.

⁸ <http://www.metrovancouver.org/region/dialogues/Reports%20and%20Issue%20Summary%20Notes/Multi-FamilyWaste-NS-Summary20110419.pdf> and <http://www.toronto.ca/garbage/pdf/2010-graph.pdf>

institutional sector (ICI). As a result future diversion strategies for multi-family are the same as the ICI sector and are discussed in Section 4.4. Additionally, Section 4.5.2 discusses the introduction of Waste Source Regulation as an additional authority under the SWMP which would drive the requirement for all multi-family buildings to have full diversion programs in place for recyclables and organics.

4.4 Industrial, Commercial and Institutional (ICI) Waste Management

The RDN encourages recycling by the ICI sector through variable tipping fees and landfill bans which prohibit the landfilling of recyclables, food waste and yard waste. An assessment of the garbage disposed by the ICI sector was done as part of the RDN's 2012 waste composition study. The data estimates that approximately 42% of the garbage disposed is compostable, including food scraps (28%), yard waste (8%) and compostable paper products (6%). An estimated 16% is considered recyclable and consists primarily of paper and cardboard (12%) with metal, pallet wrap and drywall making up the remainder of the recyclable portion of the ICI garbage.

To increase diversion from the ICI and Multi-family sectors there are essentially two distinct paths available to the RDN. The first is to continue with, and increase education and awareness and/or increased enforcement of current disposal bans at the landfill and transfer station. Increased enforcement and education of existing disposal bans and a relaunch of Commercial Organics Diversion Strategy and Multi-Family Diversion Strategy are predicted to achieve up to 3.1% diversion.

The second path is to target maximizing source separation and introduce further economic or regulatory provisions to promote the desired behavior. To do this, additional authorities are required from the province and may be gained through Ministerial approval of the Solid Waste Management Plan. The diversion potential of invoking such authorities is predicted to be up to 11%. The RDN proposes to include such strategies in the Solid Waste Management Plan which are discussed in Section 4.7.

If the RDN continues to work within the current regulatory authorities under the existing Plan to improve ICI organics and recycling diversion which may include increased education and awareness and/or increased enforcement of current landfill bans at the landfill and transfer station would require 1 new FTE or equivalent at \$80,000/year including benefits to oversee the new ICI diversion strategy plus \$20,000/year in administrative costs to run the program and \$100,000/year for increased enforcement.

4.5 Regulatory Authorities

The requirement and authority for a Plan is set out in the Provincial statute, *Environmental Management Act*. On Ministerial approval of a Plan, regional districts are given additional tools that they do not otherwise have to assist with the management of solid waste within their boundaries. The *Environmental Management Act* also provides a number of optional authorities for regional districts to manage solid waste that may be granted through plan approval.

The RDN proposes to request that the province grant additional authorities, as discussed in the following section, for managing solid waste. Should the Province grant such an authority at the concept level, further review and consultation is necessary to develop the program, determine costs and harmonize

the strategy with potentially affected stakeholders. Furthermore, it is recognized that any associated Bylaw would require approval of the Minister of the Environment before adoption.

4.5.1 Waste Stream Management Licensing

The RDN currently has authority under the existing 2004 Plan for waste stream licensing. Private facilities that manage municipal solid waste in the region are required to hold a license issued by the RDN. Further details of this program are presented in Section 3.2.10

4.5.2 Waste Source Regulation

Waste Source Regulation provides the ability to impose requirements on waste generators. Two examples of this concept are:

1. the City of Vancouver's Green Demolition bylaw which requires 75% recycling of materials on demolition of pre-1940 homes and 90% on pre-1940 character homes.
2. Comox Strathcona Waste Management proposes to require mandatory recycling of the ICI sector such as by requiring all ICI buildings to implement a recycling collection service by a defined date. They also propose the development of a model bylaw for space allocation for the placement for waste and recycling containers. These intentions are set out in Comox Strathcona's Solid Waste Management Plan approved by the Minister of Environment in 2013.

Depending on the level of enforcement, waste source regulation has the potential to result in high waste diversion. Substantial program cost increases are commensurate with increased enforcement.

Should the Province grant such an authority at the concept level, further work is necessary to develop the program, determine costs and harmonize the strategy with potentially affected stakeholders.

4.5.3 Waste Haulers as Agents

The RDN proposes to request authority to establish a licensing process for waste haulers to act as waste collection agents of the RDN. The intention is to promote industry innovation to achieve the lowest cost with highest diversion. Under an agents model it would be possible to require waste haulers to collect and remit a fee to the RDN where a customer's waste is not separated or where a recycling or organics collection service is not provided. Such a system provides an economic driver to encourage waste diversion efforts and removes the enticement of low cost disposal.

Under an agents model, other economic strategies could be pursued to further promote diversion such as a "waste collection fee" applied to licensed haulers (agents) coupled with a reduced tipping rate for licensed haulers (agents) at the landfill. This would provide incentive for waste to flow through the private sector, and increase the diversion of waste through reduction, recycling or recovery through private sector enterprise.

RDN administration costs of such a strategy are expected to be moderate with and a minor enforcement burden. Waste haulers would have some increased administration through the collection and remittance of fees as well as reporting. There would be a minor level of enforcement to ensure haulers are complying but very little enforcement activity at the waste source.

Should the Province grant such an authority at the concept level, further work is necessary to develop the program, determine costs and harmonize the strategy with potentially affected stakeholders.

4.6 Construction and Demolition (CD) Waste Management

Construction and demolition and renovation projects (CD) generate a wide range of materials most of which are reusable or recyclable. These include concrete, asphalt, wood, gypsum wallboard, metal, cardboard, asphalt roofing and plastic.

The RDN promotes diversion of these materials through disposal bans on cardboard, gypsum (drywall), metal and wood, and high tipping fees on loads of CD waste arriving at the Regional Landfill (loads of CD waste cannot be delivered to the CRTS). However, there are examples of where the high tipping fees have failed to result in diversion with the material hauled out of region for disposal. Examples of this are the 2015 City of Nanaimo Ferry Dock Demolition where 476 tonnes of wood waste was disposed of at a private landfill in the Capital Regional District and the 2015 Wellington School Demolition where approximately 250 tonnes of demolition waste was disposed of at a private landfill in Chilliwack. In the latter example, the contractor advised that disposal costs was less than half of the cost of RDN disposal at the Regional Landfill and they were not required to source separate recyclables. The introduction of further economic or regulatory provisions (see Section 4.7) has the potential to minimize this type of occurrences in the future.

There are several facilities in the RDN that accept source-separated discarded CD materials for recycling, as listed in Table 4.

Table 4 Construction/Demolition Waste Management Operations in the RDN

Material	Facility Name
Asphalt	<ul style="list-style-type: none"> • Haylock Bros. Paving • Hub City Paving
Asphalt Shingles	<ul style="list-style-type: none"> • Pacific Coast Waste Management
Concrete	<ul style="list-style-type: none"> • DBL Disposal • Hub City Paving • Haylock Bros. Paving • Mayco Mix • Pacific Coast Waste Management • Parksville Heavy Equipment
Metal	<ul style="list-style-type: none"> • Alpine Disposal & Recycling • Annex Auto • Bull Dog Auto Parts • Carl's Metal Salvage • DBL Disposal • Nanaimo Recycling Exchange • Regional Recycling • Schnitzer Steel

Wood (lumber)	<ul style="list-style-type: none"> • Alpine Disposal & Recycling • DBL • Gabriola Island Recycling Organization 	<ul style="list-style-type: none"> • Nanaimo Recycling Exchange • Pacific Coast Waste Management
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It is believed that a significant portion of CD waste is recycled or used as a fuel substitute, including:

- Wood waste is chipped and used as hog fuel at pulp mills on Vancouver Island and Washington State;
- Drywall (gypsum) is recycled;
- Metal is recycled;
- Concrete and asphalt are recycled; and
- Asphalt shingles are recycled on a limited basis.

There is also significant reuse of building materials and fixtures through salvage operations and retail stores such as Demxx and Habitat for Humanity’s ReStore.

If the RDN improves and reintroduces education and communication regarding CD waste in the region it is estimated to cost \$20,000/year. If enhanced regulation within the existing authorities were to be carried out in conjunction with increased education it is estimated to cost an additional \$20,000/year.

4.7 Household Hazardous Waste

Household hazardous waste (HHW) is managed, to a large extent, through BC product stewardship programs which have set up collection programs for the majority of household hazardous waste products, such as paint, pesticides, solvents and used motor oil. The RDN will explore options for further expanding collection of non-stewarded residential household hazardous waste.

The RDN will continue to promote the use of existing Provincial and private stewardship programs for the disposal of household hazardous wastes. Additionally, the RDN will encourage new stewardship programs for other hazardous components of the municipal solid waste stream, such as electronic goods, dry cell batteries and rechargeable batteries.

For the RDN to sponsor and/or run residential non-stewarded HHW drop off events it is estimated to cost in the range of \$80,000-\$100,000 per year.

4.8 New and Emerging Waste Management Technologies

In assessing future waste management options the RDN has considered new and emerging waste management technologies including mixed waste processing, refuse derived fuel, anaerobic digestion, and gasification. All of these technologies are directed at residuals management in contrast to targeting source separation. It is the RDN’s intention to continue to drive reduction and recycling through continued emphasis on source separation.

With the exception of mixed waste processing, the technologies listed focus on energy recovery. Again, it is the RDN's intention to exhaust reduction and recycling efforts, and a mixed waste processing facility is consistent with this goal. Of the new and emerging technologies reviewed, mixed waste processing is the technology that holds the most promise for future consideration. It is envisioned that such a facility would be developed through private sector investment. A public sector facility may be considered after fully implementing source reduction efforts if a private sector facility does not materialize.

4.9 Solid Waste Emergency/Disaster Response Plan

The RDN proposes to develop a Solid Waste Emergency Disaster Response Plan to facilitate solid waste management during and following a large scale emergency or disaster. The purpose is to aid response, minimize damage and costs, maintain high environmental protection standards and support waste diversion.

4.10 Collaboration with Social Enterprise

The RDN will seek opportunities to collaborate with social enterprise to maximize social benefit and advancement of Zero Waste in areas that are not viable or supported by the business sector.

5. Long Term Residual Management

The Regional Landfill has capacity until 2040 based on current landfilling rates. Depending on the speed and success of further diversion initiatives, the life of the landfill could be extended for an additional 10 to 15 years. The long term goal of the RDN is Zero Waste. Nevertheless, the RDN recognizes that there will be some necessary landfilling capacity for the foreseeable future. During the time frame of this Plan, technologies will be advanced and the economic viability of residual waste processing and disposal may change. The RDN will continue to review and consider alternative technologies that are consistent with the Zero Waste Hierarchy and Zero Waste commitment.

Discussions with adjacent regional districts to identify potential cooperative strategies for waste management system improvements have been on-going for a number of years and will continue. The RDN is currently a partner in the Association of Vancouver Island Coastal Communities (AVICC) that are actively looking into cooperative strategies for managing solid waste across regional district boundaries. Future options for residual management could include such as collaboration with other local governments, siting a landfill and/or considering export on or off the island.

6. Plan Implementation

6.1 Implementation schedule

Once the updated Plan has been presented and approved as part of the Public Consultation process in Stage 3 an implementation schedule will be developed and presented as part of the final Plan submitted to the Minister of Environment for approval.

It is anticipated that the Plan will be submitted to the Minister of Environment in the spring of 2017.

6.2 Bylaws

Any new bylaws or amendments required as a result of the implementation of the updated Plan the RDN will work with community stakeholders and seek ministry approval if required.

6.3 Projected Cost of Future Strategies

Table 5 below presents the approved 2016 RDN Solid Waste Services Consolidated Budget. Projected costs for future strategies outlined in Section 4 are presented in Table 6 and Table 7.

Table 5 RDN 2016 Approved Solid Waste Budget Consolidated

Program		Revenue*	Expense*	
Solid Waste	Landfill Tip Fee	7,200,000		
	Tax Requisition	578,000		
	Prior Year Surplus	1,122,000		
	Other	691,000		
	Administration, Wages, Benefits		1,253,000	
Sub Total		9,591,000	1,953,000	
Zero Waste/3Rs	Wages, Benefits		114,000	
	Programs		161,000	
	Other		10,000	
Sub Total			285,000	
Scale and Transfer	Recycling		1,445,000	
	Hauling		431,000	
	Not for Profit		73,000	
	Vehicles		62,000	
	Wages, Benefits		1,574,000	
	Other		294,000	
Sub Total			3,879,000	
Disposal Operations	Loan Proceeds	2,000,000		
	Reserve	4,765,000		
	Contract Services		207,000	
	Monitoring		110,000	
	Closure		95,000	
	Repairs, Maintenance		90,000	
	Professional Fees		139,000	
	Leachate/LFG		160,000	
	Vehicles		649,000	
	Wages, Benefits		994,000	
	Debt		127,000	
	Capital		6,841,000	
	Other		123,000	
Sub Total			9,535,000	
Curbside Collection	User Fee	3,551,000		
	MMBC	1,046,000		
	Garbage Tags	40,000		
	Prior Year Surplus	318,000		
	Other	20,000		
	Discounts		314,000	
	Administration, Wages, Benefits		631,000	
	Contracted Services		2,714,000	
	Publications		70,000	
	Landfill Tipping Fees		843,000	
	Other		152,000	
	Sub Total		4,975,000	4,894,000
	Total**		\$21,331,000	\$20,546,000

*Rounded to nearest \$10,000 **Variance in revenue and expense due to rounding

Table 6 Projected Cost of Future Strategies

Service Area	Brief Description	Annual Proposed Budget
Zero Waste Education	Enhanced public education regarding solid waste management in the region in addition to existing education programs	\$40,000
Household Hazardous Waste	RDN to fund collection of non-stewarded residential household hazardous waste.	\$100,000
Multi-Family Diversion	See ICI Waste Management	
ICI Waste Management	Increased enforcement and education of existing landfill bans and a relaunch of Commercial Organics Diversion and Multi-Family Diversion Strategy	Increased Education \$100,000
		Increased Enforcement \$100,000
CD Waste Management	Enhanced education and communication	\$20,000
	Enhanced regulation within existing authorities	\$20,000
	Additional Regulatory Authority	See Regulatory Authority
Regulatory Authorities	Waste Source Regulation	TBD
	Waste Haulers as Agents	TBD

7. Conclusion

This Plan Stage 2 Report collates the evaluation of options and sets out the preferred options for municipal solid waste management within the RDN over the next ten year period. This document serves to present the preferred options for public review and input.

The key strategies of the updated Solid Waste Management Plan in addition to existing programs are:

- Zero Waste
- Multi-Family Diversion
- ICI Waste
- Additional Regulatory Authorities
- Construction/Demolition Waste
- Household Hazardous Waste

The preferred options include the intention to request the province grant the RDN additional authorities, namely assigning waste haulers as agents or the licencing of waste haulers as well as the authority to regulate source separation of waste and recyclables. Should such authorities be granted from the Province, it is understood that further consultation with affected parties would be necessary prior to any implementation. Further, it is understood that any associated Bylaws would also require approval by the Minister of the Environment.

It is proposed that the updated Plan set an ambitious target of 90% waste diversion by 2027 and a per capita disposal of 109 kg/year.

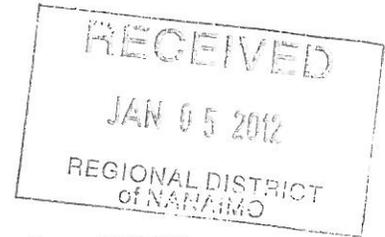
Following public consultation of this Stage 2 report, the preferred options will be modified or adopted and, Stage 3, the amended Plan will be prepared for adoption by the Regional Board and approval by the Minister of the Environment.

Appendices

- Appendix A: RDN Waste Generation Projections, RDN Staff Memorandum by M. Larson to L. Gardner, March 3, 2015.

- Appendix B: Stage 1: Existing System Report, Prepared for RDN by Maura Walker & Associates, December, 2013.
- Appendix C: Level of Service Matrix

Appendix C – Operational Certificate for Landfill



December 30, 2011

Tracking Number: 155174
Authorization Number: 1714

REGISTERED MAIL

REGIONAL DISTRICT OF NANAIMO
6300 HAMMOND BAY RD.
NANAIMO, BC
V9T 6N2

Dear Operational Certificate Holder:

Enclosed is Amended Operational Certificate 1714 issued under the provisions of the *Environmental Management Act*. Your attention is respectfully directed to the terms and conditions outlined in the operational certificate. An annual fee will be determined according to the Permit Fees Regulation.

This operational certificate does not authorize entry upon, crossing over, or use for any purpose of private or Crown lands or works, unless and except as authorized by the owner of such lands or works. The responsibility for obtaining such authority rests with the operational certificate holder. It is also the responsibility of the operational certificate holder to ensure that all activities conducted under this authorization are carried out with regard to the rights of third parties, and comply with other applicable legislation that may be in force.

This decision may be appealed to the Environmental Appeal Board in accordance with Part 8 of the *Environmental Management Act*. An appeal must be delivered within 30 days from the date that notice of this decision is given. For further information, please contact the Environmental Appeal Board at (250) 387-3464.

Administration of this operational certificate will be carried out by staff from the West Coast Region. Plans, data and reports pertinent to the operational certificate are to be submitted to the Regional Manager, Environmental Protection, at Ministry of Environment, Regional Operations, West Coast Region, 2080A Labieux Road, Nanaimo, BC V9T 6J9.

Yours truly,



Blake W. Medlar
for Director, *Environmental Management Act*
West Coast Region

Enclosure

cc: Environment Canada

OPERATIONAL CERTIFICATE

1714

Under the Provisions of the Environmental Management Act

REGIONAL DISTRICT OF NANAIMO

**6300 HAMMOND BAY RD.
NANAIMO, BC
V9T 6N2**

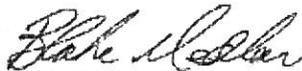
is authorized to manage waste and recyclable material from the Regional District of Nanaimo and environs at the regional landfill located in Nanaimo, British Columbia, subject to the conditions listed below. Contravention of any of these conditions is a violation of the Environmental Management Act and may result in prosecution. This Operational Certificate supersedes and amends all previous versions of Operational Certificate 1714.

1. **DESIGN AND OPERATIONS PLAN**

1.1 **Design and Operations Plan**

- 1.1.1 The operational certificate holder must design, construct, operate, maintain, monitor, close and carry out post-closure, in accordance with the latest version of the Design and Operations Plan by XCG Consultants Ltd., prepared November 2, 2009, as amended from time to time in accordance with 1.1.3 (hereinafter referred to as "the Design and Operations Plan"), and the conditions of this Operational Certificate.
- 1.1.2 The Design and Operations Plan must address the ministry Landfill Criteria for Municipal Solid Waste, as amended from time to time, or its replacement approved by the Director in writing.
- 1.1.3 Only the Director may amend the Design and Operations Plan in writing. Any other amendments to the Design and Operations Plan are without effect unless the Director has approved of such amendments in writing.

Date issued: November 5, 1973
Date amended: December 30, 2011
(most recent)



Blake W. Medlar
for Director, *Environmental Management Act*
West Coast Region

2. MANAGEMENT OF WASTE AND RECYCLABLE MATERIAL

2.1 Waste

- 2.1.1 Waste may be discharged to the regional landfill approximately located as shown on Site Plan A. Waste must not be discharged outside the 24.0 hectare landfill footprint area specified in the Design and Operations Plan. Final elevations of the landfill must not exceed those specified in the Design and Operations Plan.
- 2.1.2 The characteristics of the discharge must be:
 - (a) municipal solid waste as defined in the Environmental Management Act, or,
 - (b) other waste as specified in writing by the Director.
- 2.1.3 The authorized works are an engineered sanitary landfill and related appurtenances as specified in the Design and Operations Plan.

2.2 Leachate

- 2.2.1 Leachate must be collected and conveyed to the municipal sewage collection system.
- 2.2.2 The authorized works are engineered landfill liners, leachate collection works, north and south sanitary pipelines, lift stations, and related appurtenances as specified in the Design and Operations Plan.

2.3 Surface Water

- 2.3.1 Surface water must be collected, retained, detained and conveyed as specified in the Design and Operations Plan.
- 2.3.2 The authorized works are west wetland, north stormwater pond, south stormwater pond, north and south stormwater pipelines, and related appurtenances as specified in the Design and Operations Plan.

Date issued: November 5, 1973
Date amended: December 30, 2011
(most recent)



Blake W. Medlar
for Director, *Environmental Management Act*
West Coast Region

2.4 Ground and Surface Water Quality

- 2.4.1 The quality of ground and surface water at the property boundary must not exceed the appropriate (e.g. freshwater aquatic life, drinking water, etc.) water quality criteria in the British Columbia Approved Water Quality Guidelines and A Compendium of Working Water Quality Guidelines for British Columbia, as amended from time to time, or their replacements approved by the Director in writing. Where natural background water quality exceeds the appropriate water quality criteria, the quality of ground and surface water at the property boundary must not exceed natural background water quality. Water quality criteria from other jurisdictions can only be used for contaminants which have not been dealt with in the British Columbia Guidelines. After considering existing and potential future uses of ground and surface water, a qualified professional may recommend the appropriate water quality criteria. The appropriate water quality criteria are subject to the approval of the Director in writing.

2.5 Landfill Gas

- 2.5.1 Landfill gas must be managed in accordance with sections 4.2 and 6.4 of the ministry Landfill Criteria for Municipal Solid Waste, as amended from time to time, or its replacement approved by the Director in writing.

2.6 Other Facilities

- 2.6.1 The authorized facilities are perimeter fencing, perimeter access road, lockable gate(s), signs, weigh scales, waste and recyclable material drop-off and storage facilities, wash bay with berms and oil-water separator and connection to sanitary sewer, and related appurtenances as specified in the Design and Operations Plan.

2.7 Authorized Facilities and Works

- 2.7.1 The authorized facilities and works must be complete and in operation on and from the date of this Operational Certificate as specified in the Design and Operations Plan.

Date issued: November 5, 1973
Date amended: December 30, 2011
(most recent)



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for Director, *Environmental Management Act*
West Coast Region

2.8 Location

- 2.8.1 The location of the facilities for the management of waste and recyclable material to which this Operational Certificate is applicable is Lot A, Section 2, Nanaimo District, Plan 49841, except that part in Plan VIP58345 and VIP66090, AND, Lot 1, Sections 2 and 3, Nanaimo District, Plan 48020 except Plan VIP66090.

3. GENERAL

3.1 Qualified Professionals

- 3.1.1 All information, including plans, drawings, assessments, investigations, surveys, programs and reports, must be certified by a qualified professional. As-built plans and drawings of the facilities and works must be certified by a qualified professional.
- 3.1.2 "qualified professional" means a person who
(a) is registered in British Columbia with his or her appropriate professional association, acts under that professional association's code of ethics, and is subject to disciplinary action by that professional association, and
(b) through suitable education, experience, accreditation and knowledge may be reasonably relied on to provide advice within his or her area of expertise as it relates to this Operational Certificate.
- 3.1.3 Personnel must be trained to industry standards and at least one employee of the operational certificate holder must be trained and certified as a Manager of Landfill Operations or a British Columbia Qualified Landfill Operator by the Solid Waste Association of North America or equivalent.

3.2 Additional Information, Facilities or Works

- 3.2.1 The Director may, in writing, require investigations, surveys, the submission of additional information, and the construction of additional facilities or works. The Director may also, in writing, amend the information, including plans, drawings, assessments, investigations, surveys, programs and reports, required by this Operational Certificate. Any amendments to the information are without effect unless the Director has approved of such amendments in writing.

Date issued: November 5, 1973
Date amended: December 30, 2011
(most recent)



Blake W. Medlar
for Director, *Environmental Management Act*
West Coast Region

4. MONITORING AND REPORTING

4.1 Environmental Monitoring Program

- 4.1.1 The operational certificate holder must conduct an environmental monitoring program as specified in the Design and Operations Plan.

4.2 Annual Operations and Monitoring Report

- 4.2.1 The operational certificate holder must submit an Annual Operations and Monitoring Report to the Director on or before March 31 of each year for the previous calendar year. The report must satisfy the Design and Operations Plan and include:

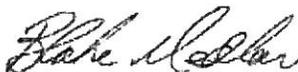
- (a) Executive Summary;
- (b) Types and tonnages of waste discharged into the landfill;
- (c) Landfill volume used and remaining, and estimated landfill closure date;
- (d) Leachate quantities and qualities collected, conveyed and discharged;
- (e) Landfill gas quantities and qualities collected, flared, and utilized;
- (f) Review of the previous year and plans for the current year;
- (g) Results of the environmental monitoring program, interpretation, assessment, conclusions and recommendations;
- (h) Any proposed changes to the Design and Operations Plan including the environmental monitoring program;
- (i) Closure/post-closure fund form and amount, and estimated closure/post-closure fund contributions, disbursements and amount, for each year, until at least 25 years after closure;
- (j) In the event of any non-compliance with this Operational Certificate, an action plan and schedule to achieve compliance.

5. CLOSURE AND POST-CLOSURE

5.1 Closure/Post-Closure Fund

- 5.1.1 The operational certificate holder must maintain a closure/post-closure fund in a form and amount acceptable to the Director. The amount of the closure/post-closure fund must meet or exceed the estimated closure and post-closure costs plus a reasonable contingency for any remediation that may be required.

Date issued: November 5, 1973
Date amended: December 30, 2011
(most recent)


Blake W. Medlar
for Director, *Environmental Management Act*
West Coast Region

5.2 **Closure/Post-Closure Plan**

- 5.2.1 The operational certificate holder must submit a closure/post-closure plan to the Director at least 2 years before the closure date of the landfill. The closure/post-closure plan must address the ministry Landfill Criteria for Municipal Solid Waste, as amended from time to time, or its replacement approved by the Director in writing.

Date issued: November 5, 1973
Date amended: December 30, 2011
(most recent)


Blake W. Medlar
for Director, *Environmental Management Act*
West Coast Region

Appendix D – Regional Solid Waste Advisory Summary Binder

SWMP Level of Service Considerations from RSWAC

Topic Area	Service	Scope	RSWAC interest in pursuing concept	Implications			
				Operations	Convenience	Diversion Estimate	Financial
				Type of service discussed	Describe potential implementation process	High, Medium or Low	Briefly describe operations
Residential Curbside	Consider collecting non-deposit glass container as part of residential curbside service	Collection trucks required for dedicated glass collection only service. Staff scoped service for triannual collection (three collections per year) to all RDN-served homes (not City of Nanaimo).	Medium	Likely to impact existing depot collection network (reduced revenue stream for them). Would require MMBC approval to change current collector contract(s). May require change to current curbside collection contract(s) to deploy dedicated glass collection vehicles.	For those who will hold glass for 4 months between pickups = High. For the rest = Insignificant to Low.	0.5%	Capital: nil Operating: \$190,000/year to add triannual service to current RDN contract. Approx. extra \$7 added to residential annual utility bill.
Residential Curbside	Explore options to collect residential yard & garden waste at the curb	Collection trucks required for dedicated yard waste collection service. Previous contract RFPs (RDN program not City of Nanaimo) provide level of background costing information based on bi-weekly nine month service. City considering implications as they phase in automated collection over next three years.	Medium	Dedicated collection vehicles required, along with the ability for a processing facility to receive and process the material. Currently Y&G handled through range of facilities - curbside collection will impact them. May be possible to co-mingle food and yard. Possibly better suited to automated collection with standard sized totes.	Varies but likely medium to high. Past surveys have shown 40-60% support for a Y&G waste collection however this drops when cost to collect is known.	0.3 % based on amount of Y&G currently in the curbside stream. Approx. 12,000 tonnes of Y&G is currently handled outside of the RDN system - if collection was set up a portion of this will be captured at curb thereby boosting waste generation and diversion numbers.	Capital: nil Operating: Additional \$50/year added to utility bills for home (RDN customers) based on past studies
Residential Curbside	Compliance and Enforcement to Improve Diversion (Curbside Collection Programs)	Continue employing outreach and education as primary tool to encourage effective use of curbside program; consider applying and actively enforcing bans on materials at the curb (i.e., enforce use of food waste collection).	Medium	Minimal additional staffing required to continue previous education efforts. Introducing disposal bans at the curb and enforcing them requires additional resources.	Low (potential for High inconvenience)	1 - 3 % range for additional outreach and for enforcing use of food waste collection.	Capital: nil. Curbside Enforcement Staffing: \$27,000, Education & outreach efforts: \$36,000, Administration: \$12,000. This excludes cost for City of Nanaimo. implement residential disposal bans for curbside materials.

SWMP Level of Service Considerations from RSWAC

Topic Area	Service	Scope	RSWAC interest in pursuing concept	Implications			
				Operations	Convenience	Diversion Estimate	Financial
				Type of service discussed	Describe potential implementation process	High, Medium or Low	Briefly describe operations
Regional Facilities	Provision of Share Sheds at Regional Facilities	Construct and operate "share sheds" which give customers the opportunity to donate items in good condition for re-use by others instead of landfilling.	Low	Siting of a building to accommodate this service; considerations for traffic flow and safety; staffing to ensure materials left to be shared do meet a minimum standards (and the shed does not become a cheaper disposal alternative for end-of-life items).	Low to Medium. Customers have expressed a level of interest to have share shed or donation opportunities co-located where they take their landfill items. There are numerous not-for-profit and for profit examples locally where re-usable items can be donated.	0.3 % - 0.5 %	Capital: \$13,000 to \$56,000 (for a shed at each facility - cost depends on type and size of shed) Operations: \$190,000/yr. for staffing at both locations
Regional Facilities	EPR Stewardship depots established at Regional Facilities	Become a "take back" location of stewardship items. There are currently 17 Stewardship Agencies in BC for items such as paint and paint products, household lighting and fixtures, thermostats, cell phones, small appliances, batteries, tires, and smoke alarms tanks. The RDN currently does not provide services for EPR type materials as the 2004 Zero Waste Plan identified this is best provided by the private sector.	Low	The Stewards determine the site requirements, which may include secure storage, protection from weather, supervised collection, and paved surfaces for easy pickup of large bins. The Stewards work with the facility to set up and train staff to identify which items are accepted or not accepted. RDN may not be picked up by some EPR programs if they determine that coverage for their items is sufficient in this region.	High. Facilities are compensated by some of the EPR programs for the recycling they collect; therefore, a drop-off fee can not be charged. EPR drop-off areas must be separate from garbage and other non-EPR recycling areas to appropriately track disposal. This may limit the convenience for traffic through the facilities, given the current site layouts.	0.25% - 0.5 %	Capital: \$248,000 (dependent on number of stewardship programs signing RDN as a location; and on their site requirements). Operations: \$384,000/yr. staffing costs
Regional Facilities	Complimentary Drop Off Days	Allowance for a "no-charge" drop off day at regional facilities where the cost is covered through taxation	Low	Reintroduction of "Complimentary Disposal" service at RDN Solid Waste Facilities.	High	Decrease in waste diversion. High customer traffic means less time for screening for attendants.	Approximately \$42,500 per day in lost revenue and additional staffing requirements.
Regional Facilities	Household Hazardous Waste	The Regional District to fund drop off events for non-stewarded residential HHW.	Further discussion required	RDN to run annual drop off events for non-stewarded HHW.	High	<1%	Operations: \$80,000-\$100,000 to run annual Non-stewarded HHW drop off events.

SWMP Level of Service Considerations from RSWAC

Topic Area	Service	Scope	RSWAC interest in pursuing concept	Implications			
				Operations	Convenience	Diversion Estimate	Financial
				Type of service discussed	Describe potential implementation process	High, Medium or Low	Briefly describe operations
ICI	Industrial, Commercial, Institutional (ICI) & Multi-Family Diversion	Increased enforcement and education of existing landfill bans and a relaunch of Commercial Organics Diversion Strategy and Multi-Family Diversion Strategy	High	The RDN continues to work within the current regulatory authorities under the existing SWMP to improve ICI organics and recycling diversion which may include increased education and awareness and/or increased enforcement of current landfill bans at the landfill and transfer station.	Low (potential for High inconvenience)	3.1%	1 new FTE or equivalent at \$80,000/year including benefits to oversee the new ICI diversion strategy. \$20,000/year in administrative costs to run the program. \$100,000/year for increased enforcement.
		Introduction of economic and regulatory tools that encourage diversion. Through the SWMP the RDN requests additional authorities to further drive diversion of recycling and organics within the ICI and Multi-Family sectors which could include Mandatory Waste Collection, Waste Hauler Franchising, Waste Haulers as Agents, or Waste Source Control.	Low support for Franchising	Varies depending on the type of regulatory tools implemented.	Low (potential for High inconvenience)	7.9%-11% Includes 3.1% from education & enforcement	No Financial estimate available at this time as cost projections are dependent on the type of additional regulatory authority granted.
ICI	Construction, Demolition Waste	Enhanced education and communication	High	Improve and reintroduce education and communication regarding C&D waste in the region.	Low	1%	\$20,000 Education
		Enhanced regulation within existing authorities	High	Enhanced regulation would be carried out in conjunction with increased education.	Moderate	2%	\$20,000 for Education \$20,000 Regulation
		Additional Regulatory Authority	High	Varies depending on the types of regulatory tools implemented.	Moderate	4%	Unknown at this time

SWMP Level of Service Considerations from RSWAC

Topic Area	Service	Scope	RSWAC interest in pursuing concept	Implications			
				Operations	Convenience	Diversion Estimate	Financial
				Type of service discussed	Describe potential implementation process	High, Medium or Low	Briefly describe operations
Zero Waste	RDN Zero Waste Plan	Education	High	Enhanced public education regarding solid waste management in the region in addition to existing education programs.	High	Not quantifiable	\$20,000-\$40,000 in administrative costs
		Advocacy	High	The RDN continues to advocate for greater waste diversion in region by engaging with federal, provincial and local government agencies as well as BC stewardship groups such as MMBC.	N/A	Not quantifiable	Variable
		RDN Purchasing Policy	High	RDN to establish a sustainable purchasing policy for internal operations which would include best management practices for source separation.	Nominal	Minimal	Minimal
		Zero Waste Definition	High	Adopt Zero Waste International Alliance zero waste definition	N/A	Not quantifiable	N/A

SWMP Level of Service Considerations from RSWAC

Topic Area	Service	Scope	RSWAC interest in pursuing concept	Implications			
				Operations	Convenience	Diversion Estimate	Financial
				Type of service discussed	Describe potential implementation process	High, Medium or Low	Briefly describe operations
Residual Management	Residual Management	Landfill	Medium	Continue to operate a regional landfill for residual disposal.	N/A	N/A	Variable
		Waste Export	Medium	Consider waste export when the life span of the current landfill is complete.	N/A	N/A	Variable
	New and Emerging Technologies	Anaerobic Digestion (AD)	Low	Anaerobic Digestion (AD)	N/A	N/A (Estimated 82% Diversion achievable overall)	\$24 M - Capital costs. O&M Cost per year: \$3.6 M net revenue Net Cost per tonne: \$90
		Conventional combustion (Mass Burn)	Low	Conventional combustion (Mass Burn)	N/A	N/A (Estimated 93% Diversion achievable overall)	\$74 M - Capital Costs O&M Cost per year: \$4.5 M net revenue Net Cost per tonne: \$85
		Gasification/Pyrolysis	Low	Gasification/Pyrolysis	N/A	N/A (Estimated 97% Diversion achievable overall)	\$90 M - Capital Costs. O&M Cost per year: \$6.4 M net revenue Net Cost per tonne: \$120
		RDF	Low	RDF	N/A	N/A (Estimated 97% Diversion achievable overall)	\$14 M -Capital Costs. O&M Cost per year: \$1.3 M net revenue , Net Cost per tonne: \$25
		Material Recovery Facility (MRF)	Medium	Material Recovery Facility (MRF)	N/A	N/A (Estimated 85% Diversion achievable overall)	\$16 M - Capital Costs. O&M Cost per year: \$2.1 M net revenue , Net Cost per tonne: \$40

TO: Larry Gardner
Manager, Solid Waste Services

DATE: October 14, 2015

FROM: Jeff Ainge
Zero Waste Coordinator

MEETING: RSWAC, November 5, 2015

FILE: 5370-01

SUBJECT: Curbside Collection Program – Household Glass Collection

RECOMMENDATION

That the report be received for information.

PURPOSE

The Regional Solid Waste Advisory Committee (RSWAC) included curbside collection of household glass containers as an option to be considered as part of the current Solid Waste Management Plan (SWMP) review.

BACKGROUND

The Regional District of Nanaimo (RDN) provides curbside collection of residential garbage, recycling and food waste to over 23,500 single family and equivalent homes located in the seven Electoral Areas, District of Lantzville and City of Parksville. A further 4,000 homes in the Town of Qualicum Beach receive garbage collection service from Town staff, with recycling and food waste collection provided by the RDN. The City of Nanaimo (CoN) provides collection services to 26,000 residences within their boundaries.

Household glass containers (food and beverage jars and bottles) have not been an accepted curbside recyclable item for several years (five years for RDN program customers and many years more for the CoN program). Glass containers have largely been replaced by plastics which are cheaper to produce and transport, and are readily recyclable. British Columbia's last facility for glass recycling (producing new glass containers from old) closed in 2008, which meant locally that the cost to transport glass off the island to a recycler in the US was prohibitive. Instead, glass was being collected at a cost and sent to a facility who charged for receiving it prior to crushing it and mixing it with construction aggregate, or for use in sand blasting or fiberglass applications.

The exclusion of glass from the RDN curbside recycling program in 2010, coincided with sweeping changes to the collection program when food waste collection was introduced and split packer collection vehicles enabled single stream (co-mingled) recycling. Leading up to the 2010 change, an analysis of RDN customers' curbside recycling in 2009 estimated 220 tonnes of glass was collected at the curb; 35% of which was deposit glass which should have been returned for refund. That tonnage represented only 5% of blue box materials. Depot options were provided and funded by the CoN and RDN to provide a household glass collection alternative.

The 2012 Solid Waste Composition Study estimated that glass made up three per cent of curbside materials disposed in the landfill. The glass category included food and beverage jars and bottles as well as ceramics and non-container glass. In terms of the total amount of glass in the overall waste stream, the study estimated it made up 2.6% or 1,386 tonnes. It should be noted that the study pre-dates the May 2014 implementation of the Province's packaging and printed paper stewardship program, operated by the stewardship agency Multi-Material BC (MMBC).

- Curbside Collection

Clear or coloured non-deposit glass bottles and jars are now included in the Province's Packaging and Printed Paper Stewardship Program, operated by the stewardship agency MMBC. Excluded from the MMBC acceptable materials list is deposit glass (which should be returned for a deposit refund), drinking glasses, dishes and cookware, window glass, mirrors, and ceramic products. Both the CoN and RDN collection program programs operate as contracted collectors for MMBC, who pays to have recycling collected on their behalf. In this region, because glass was not part of curbside collection at the time of implementing MMBC's program, household glass is accepted for recycling at MMBC depots only.

The few MMBC affiliated collectors in the Province accepting glass as part of curbside service must do so as a segregated stream and in a dedicated container. Glass is not permitted to be comingled with other recycling materials. For the RDN or CoN to consider reinstating glass as a curbside item a formal change request would need to be made to MMBC to alter the current contractual arrangement.

In terms of costs to reinstate curbside glass collection for the RDN program (not including CoN), staff estimates two additional collection vehicles would be necessary to cover the full service area. Rotating through the current collection routes (40 routes in total), those two trucks would provide for three scheduled glass collections per household per year. Based on figures provided by Progressive Waste Solutions (the RDN collection contractor), the annual cost to add two trucks to the existing service would be approximately \$190,000 (or an additional \$7.00 per year per household).

At this time, MMBC has advised that approval to change is unlikely during the term of the current collection contract. If MMBC did approve a change to the contract and allow segregated glass collection as part of curbside service, an additional \$80/tonne would be paid for glass collected and received on top of the current payment rate.

IMPACT ON DIVERSION

Reinstating glass in the curbside recycling may improve convenience for some residents, but it may have minimal impact to the overall glass capture if curbside service is simply displacing material already being collected at depots. Overall, based on the 2012 Waste Composition Study, the 275 tonnes of glass going to landfill via curbside collection is relatively small scale. Pulling it out of the garbage stream and collecting it in recycling will have minimal effect on diversion rates, and the costs to do that could be difficult to justify. This being said, staff from the CoN report being contacted regularly by members of the public who feel curbside collection of glass is a major area missing from the current collection service. Staff have discussed the potential financial indications of curbside glass collection with residents and in the majority of cases residents have indicated that they would be prepared to pay an additional fee for this service. The CoN will be conducting some community engagement around the issue of residuals collection in Fall/Winter 2015. With the advent of automated collection in the CoN (and the potential to increase revenues via higher user rates for those opting for a larger garbage bin) staff could look to fund some now initiatives to continue to push towards zero waste. All decisions would need to be indicated as public preference and approved by Council. Highlighting disposal alternatives, such as depots or re-use options, as part of promotion and education efforts could prove to be as effective at improving diversion.

Progressive Waste Solutions currently provides curbside glass collection for the 1,100 households in the City of Duncan, on a three-weekly pickup schedule. Over the three month period June-August 2015, a total of 1.34 tonnes of glass was collected. When extrapolated for a full twelve month period, less than 5.5 tonnes would be collected (or five kg per household over a year). The collector reports very few homes place glass out for collection, a noticeable percentage is deposit container glass, and that it does pose a safety risk for collection staff and those at the receiving facility.

FINANCIAL IMPLICATIONS

The financial incentive paid by MMBC to have segregated glass collected at the curb is \$80/tonne. The cost to add dedicated collection trucks for glass collection would outstrip any financial benefit for the collection programs. A negative financial impact would also likely be felt by the local MMBC affiliated depots if curbside glass collection displaced glass they currently receive and get paid by MMBC to handle.

REGULATORY AUTHORITY

Changes to current curbside recycling contracts to amend materials collected will require Board and Council approvals along with approval from MMBC. No new authorities are required for this to happen.

SUMMARY/CONCLUSIONS

Household glass containers have not been accepted as part of curbside recycling for several years in this region, and staff is not aware of any glass processors located in the Province who are capable of taking glass and making new glass containers. In 2009, an analysis of the RDN's curbside materials estimated glass containers made up about 5% of the overall recyclables set out for collection. With the advent of the Province's packaging and printed paper stewardship program, operated by the stewardship agency MMBC, household glass containers are considered packaging. Glass containers are accepted at no charge at six depots throughout the region that get paid by MMBC to handle the material.

A change to the curbside recycling collection programs operated by the CoN and RDN would require approval from MMBC, as well as contract changes for the curbside collection contractor. The CoN is contemplating service level options as a new collection system is phased in; this could include glass collection for their customers.

There is limited diversion impact in reinstating glass to the curbside recycling, and any change will come with costs (i.e., two collection trucks estimated at \$190,000/year to serve the RDN curbside routes). Glass collection can be included in contract renewal discussions with the collection contractor and MMBC when the time comes, however no immediate changes as part of the SWMP action items are foreseen.

Jeff Ainge

Report Writer

Larry Gardner

Manager Concurrence

Dennis Trudeau

General Manager Concurrence

Dennis Trudeau

A/CAO Concurrence

TO: Larry Gardner
Manager, Solid Waste Services

DATE: October 13, 2015

FROM: Jeff Ainge
Zero Waste Coordinator

MEETING: RSWAC, November 5, 2015

FILE: 5370-01

SUBJECT: Curbside Collection Program – Yard Waste Collection

RECOMMENDATION

That the report be received for information.

PURPOSE

The Regional Solid Waste Advisory Committee (RSWAC) included curbside collection of residential yard and garden waste as an option to be considered during the current Solid Waste Management Plan (SWMP) review.

BACKGROUND

The Regional District of Nanaimo (RDN) provides curbside collection of residential garbage, recycling and food waste to over 23,500 single family and equivalent homes located in the seven Electoral Areas, District of Lantzville and City of Parksville. A further 4,000 homes in the Town of Qualicum Beach receive garbage collection service from Town staff, with recycling and food waste collection provided by the RDN. The City of Nanaimo provides collection services to 26,000 residences within their boundaries.

For the purposes of this report, yard waste refers to the organic waste material produced by a residential property. This would include lawn clippings, hedge trimmings, waste from a vegetable garden and waste from flowerbeds. Not included would be kitchen waste, dimensional lumber, yard and garden tools, or other man-made products used in the yard. Currently yard waste is not collected in any of the region's local government curbside collection programs.

History

Between 1993 and 2001, the RDN distributed approximately 16,500 subsidized backyard composters to single family households in the region. Distribution was through a combination of one-day sales, sales through non-profit organizations and sales at RDN disposal facilities. When the composter distribution program was initiated there were few options available to purchase a back yard composter unit. Over time, the private sector began to offer a multitude of composter designs, available at many price points for a resident wishing to purchase a back yard composter. This raised the issue of using tax dollars to compete with the private sector which led the Regional Board to discontinue funding of subsidized composters.

In 2000, the RDN commissioned a survey to examine garbage disposal and composting habits among residents of the RDN. Slightly more than half of the respondents (53%) were in favour of a proposal to collect yard waste. This positive response was slightly higher for respondents in urban areas with the City of Nanaimo at 55%, the City of Parksville at 58% and the Town of Qualicum Beach at 48%.

In 2001, the RDN received competitive bids to collect yard waste as part of its curbside garbage and recycling collection contract tender process. Based on the results of this tender process, the Board directed staff to conduct customer surveys in the urban and suburban areas of the RDN to determine willingness to receive yard waste collection at an annual cost ranging from \$17 to \$30 per household based on collection frequency. A telephone survey of 400 homes was completed in July 2002.

Only one-third of residents polled supported the highest cost option of \$30 per year for collection every two weeks for 9 months. When the collection frequency was dropped to monthly for 9 months at a cost of \$25 per year, willingness to pay increased to 42%. When the collection frequency was dropped to four times a year at cost of \$17 per year, willingness to pay increased to 53%. The highest level of support for yard and garden waste collection was for the lowest level of service and the support was limited.

Based on these survey results the Regional Board decided not to implement a curbside yard waste collection program for residents of the urban areas served by the RDN curbside collection program.

In 2009, RDN staff issued a Request for Proposals (RFP) for the curbside collection of garbage, recycling and food waste. Similar to the 2001 tender for this service, the RFP requested costs to collect yard waste in the urban and suburban areas of the RDN (excluding the City of Nanaimo) under two service options: bi-weekly collection for nine months and monthly collection for nine months. Proponents' pricing ranged between \$18.00 to \$36.36 per household, depending upon frequency of service over nine months. Based on these collection cost proposals as well as the cost to process yard waste at a licensed composting facility, staff estimated that the user fee for nine-months of bi-weekly collection service would be \$50 annually. The Regional Board did not direct staff to proceed any further with yard waste collection at that time, but did approve the implementation of curbside collection of residential food scraps.

In the first quarter of 2015, staff promoted an online survey seeking information on a number of topics pertaining to solid waste services and the SWMP review process. In response to Question 7 "How does your household currently manage yard and garden waste?", 63% of respondents indicated they compost yard waste at home. Almost 40% reported taking their yard waste to a depot. Other responses included burning, using a collection service, and not producing yard waste. Note that respondents could check multiple boxes to cover all their yard waste management methods meaning the results add up to more than 100%.

When asked if they would be willing to pay a higher curbside user fee if it included yard waste collection service, 60% of respondents indicated no. Of the 40% who indicated they would be willing to pay, 57% of them would support an increase of less than \$30. Only 14% of respondents interested in paying for yard waste collection would support a fee increase of \$50 or more to receive it.

Current practice

With regards the findings of the 2012 Waste Composition Study, the materials in residential curbside waste received at the landfill included a small amount of yard waste (2%), or an estimated 223 tonnes. A large portion (25%) of the multi-family sample consisted of yard waste. No yard waste was found in the self-haul samples destined for disposal at the landfill. Overall, the study estimated less than 3,000 tonnes of yard waste was disposed of in the landfill in 2012.

Many residents currently self-haul this material to the Regional Landfill, the Nanaimo Recycling Exchange, and the Church Road Transfer Station as well as to several other privately operated sites in

the region, or they pay for private hauling services. These options are well used by residents and the commercial sector throughout the RDN, resulting in roughly 12,000 tonnes of yard waste diverted from disposal in the landfill each year. Unfortunately, Yard Waste is also a frequently illegally dumped item with residents tending not to understand the implications of disposing of organic material in public spaces.

Composting

The amount of yard waste composted in residential backyards has been the subject of studies in various communities however no formal research has been done in the RDN. Figures used to determine the amount of waste composted annually in the backyard range from 100 kg/home (National Solid Waste Benchmarking Initiative) to 450 kg/home (North Shore Recycling Program 2010 study). If we take a conservative 150 kg, and multiply it by the 16,500 compost units sold through the subsidized sales events, 2,475 tonnes of residential yard waste is managed on-site.

Backyard burning

Demand for yard waste collection options is related to the implementation of backyard burning bans. Within the RDN, residential backyard burning regulations vary between municipalities and electoral areas. Although land clearing and backyard burning is generally prohibited within municipal boundaries, there are few restrictions in the Electoral Areas and what restrictions are in place tend to be administered by the local Fire Protection Area, or the Ministry of Forests in the height of a dry summer.

In the Town of Qualicum Beach, where backyard burning is not permitted within the urban containment boundary, a free wood chipping program is offered to residents in the spring and fall of each year. The City of Parksville, where burning is not permitted during the period April 15 to October 15, also provides seasonal branch chipping. In the City of Nanaimo backyard burning is prohibited at all times of the year but no chipping program is offered. In Electoral Area H (Bowser, Deep Bay), where there are currently no backyard burning restrictions, staff provided two yard waste drop-off events in November 2008 and April 2009. Participation at both events was minimal with only 5 households delivering a total of 3 tonnes of material at each event which equated to a cost of \$336 per tonne.

Processing

As noted previously in this report, yard waste was not collected prior to the introduction of residential food waste collection in 2010. The privately owned processing facility which receives the curbside organics material (Nanaimo Organic Waste (NOW) formerly International Composting Corporation) was established and licensed to receive source separated organic waste. They have been able to control their process by knowing the ratios of the various feedstocks – the carbon and nitrogen components as well as the moisture content of the mix.

The waste stream management license for NOW requires all in-bound material to be tipped inside the building. Implications to accepting a yard waste/food waste blend include the need to be able to receive the material (and keep it indoors), sort it for contaminants, extract oversize items such as branches for pre-processing (shredding), and have a fair degree of confidence in the mix as it enters the composting system. Seasonal variations in the amount of yard waste available, and if collection was only provided for nine months, also create processing challenges. If yard waste was collected without being mixed with food waste, some of the receiving and processing concerns may be lessened.

Collection Considerations

Many curbside collection programs servicing urban and suburban areas provide yard waste collection service. Processing regulations for yard waste only are less onerous than those required for processing

food waste. For existing yard waste collection programs, adding food waste to their collection may require some processing infrastructure changes and capital outlay, but usually no change is needed for the collection side. It is more challenging to add yard waste to an established food waste collection program in large part due to collection vehicle capacity, collection container types and sizes, seasonal variations of material to be collected and labour considerations.

With the more restrictive backyard burning regulations of the urban areas, a municipality in the RDN could implement a yard waste collection service now without the need to involve the RDN. The challenges of collection and processing would still need to be addressed though.

Without undertaking a formal RFP for yard waste collection or exploring processing options and demand for the service, this report will assume that yard waste collection can be provided to all homes currently receiving curbside service in the region. It also assumes approximately 12,000 tonnes of residential yard waste is available for capture (material noted in the Waste Composition Study and material already diverted through RDN and other facilities). It excludes additional material that may come into the system from other sources (displaced from home composting, backyard burning, or illegal dumping activities). Based on the work done in 2009 and 2010, a collection service could include:

- Yard waste collected separately in dedicated trucks.
- Nine month service (March-November) of bi-weekly (every-other-week collection) on an add-a-day schedule.
- Same service provided to urban, suburban and rural parts of the region.
- Residents provide their own containers to an approved size and standard (such as Kraft bags or regular garbage cans with decals) suitable for manual collection.

Private collection

Subscription yard waste collection services are available to residents in the region, but to date have not seen a large uptake. In addition to one or two of the local commercial haulers who can provide collection, a Victoria based company Community Composting has provided subscription yard waste collection to this area since 2011. Subscribers are provided a wheeled container for their yard waste which is emptied every four weeks on a scheduled pickup day. Subscribers also receive a 20 litre bag of composted soil with each pick up. The company provides two size choices for the yard waste containers; the large cart has a capacity of 360 Litres (95 gallons) while the smaller cart has a capacity of 120 Litres (32 gallons). A one-time refundable container deposit of \$95.00 is required prior to the service commencing. The deposit is fully refunded upon termination of service and retrieval of the container. Subscription rates for the service levels offered are:

- 1 year subscription (12 pickups, every 4 weeks): 12 x \$22.00 (plus GST) = \$277.20
- 6 month subscription (6 pickups, every 4 weeks): 6 x \$24.00 (plus GST) = \$151.20

The company reports that they have 185 active subscribers receiving their service in this region.

IMPACT ON DIVERSION

Currently yard waste is not counted in the region's overall diversion statistics. The waste composition study completed in 2012 indicates that that roughly 80% of yard waste generated in the RDN is already diverted from landfill disposal. Consequently curbside collection of yard waste would not contribute to any significant increase in waste diversion. Although curbside collection would reduce greenhouse gas emissions by reducing vehicle trips to the various yard waste facilities, compulsory collection could also provide an incentive to produce more yard waste since residents would be paying for the service whether they used it or not. The most significant contribution to the region's sustainability goals

associated with the introduction of curbside yard waste collection would be the rationale to extend backyard burning bans to more areas in the RDN.

FINANCIAL IMPLICATIONS

Based on the work done by staff in 2010 for the RDN collection RFP, the inclusion of yard waste collection at the curb would increase the utility fee by an estimated \$50 per household (for 9 months of bi-weekly collection and processing). A formal RFP for a defined service would be required to obtain a more accurate cost. In all likelihood, the current collection vehicles utilized for the region's collection programs are fully committed so additional trucks would be required to provide the service and revised pricing may vary from the 2010 proposals.

Adding a new waste stream to curbside collection (or implementing a major change) does result in an increase in administrative support required to handle calls and enquiries from residents, and for program oversight. Staff estimates this could amount to 0.2 FTE but could probably be accommodated in the existing staff complement at the City of Nanaimo and RDN.

By capturing the yard waste currently being received at RDN and private facilities, revenues at those facilities will be impacted. This may also impact the facilities they in turn send the ground material to (private composting plants, hog fuel burners etc.).

REGULATORY AUTHORITY

No additional authorities would be required for the RDN to introduce yard waste collection as part of the curbside collection program.

SUMMARY/CONCLUSIONS

Support for introducing curbside yard waste collection hovers around 40 to 60% based on surveys completed in the region over recent years. That support drops when respondents are asked about their willingness to pay for such a service. Even without curbside collection, approximately 12,000 tonnes of yard waste is diverted from disposal each year due to residents' use of yard waste drop-off facilities coupled with backyard composting activity. Compare this with less than 3,000 tonnes estimated to enter the landfill, of which only an estimated 225 tonnes is attributed to curbside sources.

The City of Nanaimo reports their intention to conduct a public engagement and learning piece in Fall/Winter of 2015. With the advent of automated collection in Nanaimo, Council have asked staff to review the appetite of City residents for collection of Yard Waste. Staff and Council in Nanaimo regularly hear from residents that they wish to receive collection of Yard Waste, the question remains as to how much they are willing to pay. At a Council meeting in June 2015 City staff reported to Council that, of the 15 largest Cities in BC (of which Nanaimo is ninth), nine of them collected yard waste. City staff also noted as part of this report that the average user rate of the 15 largest municipalities in BC is \$197 per household per year, compared to the City rate of \$99.75 per year.

Currently yard waste is not counted in the region's overall diversion statistics however based on the 2012 waste composition study and data from facilities handling this material, roughly 80% of yard waste generated in the RDN is already diverted from landfill disposal. The collection of yard waste at the curb will not contribute significantly to the region's diversion goals, but the impression is that such a service will provide a much higher level of convenience for the resident generating the waste.

Curbside collection of yard waste would reduce greenhouse gas emissions by reducing vehicle trips to the receiving facilities, but compulsory collection could also result in more yard waste being captured since residents would be paying for the service whether they used it or not. The most significant contribution to the region’s sustainability goals associated with the introduction of curbside yard waste collection would be the rationale to extend backyard burning bans to more areas in the RDN.

<i>Option Discussed</i>	<i>Estimated Costs to Implement</i>	<i>Diversion Impact</i>
Curbside collection of yard waste	<p>An estimated additional \$50 per household/year to provide curbside collection of yard waste</p> <p>\$16,500 staffing costs (0.2 FTE to administer the collection of a fourth waste stream)</p>	<p>Assuming capture of 70% (157 tonnes) of yard waste available from the amount in the curbside waste stream =</p> <ul style="list-style-type: none"> • 0.3% diversion increase for the overall region’s disposed waste <p>If curbside collection is introduced it is likely to capture a large portion of yard waste already diverted (12,000 tonnes) or managed through composting. The impact is weighted to convenience rather than diversion.</p>

Two potential actions could form part of the focus if this item is included in the solid waste management plan:

1. Work with Electoral Area directors and planners on backyard burning ban bylaw development.
2. Formally assess the demand and willingness to pay for yard waste collection throughout the region.

Jeff Ainge

Report Writer

Larry Gardner

Manager Concurrence

Dennis Trudeau

General Manager Concurrence

Paul Thorkeleson

CAO Concurrence

TO: Larry Gardner
Manager, Solid Waste Services

DATE: October 13, 2015

FROM: Jeff Ainge
Zero Waste Coordinator

MEETING: RSWAC, November 5, 2015

FILE: 5370-01

SUBJECT: Curbside Collection Program – Compliance and Enforcement to Improve Diversion

RECOMMENDATION

That the report be received for information.

PURPOSE

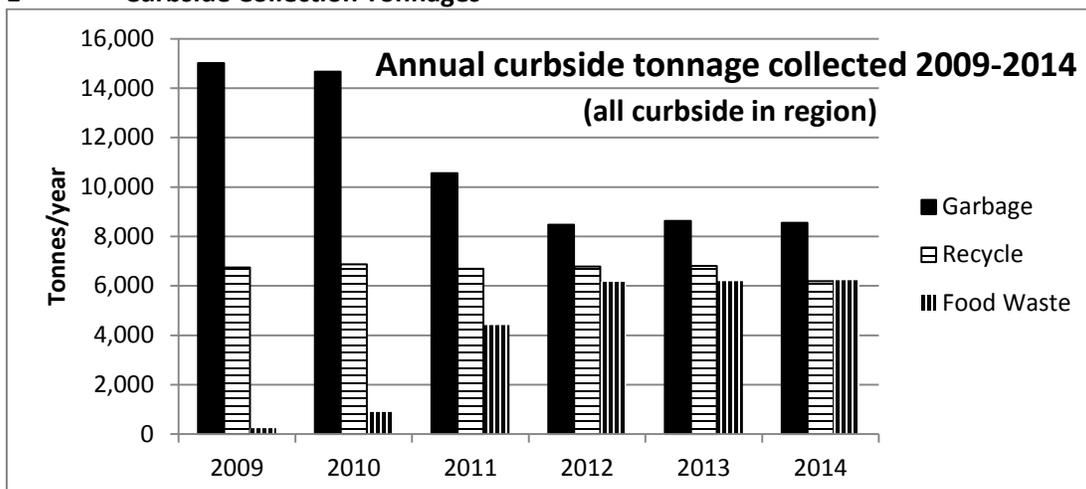
The Regional Solid Waste Advisory Committee (RSWAC) included improved enforcement of, and compliance with, existing residential collection program requirements as an option to be considered as part of the current Solid Waste Management Plan (SWMP) review.

BACKGROUND

The Regional District of Nanaimo (RDN) provides curbside collection of residential garbage, recycling and food waste to over 23,500 single family and equivalent homes located in the seven Electoral Areas, District of Lantzville and City of Parksville. A further 4,000 homes in the Town of Qualicum Beach receive garbage collection service from Town staff, with recycling and food waste collection provided by the RDN. The City of Nanaimo (CoN) provides collection services to 26,000 residences within their boundaries. In terms of the overall waste received at the Regional Landfill, the residential sector is the smallest at 17%.

Since the introduction of region-wide food waste collection in 2010 and 2011, single family homes now divert 60% of their garbage from the landfill through curbside food waste and recycling collection, as seen in Table 1. However, even with the convenience of curbside collection, the 2012 Waste Composition study calculated that compostable organic material remains the largest component of residential waste at 36% (made up of 26% food scraps + 8% compostable paper + 2% yard waste). A much smaller percentage of recyclable material also makes its way into household garbage and into the landfill as opposed to being recycled responsibly through curbside or depot programs.

Table 1 Curbside Collection Tonnages



To improve regional participation in diverting residential food waste from the landfill, the following actions could be considered for inclusion in the SWMP.

- Curbside Outreach and Education

Building on recent outreach activities undertaken by RDN Solid Waste Services staff in support of residential curbside recycling collection, a similar initiative could be made for the food waste collection.

Outreach and compliance efforts specific to curbside collection could be achieved by employing seasonal or temporary staff directly, or by creating a compliance or outreach staff position(s) which could be part-funded through the curbside utility fees. These would only apply to the RDN curbside program; the CoN program is funded and operated separately however similar actions and outreach efforts can be considered and implemented by CoN staff for their collection program.

Working with the collection staff (contracted in the case of the RDN and municipal employees in the case of the CoN), staff could assess the participation levels (set outs of green bins, or lack of green bin set outs, in particular) over a period of time, with seasonal variations accounted for, to give statistically valid data. With that data on hand, barriers to participation can be investigated, targeted compliance messages created, and varied targeted delivery mechanisms employed to promote and encourage participation. This is a methodology known as Community Based Social Marketing which has proven to be very effective in establishing social norms and encouraging positive behaviour change.

- Enforcement through a Disposal Ban

Residential food waste is considered Unacceptable Waste in the RDN and CoN collection bylaws so is not permitted to be included in the garbage container.

When launching their food waste diversion programs within the past year, both Metro Vancouver and the Capital Regional District took the step to ban this material from disposal at their facilities. The RDN did not take this step when introducing residential food waste collection, in large part because the multi-family housing sector is not serviced by local government collection programs but by commercial haulers. Commercially generated food waste is however banned from landfill disposal.

The reality of banning materials from curbside collection is that enforcement is challenging. Collection staff do not open bagged waste for curbside inspections (for health and safety reasons as well as time management constraints). Food Waste is listed as an Unacceptable Waste per RDN Bylaw No. 1591 which applies to the RDN curbside program and therefore not permitted in household garbage, but it is not actually banned from disposal so enforcement is a moot point.

Implementing a disposal ban on residential food waste can be viewed as a regulatory approach to increase use of the green bin and improve food waste diversion. For this to work, education and awareness of the existing program needs to happen – in effect a Community Based Social Marketing program to support the ban's implementation.

- Multi-Family sector collection

Given that the residential sector makes up the smallest component of the region's waste stream, and that residents receiving curbside service have made important steps in achieving 60% diversion through participation in food waste and recycling programs, the opportunity to achieve greater overall levels of diversion and compliance is attainable by having the multi-family sector receive the same level of service as the single-family housing sector. Leveling the playing field in terms of service levels and

materials collected across all housing sectors is expected to have a greater impact on landfill diversion than focusing efforts solely on curbside collection.

IMPACT ON DIVERSION

With respect to the three possibilities introduced above, the impact to landfill diversion rates would vary.

- **Curbside Outreach and Education**

Implementing targeted education and outreach efforts to improve householders' participation in the curbside collection of residential food waste would likely result in modest increased diversion rates of that material. For example, based on the 2012 Waste Composition Study findings, if a 20% improvement in curbside green bin waste capture was made, an additional 615 tonnes of food waste per annum (or eleven kilograms per household) would be diverted to an organics processing facility.

- **Enforcement through a Disposal Ban**

In terms of actively enforcing a curbside residential food waste disposal ban, while it may be somewhat effective in improving diversion rates, it is just as likely to "turn off" a percentage of residents and it will be difficult to enforce. The existing disposal ban in place for Commercial Organic Waste results in approximately 3,500 tonnes going to organics processing facilities, but there is room for greater diversion improvement in the commercial sector (a sector which generates far more waste than the residential sector). Focusing efforts on this sector, along with the multi-family housing sector is likely to have greater impact than imposing a disposal ban on food waste in the residential curbside collection.

- **Multi-Family sector collection**

Over the years this region has seen an increase in this type of housing stock. A staff report prepared in 2012 discussing recycling services available to this sector showed there were 13,430 multi-family dwelling units in the region, of which 12,300 were located in the CoN. The waste from this sector is typically collected by, and viewed as coming from, the Commercial sector. As the amount of multi-family type housing increases, so do the expectations that service levels should equate to those provided for single-family housing. Because of the inclusion of multi-family in commercial loads it is difficult to have hard numbers to work with, but the 2012 Waste Composition Study estimated 29 per cent of multi-family waste was food waste and compostable paper.

Multi-Family waste generation assumptions:

- A multi-family household would set out the same amount of garbage and food waste (excluding recyclables) as a single family household (280 kg/yr) with no allowance made for garburator use, lack of domestic livestock or backyard composter use, household size or demographic differences.
- $280 \text{ kg} \times 29\% = 81 \text{ kg/dwelling unit}$ of green bin material a year available for capture.
- $81 \text{ kg} \times 13,430 \text{ households (based on the 2012 staff report)} = 1,088 \text{ tonnes}$ of material available for capture.
- 75% participation rate (similar to single family curbside set-outs) = 815 tonnes of material diverted.

Creating a level playing field for all residential sectors will improve diversion rates however the biggest impact by far can be achieved by targeting the commercial sector which makes up the largest component of waste generators in the region.

FINANCIAL IMPLICATIONS

- **Curbside Outreach and Education**

Costs associated with curbside outreach and education would typically be factored into the curbside programs' operating budgets which are funded through annual utility (user) fees. Implementing an enhanced outreach program for curbside customers could be achieved through employing temporary, seasonal or Co-operative Education program students. Based on recent work completed on the RDN curbside collection program, a summer outreach team of two temporary staff employed for 16 weeks would require a budget line item of approximately \$36,000 (wages, benefits, and administrative overhead costs all included).

A financial implication related to curbside service is the reduced price differential between the landfill disposal fee and organics processing fee meaning collecting increased amounts of curbside organics material may result in slight increases in residential annual utility fees.

- **Enforcement through a Disposal Ban**

The process to implement a disposal ban for any material would require a one to two year timeframe for planning and stakeholder engagement, followed by consultation and preparation of resource materials. A longer term temporary person could be employed to spearhead the project, or the task could form part of a Compliance or Outreach position. Funding to achieve a disposal ban on compostable material from all sectors could be in the order of \$100,000 per year for the duration of the timeframe to phase it in. Following implementation, an ongoing commitment to enforcement and compliance of the ban is important for ensuring adherence and monitoring of the ban's effectiveness. An equivalent 0.3 FTE contribution to a Compliance or Outreach staff person (in the RDN), based on a CUPE level 11 classification, would require a budget line item of approximately \$27,000 (wages, benefits, and administrative overhead costs all included).

- **Multi-Family sector collection**

In this region, as with most other jurisdictions, the multi-family sector presents many challenges when it comes to collection service levels, diversity of housing types (town home strata, multi-level, multi-owner, etc.), resident engagement and participation in diversion programs, bans compliance, and service provider involvement. Food waste diversion is offered by the private haulers servicing the multi-family sector however uptake is limited and collection systems are not standardized. It is very unlikely that the existing RDN or CoN curbside collection system can change to accommodate servicing multi-family dwellings. In response to requests for assistance, work is currently underway in preparing a food waste collection tool-kit for building managers, haulers and residents to make use of when considering setting up a food waste diversion and collection program.

Reviewing the range of current service levels, and developing a strategy to include food waste (and perhaps standardized recycling) collection across the region could be accomplished with dedicated staff time. For this particular sector, with over 90% of the multi-family units located within the City, a region-wide coordination position may make sense. A temporary person could be employed for a year to spearhead the project (at an estimated total wage cost of \$85,000), or the task could form part of a Compliance or Outreach position. Ongoing program support could be accomplished by an equivalent 0.3 FTE contribution to a Compliance or Outreach staff person, based on a CUPE RDN level 11 classification, would require a budget line item of approximately \$27,000 (wages, benefits, and administrative overhead costs all included).

REGULATORY AUTHORITY

None of the three options discussed require additional authority for implementation.

With regards curbside compliance and enforcement, solid waste trade journals recently have included articles regarding the legality of garbage inspections by collectors to identify those placing food waste or

recyclable materials in garbage cans. For this reason, outreach and education can be a less contentious and softer approach to achieve the desired behaviour changes. At the time of preparing this report staff knows of one legal challenge underway in Seattle (see Attachment 1 for information).

SUMMARY/CONCLUSIONS

The residential sector contributes the smallest amount of waste to landfill at 17%. Households receiving curbside collection service throughout the region are achieving a 60% diversion rate through their participation in the curbside recycling and food waste collection programs. Despite this laudable achievement, compostable organic waste still enters the waste stream.

Options to improve curbside compliance and participation in diversion programs include targeted outreach and education activities focusing on organics and other recyclable materials, extending the organics disposal ban to include food waste from residential sources, and ensuring the multi-family sector receives a similar level of collection service.

Focusing efforts on the commercial sector, along with the multi-family housing sector is likely to have greater impact than targeting curbside collection.

<i>Option Discussed</i>	<i>Estimated Costs to Implement</i>	<i>Diversion Impact</i>
Curbside Outreach to improve food waste diversion	\$36,000 staffing costs (annually employed seasonal staff).	Assuming capture of 20% (615 tonnes) of food waste from curbside garbage = <ul style="list-style-type: none"> ▪ 7% diversion increase for the curbside program ▪ 1.15% diversion increase for the overall region’s disposed waste
Enforcement through a disposal ban	\$100,000-\$200,000 to prepare and implement a disposal ban (staffing costs and development of supporting outreach resources). \$27,000 annually (staffing costs to monitor compliance and enforcement at the curb only). To be most effective, inclusion of food waste from all sectors in a re-launch of the existing commercial sector ban along with enforcement could be considered. The above costs could be applied to this approach.	If enforcement applied to curbside collection, diversion could increase when coupled with the option above; for example capture 40% (1,230 tonnes) from curbside garbage = <ul style="list-style-type: none"> ▪ 14% diversion increase for the curbside program ▪ 2.3% diversion increase for the overall region’s disposed waste The best achievable result is to enforce the current ban on commercially generated organic waste. <ul style="list-style-type: none"> ▪ 15% - 25% diversion increase possible for the region’s overall diversion rate
Multi-Family sector collection	\$85,000 to prepare a region-wide multi-family collection strategy, and to commence with implementation. \$27,000 annually (staffing costs to monitor and provide ongoing support for multi-sector collection programs).	Assuming capture of 815 tonnes of food waste from multi-family garbage = <ul style="list-style-type: none"> ▪ 20% diversion increase for the multi-family sector ▪ 1.5% diversion increase for the overall region’s disposed waste

Jeff Ainge

Report Writer

Larry Gardner

Manager Concurrence

Dennis Trudeau

General Manager Concurrence

Paul Thorkelsson

CAO Concurrence



Courthouse News Service

Monday, July 20, 2015 Last Update: 1:34 PM PT

Seattleites Call Trash-Inspection Law Garbage

By JUNE WILLIAMS

SEATTLE (CN) - Seattle is illegally searching trash cans without warrants looking for recycling scofflaws, a group of residents claim in court.

Although Seattle has one of the highest recycling and composting rates in the nation, the city passed a law in September 2014 that fines residents for discarding food or recyclables in their personal garbage bins.

"The ordinance directs garbage collectors and Seattle Public Utilities (SPU) inspectors to search both residential and business garbage cans, without suspicion or a warrant, in order to estimate whether compostable materials or recyclables make up a 'significant amount' of a garbage can's contents," according to the complaint filed on July 16 in King County Superior Court.

Richard Bonesteel and seven other plaintiff residents contend that the city's new garbage-inspection law "violates privacy rights on a massive scale."

If garbage collectors find a can has more than 10 percent of food or recyclables, Seattle Public Utilities places a warning sticker on the can. Fines will allegedly start in 2016.

"The city's garbage inspection law violates privacy rights on a massive scale. Seattle has an estimated population of 652,500," the complaint states. "The ordinance directs garbage collectors to invade the private affairs of each and every Seattle resident and business on a weekly basis. The city and its agents began enforcing the ordinance in January 2015. From January through April 2015, the city issued an estimated 9,000 notices of violation."

Bonesteel and the other plaintiffs say that Seattle will enforce the ordinance without notice to residents and businesses or an opportunity to challenge violations resulting from the "warrantless inspections."

The residents want an injunction against the warrantless inspections, a judgment that the ordinance is unconstitutional, and damages for invasion of privacy and violation of due process.

Their attorney at Pacific Legal Foundation, Ethan Blevins, issued a statement about the lawsuit.

"Seattle can't place its composting goals over the privacy and due process rights of its residents," Blevins said in a statement. "This food waste ban uses trash collectors to pry through people's garbage without a warrant, as Washington courts have long required for garbage inspections by police."

For the City Attorney's Office, the the Seattle Public Utilities program "fully complies with the law, including the enhanced privacy protections afforded by the Washington constitution."

"SPU believes the instructions we've given to our collectors upholds the Washington state Constitution and civil liberties," SPU said in a statement. "There is no intention of opening trash bags. Containers are only tagged if the contamination is clearly visible. The guidelines state: if you can't see, don't report it and don't tag it."

- END -

Source: <http://www.courthousenews.com/2015/07/20/seattleites-call-trash-inspection-law-garbage.htm>

TO: Larry Gardner
Manager, Solid Waste Services

DATE: October 26, 2015

FROM: Amanda Kletchko
Special Projects Assistant

MEETING: RSWAC, November 7, 2015

FILE: 5380-20

SUBJECT: Share Shed programs at the Regional District of Nanaimo Solid Waste Facilities

RECOMMENDATION

That the report be received for information.

PURPOSE

The Regional Solid Waste Advisory Committee (RSWAC) included the introduction of "Share Sheds" at the Regional Landfill (the Landfill) and Church Road Transfer Station (CRTS) as an option to be considered as part of the current Solid Waste Management Plan (SWMP) review.

BACKGROUND

Share Sheds give customers the opportunity to set aside items in good condition for re-use by others instead of landfilling; the installation of Share Sheds at the CRTS and the Landfill could result in greater waste diversion as items are donated and re-used instead of landfilled.

Currently, CRTS and the Landfill do not offer any customer exchange programs, and salvaging is not permitted. Share Sheds have not yet been introduced at the facilities primarily due to potential liability to the Regional District of Nanaimo (RDN) by making salvaged material available to the public. Other considerations include managing traffic, loitering, space and staffing implications.

In order to reduce potential liability, the RDN could introduce a program that imitates the program run by the Capital Regional District. In this scenario, items collected are offered only to local thrift stores or non-profit groups - the public does not have access to items in the Shed. This program could involve a list of desired items submitted to the facility by the receiving organizations, and those items would be identified and set aside by the customers as directed by the Attendants. Alternately, Attendants could be responsible to determine if items are suitable for donation, and pickup could be assigned on a regular basis. The submission of a liability waiver by the receiving organization could solve any liability issues that may arise.

It may be possible to locate sheds inside or outside the scaled areas of both the Landfill and CRTS:

Outside the scaled area

If the Share Sheds are located outside the scaled area, the Attendant would be required to direct the customer to the Share Shed for drop-off. The customer would be required to travel over the scales to complete their waste transaction, and proceed to the Share Shed location. There would be no revenue created with this method, as the customer would not be paying to drop off their item.

Care and planning must take place to reduce traffic congestion and/or confusion. Providing sheds outside of the scaled area could require additional staffing to provide oversight and to maintain the facility. Diversion could be tracked when the receiving organization crosses the scale at the time of pick up.

Inside the scaled area

By providing a Share Shed inside the scaled area, the Attendant would be required to direct the customer to the Share Shed for drop-off, but the customer would not be required to pass over the scale first. This would allow the RDN to continue to collect revenue for all items brought to the site, and the amount of material diversion could still be monitored at the time of pickup by the receiving organization. Additional staff may not be required to monitor the shed, as it would be in the vicinity of the bins area. Attendants may have to field questions by self-haul customers regarding why they cannot take items from the shed.

If it was determined that there would be no charge to the customer for dropping items off for donation, the customer would be required to travel over the scales to complete their waste transaction, and then proceed through the bypass lane and back into the scaled area. Care and planning would need to take place to reduce traffic congestion and/or confusion.

Moving forward with this program could increase customer satisfaction, as requests by customers to provide others with access to reusable items (i.e. furniture and household items), is common. Customers have expressed the desire for a Share Shed, explaining that they have good items to donate, and would like to see things reused rather than landfilled. As they have already made the trip to the facility, it would be convenient if they did not have to travel further to donate at a thrift shop. Staff at the Cowichan Valley Regional District's Bing's Creek facility have indicated that their Share Shed program is very popular with customers, and Attendants at the Landfill say that the amount of re-usable items being landfilled appears high. Nanaimo Recycling Exchange offers free drop-off in their Community Market, but customers must purchase desired items.

A number of guidelines would need to be pre-determined prior to the installation of the Share Sheds:

Acceptable items

The RDN would need to determine what items are considered acceptable in the Share Shed, and also who would be responsible to say if an items belongs in the shed.

Length of Time

A regular routine of organization pickup must be put in place, whether the RDN contacts the organization when the shed is full, or whether a truck comes by on a pre-determined schedule.

Liability

Prior to implementing the Program, the RDN would need to determine liability of collecting second hand goods on behalf of a non-profit organization.

IMPACT ON DIVERSION

It is estimated that approximately 160 - 240 tonnes of waste could be diverted from the Landfill per year resulting in a 0.32% - 0.45% diversion rate. This value is based on the estimations made by landfill Attendants who indicate that one to two 16' cube vans worth of items (1500kg capacity) are re-saleable per week, depending on the time of year.

FINANCIAL IMPLICATIONS

Short Term Costs

Time required to prepare the area is location dependent. Preparation at CRTS could be completed within a few hours to a day; preparation at the Landfill could take up to several days due to space restrictions. A Planner or Engineer may need to be involved in planning the Sites for best use of space and roadways.

Financial requirements to prepare areas for the Share Sheds is dependent upon the chosen location of the sheds at each facility. The current rate of Engineering consultation, if required, is \$200/hr. Labourers, operators and equipment are available on site at the Landfill at a rate of \$175/hr; labourers and operators are available at CRTS at a rate of \$75/hr, but equipment may need to be rented at a rate of \$125/hr and a mob/de-mob fee of approximately \$500. New informational signage and directional line painting will be necessary.

The cost of a shed varies with size and model. Based on pricing from Global Industries¹ (Figure 1), a metal garage approximately the size of a two-car garage 12w x 32l x 8h (2169 ft³) with a roll-up door, is \$4,400 including the cost of freight. Pricing from Future Buildings² (Figure 2) for a steel garage kit 16w x 32l x 17h (8704 ft³) is \$26,000 including freight, as of Aug. 12, 2015. Table 1 gives greater detail on short term pricing estimates.

Figure 1 Global Industries DuraMax Metal Garage

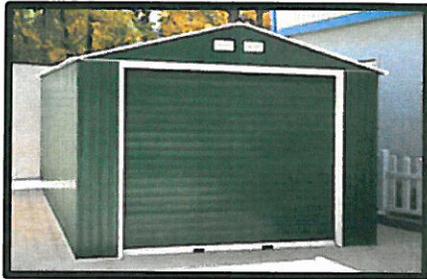


Figure 2 Future Buildings Steel Garage Kit



¹ Global Industries, *Buildings and Storage Sheds, DuraMax Large metal Garages with Roll-Up Door*, <http://www.globalindustrial.ca/g/outdoor-grounds-maintenance/sheds/metal-storage-sheds/duramax-large-metal-storage-garage-with-door>
Accessed: August 4 2015

² Future Buildings, *Steel Garage Kits*, <http://www.futurebuildings.com/future-steel-products/steel-garage-kits.html/ngallery/page/1>
Accessed: August 17, 2015

Table 1 Share Shed Pricing Estimate

Landfill				
	Amount	Unit	Per unit cost	Total
Labour and Equipment	6	Hours	\$175	\$1,050
Engineering	4	Hours	\$200	\$800
Building	1	Each	\$4,000	\$4,000
Building Delivery	1	Each	\$600	\$600
Road Marking	1	Each	\$200	\$200
Signage	2	Each	\$75	\$150
Total				\$6,800.00
CRTS				
Labour	4	Hours	\$75	\$300
Equipment	2	Hours	\$100	\$200
Mob/de-mob	1	Each	\$500	\$500
Building	1	Each	\$4,000	\$4,000
Building Delivery	1	Each	\$600	\$600
Engineering	1	Hours	\$200	\$200
Road Marking	1	Each	\$200	\$200
Signage	2	Each	\$75	\$150
Total				\$6,150.00

Total Share Shed Short Term Cost Two Locations \$12,950.00

Long Term Costs

A Share Shed will require regular housekeeping by an attendant in maintaining the Share Shed, including directing customers and general tidying. Depending on the location of the shed, one additional Attendant at each location may be needed to monitor the area at a rate of \$33/hr.

Table 2 Labour Estimate

Landfill							
	Personnel	Amount	Unit	Per unit cost	Total per day	Total per week	Total per year
Labour	1	8	Hours	33	\$312	\$2,184	\$96,096
CRTS							
Labour	1	8	Hours	33	\$312	\$2,184	\$96,096
Total Labour Both Locations					\$624	\$4,368	\$192,192

REGULATORY AUTHORITY

Should the RDN decide to move forward with implementing Share Sheds at the Landfill and CRTS, there does not appear to be any changes necessary to RDN authority regarding this program.

SUMMARY

Share Sheds give customers the opportunity to donate items in good condition for re-use by others instead of landfilling; the sites could take on a similar program to that of the Capital Regional District, where items are donated to local thrift stores. From the customer's perspective, the option to donate good quality items at the facility is preferable to landfilling or traveling to a thrift shop. Feedback from facilities that currently offer a Share Shed program indicate that the program is extremely popular with customers, and Attendants at both RDN facilities often see re-useable items being landfilled.

The installation of Share Sheds at the CRTS and the Landfill could result in some waste diversion as items are donated instead of landfilled. The introduction of Share Shed programs at the Landfill and CRTS could result in waste diversion of 160-243 tonnes per year, or a 0.31% - 0.45% diversion rate.

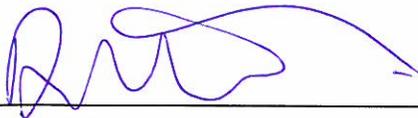
Installing Share Sheds would have a number of short term costs including site preparation, engineering, buildings and signage; Capital costs to introduce Share Sheds at the two facilities could be approximately \$13,000. Over the long term, and depending on the location of the Share Sheds, there could be additional labour costs in running the program as one additional Attendant may be required for maintenance purposes; annual operating costs could be approximately \$190,000 per annum for the two sites.



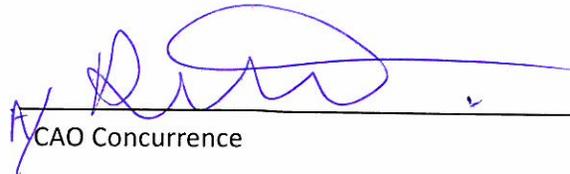
Report Writer



Manager Concurrence



General Manager Concurrence



CAO Concurrence

TO: Larry Gardner
Manager, Solid Waste

DATE: October 26, 2015

FROM: Amanda Kletchko
Special Projects Assistant

MEETING: RSWAC, November 7, 2015

FILE: 5380-20

SUBJECT: EPR Stewardship at Regional District of Nanaimo Solid Waste Facilities

RECOMMENDATION

That the report be received for information.

PURPOSE

The Regional Solid Waste Advisory Committee (RSWAC) included the collection of Extended Producer Responsibility (EPR) stewarded items at the regional facilities as an option to be considered as part of the current Solid Waste Management Plan (SWMP) review.

BACKGROUND

EPR Stewardship Programs are programs that manage the collection and recycling of items that would otherwise end up in the landfill. There are currently seventeen Stewardship Agencies in BC (Appendix 1), recycling items such as paint and paint products, household lighting and fixtures, thermostats, cell phones, small appliances, batteries, tires, and smoke alarms. Recycling acceptance at the Regional Landfill (the Landfill) and Church Road Transfer Station (CRTS) is currently limited to metal, cardboard, yard waste, wood waste, automotive batteries, oil filters, and propane tanks. The Regional District of Nanaimo (RDN) has not expanded recycling services for EPR type materials, as the 2004 Zero Waste Plan identified the services to be provided by the private sector. It was also acknowledged in the 2004 SWMP review that the RDN would incur significant costs to establish depots at regional facilities due to additional staffing requirements, and space limitations, particularly at the Regional Landfill where space is limited.

As well as the EPR programs mentioned, the RDN could expand recycling services to include glass, polystyrene foam (i.e. styrofoam) and plastic bags (MMBC items) and a variety of hard plastic including lawn furniture and toys, which are not stewardship products.

With the growth of EPR programs there are now several for-profit depots in the Nanaimo and Parksville areas where stewardship items are accepted, including Regional Recycling (two locations: Old Victoria Road and Kenworth Road), Parksville Bottle and Recycling Depot and Qualicum Bottle Depot. Nanaimo Recycling Exchange and Gabriola Island Recycling Organization are the local non-profit organizations that collect EPR items. Taking on EPR at the regional facilities may negatively impact revenues at these other facilities; for example, the facilities that Encorp Electronics Recycling works with are mostly for-profit, individually owned and operated businesses that rely on the volumes collected in the electronics program.

Aside from housekeeping, sorting and packaging duties, the EPR programs are managed by the program Stewards. Collection and transportation of large bins are arranged by programs such as ReGeneration, and bins and signage are provided. For smaller items not requiring bin pickup such as Switch the 'Stat and Recycle My Cell, pre-paid courier waybills are provided, and it is up to the facility to ensure the package is appropriately shipped to the Stewards.

The Stewards determine the site requirements, which may include secure storage, protection from weather, supervised collection, and paved surfaces for easy pickup of large bins. The Stewards work with the facility to set up and train staff to identify which items are accepted or not accepted. Before taking on certain programs such as ReGeneration and Electronic Products Recycling Association (EPRA), coverage reviews and site inspections may be required. For example, the Nanaimo and Parksville areas are well covered by Encorp Pacific's Electronics Recycling program for EPRA; this group may not be interested in expanding their collection sites in the RDN area.

At the Cowichan Valley Regional District's Bings Creek Centre, ReGeneration items (paint, lighting products, pesticides & flammable liquids, smoke & CO alarms, major and small appliances, power tools, outdoor power equipment) make up the greatest volume of incoming recycling. Accepting ReGeneration items increases revenue but, the facility must to manage the residuals as well. Residuals from this program may include solvents, brushes, rollers, and patching kits, among other items; turning customers away with such products could result in abandonment and other unsuitable disposal practices.

Facilities are compensated by some of the EPR programs for the recycling they collect; therefore, customers may not be charged a drop-off fee for these items. EPR drop-off areas must be separate from garbage and non-EPR recycling areas in order to appropriately track disposal. There appears to be space to accommodate EPR acceptance at the CRTS facility, but space at the Landfill is extremely limited. Considerable effort and time would be required to reorganize the facility to accommodate EPR acceptance. It is possible that reconfiguring the layouts at the facilities could encourage customers to recycle more of their items rather than using the garbage bins.

EPR bins could be located inside or outside the scaled areas at both facilities:

Outside the scaled area:

If the bins are located outside the scaled area, customers would be required to drop off EPR items before or after crossing the scale with garbage and other paid recycling. Care and planning must take place to reduce traffic congestion and/or confusion.

Inside the scaled area

If bins are located inside the scaled area, customers would be required to use the bypass lane before or after dropping off their paid garbage and recycling items. Pre-planning and attendant diligence must take place to prevent dumping of garbage and other paid items in the recycling area. Care and planning must take place to reduce traffic congestion and/or confusion.

RDN residents have expressed interest in the facilities' expanding acceptance to include EPR stewardship items for recycling. From the customer's perspective, the convenience of a "one stop drop off" facility could increase their satisfaction as the need to travel to a second recycling location is eliminated. Additionally, by increasing the recycling options at the facilities, diversion rates could increase as facilities staff would be able to redirect customers to convenient on-site EPR recycling.

IMPACT ON DIVERSION

Based on information obtained from Table 3 of the 2012 RDN Waste Composition Summary¹, it is estimated that EPR items could make up between 0.23% - 0.46% of the waste stream at the two RDN facilities, depending on what percentage of current recyclable items in the waste stream get diverted (Appendix 2).

Bin Attendants at both facilities often see EPR items disposed of into the garbage bins; most commonly, plastics, polystyrene, and glass, as well as paint cans, electronics and bicycle/ATV tires. It is possible that reconfiguring the layouts at the facilities could encourage customers to recycle more rather than using the garbage bins. For example, making the garbage bin inconvenient to use, or reducing the number of garbage bins from two to one, and requiring customers to use clear garbage bags and pre-sort their items before arriving at the facilities may help to increase diversion of recyclable items from the Landfill.

The Nanaimo area is currently ahead of the provincial average for electronics recycling, with 5.63kg per capita collected, as compared to the provincial average of 4.9kg per capita. The highest diversion rate in BC is in the Central Okanagan area, with 7.95kg per capita.² The RDN would have to capture an additional 2.32kg per person of new material to reach the Central Okanagan rate; calculations performed for the purpose of this report indicate that approximately 1.20kg per person of additional electronics is available to be collected by the RDN (based on values in the Solid Waste Composition Study).

FINANCIAL IMPLICATIONS

Rebates

Rebates are offered to collection facilities for some EPR items, which could help to offset any reduction in tipping fees. Rebates for common household recyclables are outlined in Appendix 3, and range from \$0.10/L for used oil to \$120 for newer, working cell phones. Based on EPR rebates received by the Capital Regional District (Environmental Resource Management Annual Report 2013, page 23³), and by comparing tonnages accepted on a per capita basis, the RDN could potentially receive rebates of approximately \$56,000 - \$59,000/yr. (Appendix 4).

It is important to note that the RDN may not be picked up by some EPR programs if they determine that coverage for their items is already sufficient in the Nanaimo area.

Short Term Costs

Time required to prepare the area is location dependent. Preparation at CRTS could be completed within a few hours to a day; preparation at the Landfill could take up to several days due to space restrictions. A Planner or Engineer may need to be involved in planning the sites for best use of space and roadways. Several EPR items are collected in tubs measuring approximately 4'x4', and the Household Hazardous Waste bin is a metal bin approximately 12'x5' with a 4' latching door on the front which must be located outdoors. Ideally, a covered and paved area would be required for EPR collection, with room for a forklift and space for a truck and trailer to safely maneuver. The purchase of a new or used forklift may be required.

¹ Walker, Maura and Associates. *Solid Waste Composition Study Report (2012)*, <http://rdn.bc.ca/cms/wpattachments/wpID1602atID5945.pdf> Accessed August 20, 2015

² Personal communication between RDN and Encorp Electronics September 2015

³ Capital Regional District. *Environmental Resource Management Annual Report (2013)* <https://www.crd.bc.ca/docs/default-source/crd-document-library/annual-reports/solid-waste/2013-erm-annual-report-web.pdf?sfvrsn=4> Accessed September 3, 2015

The cost to prepare areas for EPR items is dependent upon the chosen location at each facility. The current rate of Engineering consultation, if required, is \$200/hr. Labourers, operators and equipment are available on site at the Landfill at a rate of \$175/hr; labourers and operators are available at CRTS at a rate of \$75/hr, but equipment may need to be rented at a rate of \$125/hr and a mob/de-mob fee of approximately \$500.

New informational signage, directional line painting, and paving will be necessary as specified by the EPR program requirements. If the recycling facilities are expanded to include Styrofoam acceptance, there are several models of foam densifiers available. CVRD currently operates with a Recycle Tech XT-200SA, using heat to densify the foam; the XT-200SA is not large enough to handle the Bing's Creek current foam volume (max volume of this model is 200lb/hr). The XT-200SA is approximately \$35,000 CAD; the commercial-sized model XT-500SA handles 500 lb/hr and is approximately \$85,000 CAD. Heger Foam Compacting Systems offer compaction processing as opposed to heat treatment; Heger "Tiger" and "Lion" models range from approximately \$69,000 to \$127,000 CAD including freight from Germany, as of August 2015. Alternatively, foam could be shipped un-densified, resulting in less of a rebate from MMBC.

The cost of a covered recycling shelter varies with size and model. Based on pricing from Future Buildings⁴ (Figure 1), a bolt together metal carport approximately 10w x 20l x10h (ft), is \$15,000 per unit. A much cheaper version shelter would be the 12w x 20l x8h Global Industries Steel Carport⁵ (Figure 2) for approximately \$2,000. Table 1 shows greater detail of short term costs that could be incurred by this project.

Figure 1 Future Buildings Metal Carport

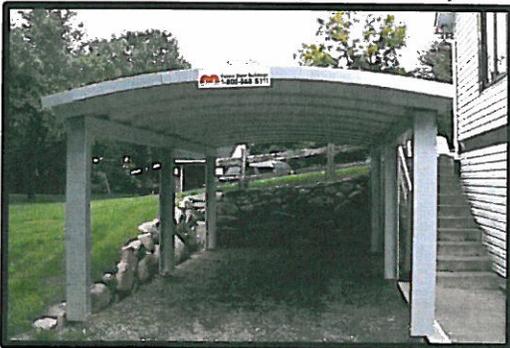
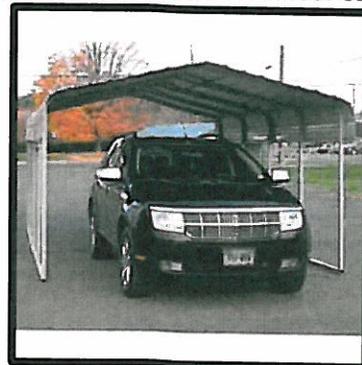


Figure 2 Global Industries Steel Carport



⁴ Future Buildings, *Carport Kits and Shelters*, <http://www.futurebuildings.com/future-steel-products/carport-kits.html>
Accessed: August 17, 2015

⁵ Global Industries, *Gray 12xW x 20'L x8'H Steel Carport*,
<http://www.globalindustrial.ca/g/outdoor-grounds-maintenance/tarps-canopies/carport/Steel-Carports> Accessed: August 17, 2015

Table 1 EPR Stewardship Short Term Pricing Estimate

Landfill				
	Amount	Unit	Per unit cost	Total
Labour and Equipment	20	Hours	\$175	\$3,500
Engineering	8	Hours	\$200	\$1,600
Styrofoam densifier	1	Each	\$85,000	\$85,000
Forklift	1	Each	\$20,000	\$20,000
Building 10x20	1	Each	\$15,000	\$15,000
Paving	25	m ²	\$50	\$1,250
Road Marking	1	Each	\$200	\$200
Signage	2	Each	\$75	\$150
			Total	\$126,700.00
CRTS				
Labour	6	Hours	\$75	\$450
Equipment	2	Hours	\$100	\$200
Mob/de-mob	1	Each	\$500	\$500
Building 10x20	1	Each	\$15,000	\$15,000
Engineering	1	Hours	\$200	\$200
Styrofoam densifier	1	Each	\$85,000	\$85,000
Forklift	1	Each	\$20,000	\$20,000
Road Marking	1	Each	\$200	\$200
Signage	2	Each	\$75	\$150
			Total	\$121,700.00
Total EPR Recycling Expansion Short Term Cost Two Locations				\$248,400.00

Long term costs

The Capital Regional District has three employees dedicated to managing the recycling area; part of the agreement with the ReGeneration program is that there must be supervised collection at the site. There is some labour intensiveness involved in maintaining EPR programs, including spotting and sorting items as they arrive, preparing items for shipment to the stewards, and general housekeeping duties. Depending on the location of the shed, two additional attendants at each location may be needed to monitor the area at a rate of \$33/hr including the cost of benefits. Table 2 outlines the estimated labour requirements in an expanded facility.

As an EPR depot, the RDN would also be required to have in place indemnity insurance.

Table 2 Long Term Labour Costs

Landfill							
	Personnel	Amount	Unit	Per unit cost	Total per day	Total per week	Total per year
Labour	2	8	Hours	33	\$528.00	\$3,696.00	\$192,192.00
CRTS							
Labour	2	8	Hours	33	\$528.00	\$3,696.00	\$192,192.00
Total labour two locations					\$1,056.00	\$7,392.00	\$384,384.00

REGULATORY AUTHORITY

Should the RDN decide to move forward with implementing EPR Stewardship at the Landfill and CRTS, there does not appear to be any changes necessary to authority under the existing SWMP.

SUMMARY

The introduction of an EPR recycling program at the Regional Landfill and CRTS could result in an increase in waste diversion by approximately 0.22% – 0.45%, as customers use on-site recycling stations as opposed to landfilling. Options for recycling expansion include taking on various EPR programs such as ReGeneration (paint, household lighting, CO and smoke alarms, small appliances), cell phones, batteries, and thermostats, among others. Currently, there are several for-profit and non-profit depots in the Nanaimo and Parksville areas where EPR items are accepted; taking on EPR at the regional facilities could negatively impact revenue at these facilities that depend on the volumes collected for the programs.

Storage containers and signage are provided by the EPR programs, and the shipping of items for recycling is covered with free packaging and pre-paid courier waybills or bin pickup for large volumes. The Stewards determine the site requirements, which could include secure storage, protection from weather, supervised collection, and paved surfaces for safe pickup of large bins. Some Stewards will also determine if there is currently adequate collection coverage in an area; if coverage is considered suitable, they are not required to expand their collection.

Collection rebates are offered by some programs, and could help offset the loss of tipping fees. Rebates range in value from \$0.10/L for used oil to \$120 for newer model working cell phones. Based on rebates received by the Capital Regional District in 2013, the RDN could expect rebates in the range of \$56,000 - \$59,000 per year, if all programs agree to receive EPR items from RDN facilities.

From the customer’s perspective, the convenience of a “one stop drop off” facility could increase their satisfaction as the need to travel to a second recycling location is eliminated. Plastics, polystyrene, and glass are often observed in the garbage bins, as well as paint cans, electronics and tires. Adding EPR and reconfiguring the facility’s layouts could increase both convenience and diversion rates.

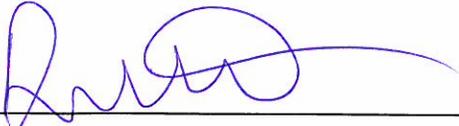
The introduction of EPR programs at the sites would have a number of short term costs including site preparation, engineering, new equipment, buildings and signage. The preliminary cost to expand recycling by addition of EPR items at the regional disposal facilities would be an estimated \$250,000 in modifications to accommodate increased recycling. Over the long term there would be additional labour costs in providing two additional personnel as well as a potential loss in tipping fee revenue if EPR items were made available for free drop off. It is estimated that there would be an additional cost of \$380,000 per annum to staff the expanded recycling at both regional facilities.



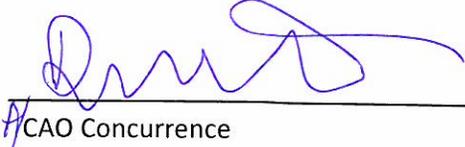
Report Writer



Manager Concurrence



General Manager Concurrence



CAO Concurrence

APPENDIX 1

List of EPR Programs

Stewardship Program Name	Products Covered
AlarmRecycle	Used or expired smoke alarms, carbon monoxide (CO) alarms and combination smoke & CO alarms.
BC Used Oil Management Association	Antifreeze, lubricating oil, oil filters and oil containers.
Brewers Association of Canada	Beer containers (bottles, cans and kegs).
Canadian Battery Association	Consumer and industrial lead-acid batteries.
Call 2 Recycle	Non-rechargeable, rechargeable and cell phone batteries.
Electronic Products Recycling Association	Computers and components, TVs, video players, home audio-visual items, portable and car audio devices. Corded and cordless phones, walky talkies, electronic musical instruments, medical monitoring & treatment devices and video gaming systems & accessories.
Encorp Pacific (Canada)	Return for deposit soft drink, juice, water, and alcohol beverages in glass, plastic, aluminum and drinking box, gable top, or pouch containers. Also accepts plastic and gable-top milk non-deposit containers. Provides depot recycling drop-off for products listed beside the Electronics Products Recycling Association.
Light Recycle	All residential and commercial light bulbs, tubes, table and floor lamps and fixtures and outdoor lights and strings. The program is operated by Product Care Association.
Health Products Stewardship Association	Leftover medicines can be returned to participating pharmacies throughout BC. Not accepted at the Nanaimo Recycling Exchange.
Multi-Material BC	Residential packing and printed paper on behalf of industry
Outdoor Power Equipment Institute of Canada	Electrical outdoor power equipment, ranging from lawn movers to grass trimmers, chain saws and pressure washers.
ReGeneration	Paint, flammable liquids, domestic pesticides and gasoline.
Recycle My Cell	Cell phones, smart phones, wireless PDAs, batteries and pagers.
Switch the 'Stat	Older mercury-containing thermostats and electronic thermostats.
Telus Return & Recycle Program	Used mobile handsets and accessories, and telecommunication items such as corded phones, cordless phones and charging stations, modems, routers, gateways and TV remote controls.
Tire Stewardship BC	Scrap vehicle tires, bicycle tires and tubes.
Unplugged Small Appliance Recycling Program	Old and broken small appliances ranging in size from toasters and electric toothbrushes to countertop microwaves and vacuum cleaners. Power tools, sewing machines, electrical exercise and sporting equipment, and other electrical products.

APPENDIX 2

Breakdown of potential diversion rates

* In 2014, the total solid waste disposed was 51,217 tonnes¹

* The self-haul rate is 15% of the total RDN solid waste stream²

Therefore:

15% of 51,217 t = 7683 tonnes of self-haul waste in 2014

* 6.1% of the self-haul waste was recyclable items in 2012³

With 25% and 50% projected recovery rates for EPR items:

25% of 6.1% = 1.5%

1.5% of 7680 = 115 tonnes of recyclable items in the self-haul waste stream

115 tonnes of 51,217 tonnes of total waste = 0.23% of waste may be diverted

Or

50% of 6.1% = 3.05%

3.05% of 7683 = 234 tonnes of recyclable items in the self-haul waste stream

234 tonnes of 51,217 tonnes of total waste = 0.46% of waste may be diverted

¹ RDN Scalehouse data (2014)

² RDN Scalehouse data (2014)

³ Walker, Maura and Associates. *Solid Waste Composition Study Report (2012) Table 3*, <http://rdn.bc.ca/cms/wpattachments/wpID1602atID5945.pdf> Accessed August 20, 2015

APPENDIX 3

Rebate Values

Program	Items Collected	Rebate
Regeneration		
AlarmRecycle	CO2 alarms, smoke alarms	\$50/box (1'x1')
CESA ElectroRecycle	Small appliances	\$209/tonne
Light recycle	Residential lighting, fixtures, flashlight	Rebate per box (value unavailable at this time)
ProductCare	Paint, varnishes, wood preservatives, paint cans	\$45/tubskid (~4'x4')
ProductCare	Household hazardous waste	\$120/tubskid (~4'x4')
Encorp Return-It Electronics ⁴	Household electronics	\$200/tonne
Call2Recycle	Batteries, cell phones	Small collection: \$0 Medium collection 20-30 palletized boxes per 1-3 months: \$0.22/kg Large collection 2 or 3 palletized drums per year: \$0.38/kg (drums not included)
Recycle my Cell	Cell phones and their batteries	Non-working cell phones \$1.00/2.2kg Working, newer models \$1 - \$120 depending on model No rebate for chargers or batteries
Switch the 'Stat	Residential thermostats	No rebate
Tire Stewardship BC	Off rim vehicle, bike, motorcycle tires	No rebate
BC Used Oil Management Association	Oil, oil filters, oil containers, antifreeze and antifreeze containers	Oil: \$0.10/L Antifreeze: \$0.15/L No rebate on containers
MMBC		
Plastic Bags	Plastic bags and overwrap	\$505/tonne baled
Styrofoam	Household Styrofoam packaging	\$505/tonne baled or densified
Glass	Household non-refundable glass	\$80/tonne

⁴ Rebate information for Encorp Electronics is approximate

APPENDIX 4

Rebates

Breakdown of potential rebates based on a Per capita basis

*2013 rebate value for EPR Programs at the Capital Regional District was \$139,461

* CRD population 359,991

$\$139,461/359,991 = \0.39 rebate per capita CRD

*RDN population 146,574

$\$0.39 * 146,574 = \$57,163.86$ potential RDN rebate based on population

Breakdown of potential rebates based on CRD EPR tonnages⁵

	CRD Hartland ⁶	Approximate RDN tonnage based on CRD population			
Population	359 991	146 574			
EPR Program	Tonnes Collected 2013	RDN Potential tonnage	Rebate	Unit	Total
Batteries t/person	40 0.000111	16	\$220.00	Tonne	\$3600
Electronics ⁷ t/person	293 0.000814	119	\$200.00	Tonne	\$24 900
Plastic film t/person	7 1.94449E-05	3	\$505.00	Tonne	\$1400
ProductCare: paint, pesticides /solvents, residential lighting #tubskids @~261kg each t/person	166 636 0.000461	67 258	\$45.00	Tubskid (4'x4' bin)	\$11 600
Small appliances/ tools t/person	131 0.000364	53	\$209.00	Tonne	\$11 100
Styrofoam t/person	20 5.55569E-05	8	\$505.00	Tonne	\$4100
Used Oil (Litres)	28 000	11 400	\$0.10	L	\$1600
Used Antifreeze (Litres)	3657	1490	\$0.15	L	\$200
Regional District of Nanaimo Potential EPR Rebate					\$58 500

⁵ Totals have been rounded to the nearest \$100

⁶ Capital Regional District. *Environmental Resource Management Annual Report (2013)* <https://www.crd.bc.ca/docs/default-source/crd-document-library/annual-reports/solid-waste/2013-erm-annualreport-web.pdf?sfvrsn=4> Accessed September 3, 2015

⁷ Rebate information for electronics is approximate

TO: Larry Gardner
Manager, Solid Waste

DATE: April 5, 2016

FROM: Sharon Horsburgh
Senior Solid Waste Planner

MEETING: RSWAC, April 14, 2016

FILE: 5365-00

SUBJECT: Complimentary Disposal Services at Regional District of Nanaimo Solid Waste Facilities

PURPOSE

Board representatives suggested that the Regional Solid Waste Advisory Committee (RSWAC) consider introduction of “Complimentary Disposal” service at the Regional Solid Waste Facilities (Church Road Transfer Station (CRTS) near Parksville and Regional Landfill in south Nanaimo) as an option for future service. This was a service provided in the past and was well supported by a segment of the population who were the recipients of free waste disposal.

BACKGROUND

A complimentary disposal program was in place in the Regional District of Nanaimo (RDN) from approximately 1992 – 1998. The program was introduced soon after the RDN user-pay system was implemented for garbage pickup and dropoff; there were concerns by the Board that new fees would result in increased illegal dumping in and around the RDN¹. The Complimentary Disposal program gave RDN residents the opportunity to drop off household waste at the Regional Landfill and CRTS without charge, four times per year. The program began with a complimentary disposal day each season, then was decreased to twice per year, before being cancelled in 1998, when it was determined by the Board that the complimentary disposal service created risks to public safety and environmental protection.²

On a complimentary disposal day, an average of 1,450 customers passed through the Regional facilities, disposing approximately 1,250 tonnes of waste each year.³ This turnout represented approximately 3% of eligible RDN households on a Complimentary Disposal day, and an almost 400% increase in traffic at the facilities. All Landfill employees were required to be on site on complimentary disposal days, and additional staff were hired to assist with traffic control. Employees recall traffic lined up the entire length of Cedar Road, from the Landfill to the intersection of Cedar Road and Highway 19, approximately 1.5km.

At the Regional Landfill facility, customers were directed to drop off their waste in the bin area, but many were sent to the active face of the Landfill if they had a large load and their vehicle was capable.

¹ Regional District of Nanaimo. (1996). *Solid Waste Management Free Day Policy at the Solid Waste Management Facilities* (Freedays rpt 9607-1). Donnelly, Mike.

² Regional District of Nanaimo. (2000). *Solid Waste Management Self-Haul Tipping Fees* (SelfHaulrpt003). Mclver, Carey.

³ Regional District of Nanaimo. (1998). *Solid Waste Management Free Day Policy at Solid Waste Management Facilities* (SW Free Day rpt 9804). Mclver, Carey

Some customers proceeded to the working face without direction, increasing the potential for accidents with Landfill equipment or other residential vehicles. Employees recall long traffic lineups along the Haul Road, between the Landfill face and the exit. All waste was accepted and little to no screening for recyclable or hazardous items took place; waste volume was very high, and bins were emptied continuously. Operational concerns included out-of-district trips, and multiple trips; additionally, each complimentary disposal day took two to three days of clean up, sorting, and moving of all the material brought to the Landfill, which disrupted commercial flow of traffic, and causing the system to slow down.

Staff recall that complimentary disposal days were extremely busy and very hectic. The primary concerns were traffic control and the safety of customers and staff. Photographs from the mid-90's appended to this report illustrate some of the challenges in managing much of the large bulky material received over these one day events.

DIVERSION AND ILLEGAL DUMPING

Recycling/Screening

There are waste diversion policies in place to prevent the disposal of recyclable items in the Landfill; recycling stewardship programs include management for kitchen and yard waste, tires, batteries, electronics, packaging and printed paper, hazardous waste, wood, metal, cardboard and small appliances. These items are banned from the Landfill, and a Complimentary Disposal service would need to involve screening for, and separation of, these items from household garbage.

Illegal Dumping

Complimentary disposal days were introduced in 1992, partially to alleviate concerns that the newly introduced user-pay system would result in increased illegal dumping in the RDN. In 1995, Latimer Consulting Services provided a report entitled "Examination of Changes in Illegal Dumping Since 1992", where it was determined that illegal dumping was not increasing, and that dumping is carried out by residents who would not be enticed by policy changes, rate incentives, or educational efforts to change their behaviour. It was unlikely that residents who participated in the complimentary disposal service were part of that group, as wait times to dispose of waste on a complimentary disposal day were often at least 30 minutes; it's doubtful that residents who dump illegally would wait that long to dispose of their waste appropriately.⁴

FINANCIAL IMPLICATIONS

From 1992 – 1998, approximately 1,450 residents per complimentary disposal day visited the two facilities, resulting in 1,250 tonnes of waste disposal yearly.⁵

In 1996, costs to operate complimentary disposal services at the two facilities were estimated to be approximately \$74,000 per year, or \$18,500 per day; lost revenue was calculated to be \$61 000, and additional staffing costs were \$13,000 per year. Total costs per vehicle visiting the sites on a complimentary disposal day were estimated at \$12.75 each.

⁴ Regional District of Nanaimo. (1996). *Solid Waste Management Free Day Policy at the Solid Waste Management Facilities* (Freedays rpt 9607-1). Donnelly, Mike.

⁵ Regional District of Nanaimo. (1998). *Solid Waste Management Free Day Policy at Solid Waste Management Facilities* (SW Free Day rpt 9804). McIver, Carey.

Based on 1996 complimentary disposal tonnages (53% garbage, 14% Construction and Demolition, 33% Scrap Metal and Yard Waste), but with 2015 tonnage rates, lost revenue could be \$39,000 per day if a complimentary disposal program is re-introduced as it was in 1992. At 2015 rates, additional staffing costs could be \$3,500 per day, resulting in a possible loss of \$42,500 in costs and lost revenue to operate a complimentary disposal day at two facilities. Additionally, costs to haul recyclables and pay recycling fees could increase costs by \$1,500.

“Complimentary Disposal” is not really free. Not collecting a fee for residential garbage means that costs to cover Landfill expenses are not met, including Landfill airspace, engineering costs, environmental monitoring, and contributions to Landfill equipment and other purchasing needs. Additional staffing required to manage high traffic volumes is also not covered by the users. Users who pay for their drop-off are subsidizing those who don’t.

OPTIONS

There are options to re-introduce complimentary disposal at Regional facilities, with restrictions that would reduce traffic volume, thus increasing safety, and allowing for appropriate sorting and separation of items.

Drop Off by Municipality or Electoral Area

Individual Municipalities or Electoral Areas could be granted one day per year where the resident is permitted to drop off their waste without charge at either facility. Dividing the areas up by population would control the amount of traffic on site in one day, allowing for proper screening and sorting of waste.

Uncertainties

Complications could arise with Electoral Area drop off as the Scale Clerks would be required to check the address of each customer to confirm eligibility of free drop off. The hauler of the waste may not be the resident, and the resident may not be present during drop off. Unless some form of Area permit was provided, each driver passing through the Scale would need to provide address information; backlash could be experienced if a customer was from the free Area on a given day, but paid for their dropoff because they were unaware of the day.

The RDN may wish to restrict vehicle size and/or waste weights, as questions could arise regarding whether or not the waste is residential or commercial. Another option could be to restrict the weight of “complimentary” waste to a certain number of kilograms, with a fee being applicable over that weight.

Trash It! Ticket

Trash It! By Area

Customers could be provided with a “Trash It! Ticket” with their residential tax package, utility billing or annual collection calendar; this system would help prevent out-of-district trips and multiple loads. The ticket could provide information regarding the approved drop off date for their Area, as well as facility locations, and outline the requirements to drop off (pre-sorting, recycling requirements, hazardous waste information). Customers would be required to provide and relinquish their ticket upon drop off.

Uncertainties

Distribution of the Trash It! Tickets could be complicated; many residents are not the owner of the home in which they reside, and tickets would need to be provided to the resident by the home owner if sent out with tax packages.

The RDN may wish to restrict vehicle size and/or waste weights; questions could arise regarding whether or not the waste is residential or commercial.

Area complimentary disposal days may require additional staff on hand at both facilities in order to appropriately manage traffic volume and screen waste items.

Trash It! Any Day

Customers could be provided with a "Trash It! Ticket" with their residential tax package, utility billing or annual collection calendar that could be used on any day of the year, regardless of residential Area. The Ticket could provide information regarding facility locations and outline the requirements to drop off (pre-sorting, recycling requirements, and hazardous waste information). Customers would be required to provide and relinquish their Ticket upon dropoff.

Uncertainties

Distribution of the Trash It! Tickets could be complicated; many RDN residents are not the owner of the home in which they reside, and tickets would need to be provided to the resident by the home owner if sent out with tax packages.

The RDN may wish to restrict vehicle size and/or waste weights; questions could arise regarding whether or not the waste is residential or commercial.

Trash It! by Weight

In addition to either *Drop Off by Area* or *Any Day Drop Off*, the RDN could introduce a weight restriction for the free waste.

Trash It! Decisions by Area

Some Electoral Areas may show more interest in free dropoff than others, and drop off services to particular areas based on the level of interest could be explored. Based on historical numbers, 3% of the eligible population participated in complimentary services at the facilities. An increased tax rate for an area could be discussed, or a discussion could ensue to help residents understand that "complimentary drop off" is not really free, and that disposal services come at an expense. For example, if Area H were to enter into an agreement with the RDN for complimentary services four times per year, 105 out of 3,509 residents (2011 population) might take part in the service per day. Services provided to those 105 people could cost \$22 per person, or \$2,300 per day. To cover these costs four times per year could cost each Area H resident an additional \$2.60 per year.

Uncertainties

Communicating a request for interest in a free day to the various areas could be difficult, as well as increasing the understanding that disposal could come at a cost in another area of service.

REGULATORY AUTHORITY

There is a possibility that providing complimentary disposal to residential self-haul customers is discriminatory⁶. The Municipal Act allows the RDN to set rates for different classes of people, property or types of land use; however, charging fees to some residents and not to others could be considered discriminatory. It may not be legal to waive tipping fees for residential, but not for commercial, users.

SUMMARY

Complimentary disposal services were introduced in 1992 to offset concerns regarding illegal dumping in response to the new RDN user-pay system. The program ran until 1998, when complimentary disposal services dropped from four per year, to two, and then was eliminated due to public safety and environmental protection concerns.

There are recycling stewardship programs in place for electronics and small appliances, packaging and printed paper, hazardous waste, wood waste, and cardboard, among others. Screening for these items must be maintained for each load. An average complimentary disposal day saw 1,450 customers pass through the two facility's scales, disposing of 1,250 tonnes of waste per year, and representing 3% of eligible RDN households. This volume resulted in a 400% increase in traffic at the facilities, resulting in little to no sorting or recycling of waste. Operational concerns included out-of-district trips, and multiple trips; additionally, each complimentary disposal day took two to three days of clean up, sorting, and moving of all the material brought to the Landfill, disrupting commercial flow of traffic, and causing the system to slow down.

In 1995, a consulting service provided a report entitled "Examination of Changes in Illegal Dumping Since 1992" which determined that illegal dumping was not on the increase since the RDN user-pay system was put in place, and that it was unlikely that the complimentary disposal program was utilized by those who dump their waste illegally.

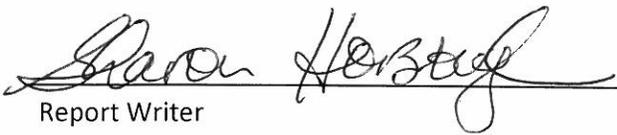
Not collecting a fee for residential garbage means that costs to cover Landfill costs are not met, including Landfill airspace, engineering costs, environmental monitoring, and contributions to Landfill equipment and other purchasing needs. Additional staffing required to manage high traffic volumes is also not covered by the users. In 1996, costs to operate Complimentary Disposal services at the two facilities were estimated to be approximately \$74,000 per year, or \$18,500 per day. Based on 1996 complimentary disposal tonnages (53% garbage, 14% Construction and Demolition, 33% Scrap Metal and Yard Waste), but with 2015 rates, the RDN could have a possible loss of \$42 500 per day in revenue and staffing costs to operate a complimentary disposal service at two facilities if the program was re-introduced as it was in 1992.

A new program could be implemented at the Regional facilities that would reduce the traffic volume and allow for appropriate screening of items. This new program could involve complimentary disposal acceptance from particular Municipalities and Electoral Areas on certain days, where each area could be given a different day for complimentary dropoff at either the Regional Landfill or the CRTS. Other options include distributing a "Trash It! Ticket" to residents that they would provide and relinquish at the time of drop off. Tickets could be distributed with residential tax packages, utility billing or annual

⁶ Regional District of Nanaimo. (1998). *Solid Waste Management Free Day Policy at Solid Waste Management Facilities* (SW Free Day rpt 9804). Mclver, Carey.

collection calendar, and may provide particular disposal days by Area, or could be used on any day of the year. Areas could be given the opportunity to accept a tax increase in exchange for complimentary service, and weight restrictions could be implemented to reduce the likelihood of commercial loads. There are several uncertainties for all these options: how to determine the source of the waste if the program is implemented by Area; how to distribute Trash It! Tickets to residents; limiting load size, and; how to communicate that complimentary waste disposal comes at a cost that must be subsidized by users and non-users alike.

Charging fees to some residents and not to others could be considered discriminatory. Introducing a program that a small percentage of the population participates in, means that costs are transferred to a larger population of those who do pay. Additionally, it may not be legal to waive tipping fees for residential, but not for commercial, users.



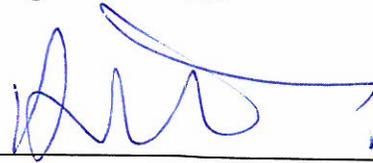
Report Writer



Manager Concurrence



General Manager Concurrence



CAO Concurrence

PHOTOS





TO: Larry Gardner
Manager, Solid Waste

DATE: January 7, 2016

FROM: Meghan Larson
Special Projects Coordinator

MEETING: RSWAC, January 14, 2016

FILE: 5365-00

SUBJECT: Multi Family and IC&I Collection in the RDN

RECOMMENDATION

That the Regional Solid Waste Advisory Committee (RSWAC) receives this report for information.

PURPOSE

To provide background on the current state of Multi-Family and Industrial, Commercial and Institutional (IC&I) sector collection in the RDN and to estimate additional waste diversion potential from this sector.

BACKGROUND

The IC&I sector represents 63% of landfilled waste at the Regional Landfill. Examples of waste generators in this sector include businesses, industries, or commercial operations including stores, offices, hotels, hospitals, schools, restaurants, construction companies, factories etc., and the Multi-Family housing sector. In the Regional District of Nanaimo (RDN) the IC&I sector (including Multi-Family) is serviced by private waste haulers. However, for the purpose of this report Multi-Family waste collection will be examined separately from the rest of the IC&I sector even though the waste is collected together by most haulers.

When comparing the 2004 RDN waste composition study with the study completed in 2012, the amount of waste disposed at the Regional Landfill from the IC&I sector has remained relatively static at approximately 33,239 MT, while the overall percentage of the waste stream coming from the IC&I sector has increased from 56% of waste disposed at the Regional Landfill in 2004 to 63% of waste disposed at the Regional Landfill in 2012.

Multi-Family Housing Sector

As indicated in Table 1, the residential housing sector consists of the following types of housing: single family housing which includes single family detached homes, duplexes and fourplexes (75%), Townhouses and Mobile Home Parks (12%) and Apartments (13%)¹. Townhouses, Mobile Home Parks and Apartments are typically referred to as Multi-Family housing. Service delivery to the Multi-Family sector is primarily by the private sector. In the RDN, Multi-Family waste is estimated to be 8% of the IC&I waste received at the Regional Landfill and is approximately 20% of the residential solid waste generated in the region (not including self-haul waste).

¹ Estimates based on data from 2012 RDN Multi-Family Housing Diversion Strategy Progress Report

Table 1: Regional Distribution of Housing Units by Type, 2012

Area	Single Family			Townhouses/MHPs			Apartments			Municipal Collection	Private Collection
	%	Garbage	Recycling/FW	%	Garbage	Recycling/FW	%	Garbage	Recycling/FW	%	%
City of Nanaimo	67%	CON	CON	13%	Private	Private	19%	Private	Private	67%	32%
Electoral Areas	92%	RDN	RDN	8%	RDN	RDN	0%	Private	Private	100%	0%
COP	59%	RDN	RDN	24%	RDN	RDN	16%	Private	Private	83%	16%
Town of Qualicum Beach	84%	TQB	RDN	13%	TQB	RDN	3%	Private	Private	97%	3%
District of Lantzville	97%	RDN	RDN	3%	RDN	RDN	0%	-	-	100%	0%
Region Wide	75%	-	-	12%	-	-	13%	-	-	80%	20%

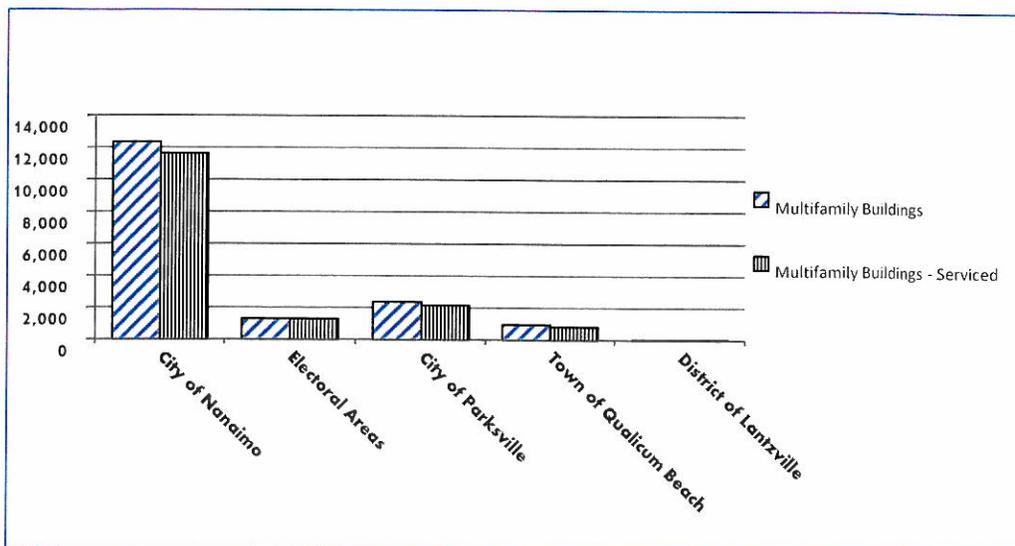
Multi-Family Diversion Strategy

Since 1991, the RDN has progressively banned materials from landfill disposal as local recycling and processing facilities became available. Banned household items include recyclable paper, cardboard, metal and, most recently in 2010, household plastic containers (i.e. empty HDPE and LDPE plastic containers from residential premises including milk jugs, margarine and yogurt containers and dish soap and laundry detergent bottles).

In 2008, the RDN launched a Multi-Family Recycling Program which was designed to increase waste diversion through source separation of recyclable material at multi-family buildings. This was an information program working collaboratively with key stakeholders such as; private haulers, property owners and managers and strata council representatives. Staff met frequently with haulers and consulted with property owners and managers as well as strata council representatives through letters and onsite visits.

The fieldwork involved face to face meetings with building owners to verify onsite recycling services throughout the RDN. Based on observations through these onsite visits, staff concluded that in 2012 94% of multi-family housing buildings had access to on-site recycling services (not including organics) that was equivalent to those provided to the single-family housing as presented in Figure 1.

Figure 1: Multi-Family Buildings with On-site Recycling Services, 2012



As indicated in Figure 1, the Multi-Family Recycling Program significantly improved access to recycling services in the multi-family housing sector. However, the 2012 waste composition study shows that there are still improvements that could be made (see Figure 2). For comparison purposes, the waste composition for the residential curbside is presented in Figure 3. Based on the 2012 Waste Composition study, paper and plastic still made up 31% of the multi-family waste stream. Comparatively, the same materials make up 21% of the residential curbside waste stream. This data suggests that, in 2012, although there was a high level of access (i.e. 94%) to multi-family on-site recycling facilities, there is significant opportunity to increase diversion.

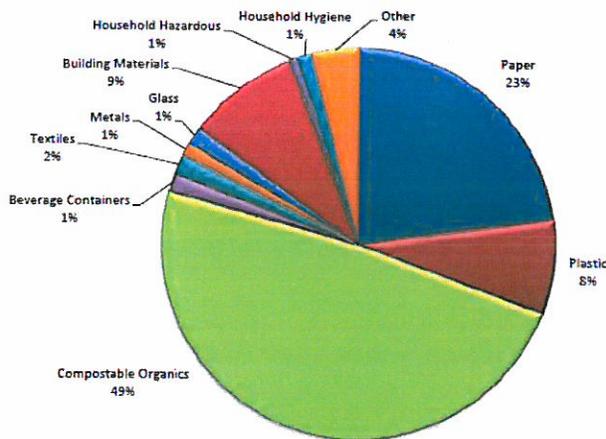


Figure 2: Multi-Family Waste Composition (2012)

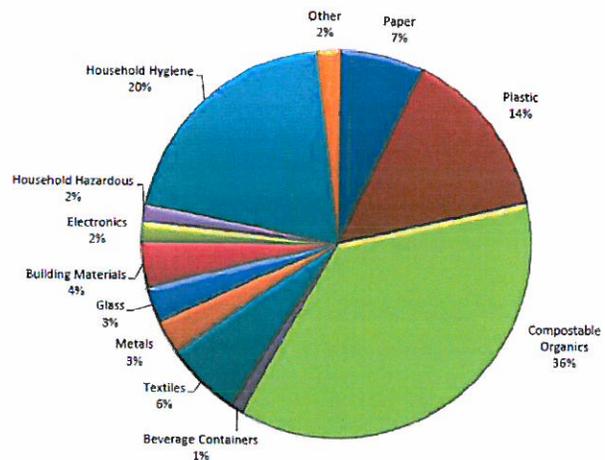


Figure 3: Curbside Residential Waste Composition (2012)

Since the work undertaken in 2012, the Ministry of Environment has amended the provincial Recycling Regulation to include Printed Paper and Packaging (PPP) generated from the residential sector as a stewardship material. Multi-Family housing is included in the residential sector per the recycling regulation, however participation in the stewardship program’s collection side relies on haulers to sign on with the stewardship agency and not all have. At present the Ministry has approved one stewardship plan for residential PPP, however a second plan with a focus on Multi-Family is currently with the Province for consideration; if approved this additional plan may result in increased recycling opportunities for this housing sector.

Furthermore, the greatest diversion opportunity continues to be with the compostable organics which make up almost half the waste stream from this housing sector.

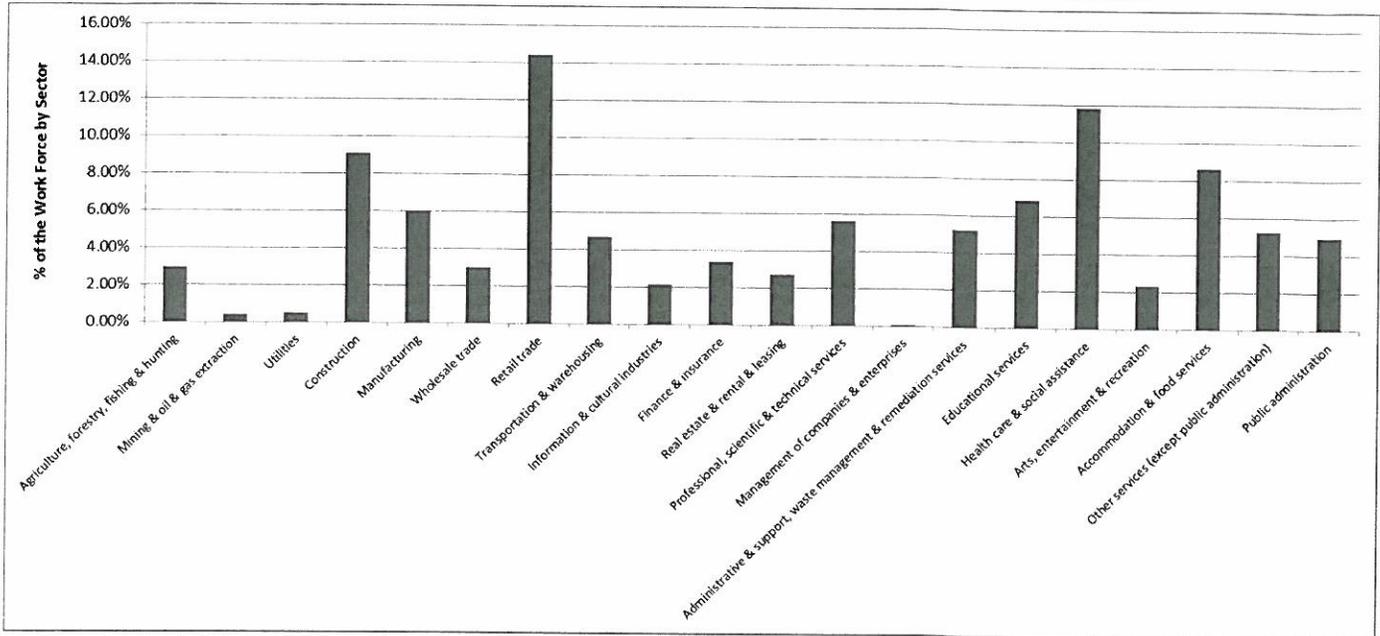
Challenges to achieving a high degree of source separation in the multi-family sector include inconvenience, cost, available space for separation and often a lack of a site champion to promote diversion. Appendix A presents a list of challenges and limitations that hinder diversion in both the multi-family and ICI sectors.

IC&I Sector

In the RDN, the IC&I sector is fully serviced by private waste haulers. Figure 4 provides an overview of the labour force in the Regional District by category with Retail Trade, Construction, and Health Care and Social Assistance being the top ranked employers in the Region.

In large part due to a successful Construction and Demolition (C&D) Waste Diversion Strategy, IC&I waste disposal in the RDN is largely generated from small and large businesses, industry, grocery stores, restaurants, multi-family residences and schools. Further discussion on the C&D Waste Diversion Strategy is not included in this discussion and will be presented to the RSWAC in a separate report.

Figure 4: Regional Distribution of Labour by Categories in Parksville and Nanaimo



Based on 2006 Stats Canada data for Parksville and Nanaimo

Commercial Food Waste Diversion Strategy

In 2004, the RDN waste composition study found that food waste and compostable paper comprised from the IC&I waste sector made up 21.6% of the waste disposed at the Regional Landfill. Following the opening of the International Composting Corporation (now Nanaimo Organic Waste) in June 2005, the RDN banned commercial food waste at the region’s solid waste facilities. Commercial food waste includes raw and cooked food and other compostable organic material from commercial and institutional premises.

Extensive consultation preceded the commercial food waste and organics disposal ban with follow-up site visits to over 200 businesses and organizations. Under Bylaw 1531, landfill disposal of compostable organic waste from a commercial or institutional facility is not permitted. It was expected that this prohibition on organic waste being received at the landfill and transfer station would be the catalyst for commercial and institutional facilities to have food waste diversion systems in place.

Figure 5 shows the results from the 2012 RDN waste composition study for the IC&I sector. The compostable organics category (estimated at 26.2% of the total waste disposed at the Regional Landfill disposed) consisted of food scraps (28%), yard waste (7%) and compostable paper products (6%).

The compostable organics from the IC&I sector made up 26.2% of the waste stream in 2012 as compared to 21.6% in 2004. However, with a changing waste stream, the efficacy of the Commercial Food Waste Diversion Strategy is better gauged by considering the change in per capita tonnage of compostable organics in the waste stream and this amount dropped from 95.5 kg/capita to 91.2

kg/capita between 2004 and 2012 respectively. These findings show that the current strategy has only realized modest success and there is significant opportunity for additional organics diversion in the IC&I sector. Furthermore, there is still a significant diversion opportunity with paper and plastic components.

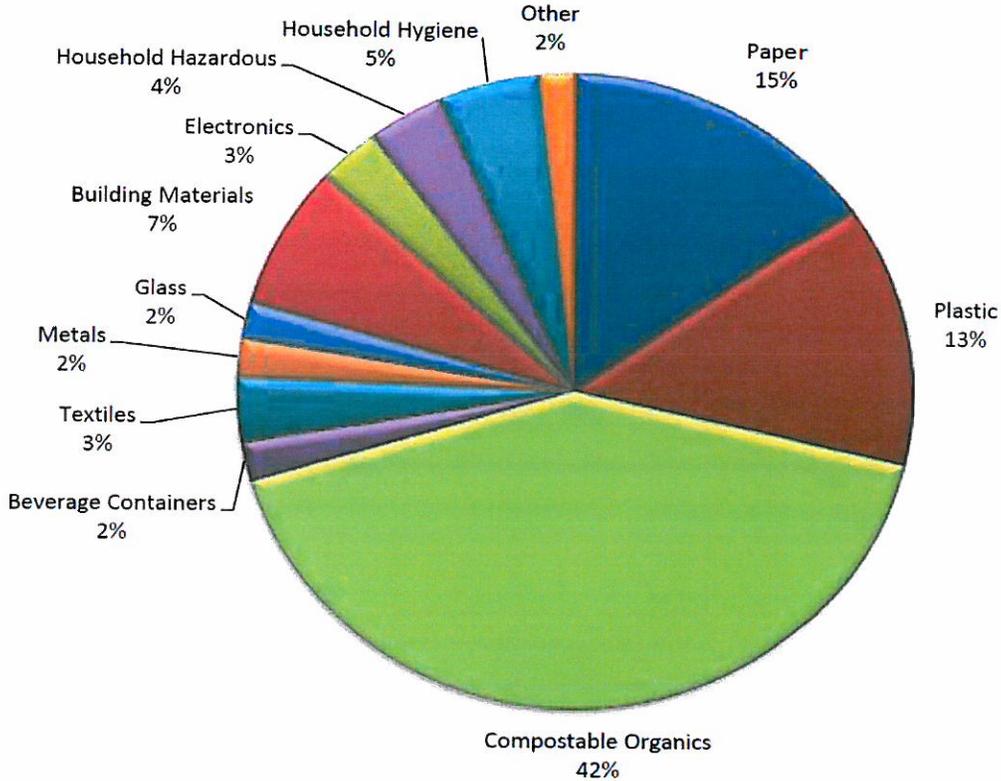


Figure 5: Industrial, Commercial, Institutional Waste Composition in the RDN (2012)

IMPACT ON DIVERSION

Based on the 2012 RDN Waste Composition Study, four material categories characterize approximately 77% of the IC&I waste stream: compostable organics, paper, plastic and building materials as shown in Figure 5. That means that there is an estimated 36% of waste disposed at the Regional Landfill that consists of compostable organics and paper from the IC&I sector that are banned from landfill disposal.

It is clear from the 2012 RDN Waste Composition Study that a large component of compostable organics is still not being diverted from landfill, with only a modest reduction in per capita disposal (from 95.5 kg/capita in 2004 to 91.2 kg/capita in 2012) (refer to Appendix B).

Table 2 shows IC&I weights of compostable organics diverted from landfill disposal from 2007-2015. There are a number of factors affecting these numbers however it is important to recognize that the amount of commercial organics diverted within the RDN has not increased despite the current Commercial Organics ban.

Table 2: IC&I Sector Organics Diversion in the RDN

	2007	2008	2009	2010	2011	2012	2013	2014	2015
Total Weight (tn)	3,408	4,103	3,550	3,187	3,371	3,711	3,566	3,332	3,380

Enforcement

As mentioned previously in this report, the primary mechanism to motivate the diversion of recyclables and organics is by virtue of bans at the landfill and transfer station (refer to Appendix C for full list of existing landfill bans in the RDN). The RDN has encouraged voluntary compliance and has reserved the application of fines to the most egregious cases.

Since 2010, fines have been imposed on 65 separate occasions for recyclables in mixed solid waste. These have primarily been for metal and cardboard being in the waste. Few fines have been issued for commercial organic waste and possibly no fines imposed for household plastic containers. Details of the occurrences as well as pre-2005 data is available in the RDN archives but were un-researched at the time of this report. Anecdotally, landfill staff report that there are seldom significant amounts of banned materials in individual loads, offences on food waste and recyclables in mixed solid waste are applied only when there is contamination of 10% or more in the load.

There are a number of challenges with the current enforcement strategy as follows:

1. No Requirement for Source Separation – Although the landfill ban was intended to drive source separation, there is no actual requirement for the waste producer to make the effort.
2. Enforcement Transferred to the Waste Hauler – Fines are applied to the waste hauler depositing banned material. In theory, the cost can be transferred back to the waste producer but in practice this does not happen (i.e. fear of alienating customers, unable to pinpoint source of contamination due to mixing of loads).
3. Encourages Waste Export – The relative value of the Canadian and US dollar is currently a barrier to waste export to the US. As well, there are also private Canadian for-profit landfills. The imposition of fines on haulers does further increase the potential of waste export to locations that do not impose such restrictions. Should this happen, no waste diversion would likely be achieved.
4. Bans Apply to Different Sectors - Food waste is banned from the commercial sector while plastic containers are banned from households. Waste from different sectors is often collected in the same truck making enforcement in these cases virtually impossible.

IC&I Diversion Strategy

Table 3 looks at two scenarios for increasing diversion in the IC&I and Multi-family sectors.

Scenario 1: Increased Education/Enforcement at Regional Facilities

The RDN continues to work within the current regulatory authorities under the existing SWMP to improve IC&I organics and recycling diversion. This may include:

- Increase education and awareness
- Increase enforcement of current landfill bans at the landfill and transfer station

It is expected that the Multi-Family and IC&I sector would experience a marginal increase in diversion though additional outreach and that diversion would increase commensurate with increased enforcement of the landfill bans and issuing of fines. This approach runs the risk of increasing waste leakage where private haulers opt to haul waste out of district in order to bypass landfill bans. It is estimated that such an approach could remove as much as 20% of the recyclable materials and organics that still remain in the waste stream.

Scenario 2: Additional Regulatory Authority

Through the SWMP the RDN requests additional authorities to further drive diversion of recycling and organics within the IC&I and Multi-Family sectors. This could include:

- Mandatory Waste Collection
- Waste Hauler Franchising
- Waste Haulers as Agents
- Waste Source Control

This scenario provides for the introduction of economic and regulatory tools that encourage diversion. It is estimated that this approach could remove as much as 50-70% of the recyclable material and organics that remain in the waste stream.

Table 3: IC&I Sector Diversion Potential in the RDN

Target Material	2012		Scenario 1			Scenario 2					
	Waste Stream %	Amount in Waste Stream (MT)	If 20% is diverted			If 50% is diverted			If 70% is diverted		
			Amount in Waste Stream (MT)	Waste Stream %	Diversion Potential of Total Waste Stream	Amount in Waste Stream (MT)	Waste Stream %	Diversion Potential of Total Waste Stream	Amount in Waste Stream (MT)	Waste Stream %	Diversion Potential of Total Waste Stream
Paper	9.5	5,049	4039	7.6%	0.6%	2525	4.7%	1.5%	1515	2.8%	2.1%
Plastic	8.4	4,432	3546	6.6%	0.5%	2216	4.2%	1.3%	1330	2.5%	1.9%
Metal	4.8	2,864	2291	4.3%	0.3%	1432	2.7%	0.9%	859	1.6%	1.2%
Compostable Organics	26.2	13,879	11103	20.8%	1.7%	6940	13.0%	4.2%	4164	7.8%	5.8%
Total	48.9	26,224	20,979	39.3%	3.1%	13,112	24.6%	7.9%	7,867	14.8%	11.0%

Note: Scenario 1: 20% increase in diversion of available materials.
 Scenario 2: 50% to 70% increase in diversion of available materials.
 All estimates based on 2012 total waste generation of approximately 167,000 MT; 53, 319 MT disposed and 68% overall diversion

FINANCIAL IMPLICATIONS

Scenario 1 Increased Education/Enforcement at Regional Facilities	1 new FTE or equivalent at \$80,000/year including benefits to oversee the new IC&I diversion strategy. \$20,000/year in administrative costs to run the program. \$100,000/year for increased enforcement
Scenario 2 Additional Regulatory Authority	No financial estimate is available at this time as cost projections would be dependent on the type of additional regulatory authority which was granted.

REGULATORY AUTHORITY

If Scenario 2 is the preferred option additional regulatory authorities would need to be requested under the new SWMP.

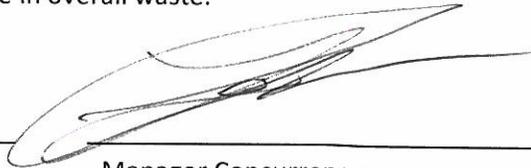
SUMMARY/CONCLUSIONS

The IC&I and Multi-Family sectors waste streams contain significant amounts of recyclable material and compostable organics. This is despite landfill bans being in place for various recyclable materials and commercial organics starting in 1991. These sectors provide the greatest opportunity for further waste diversion in the RDN.

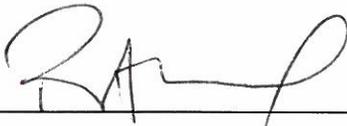
The RDN has done outreach to promote diversion in these sectors and has largely relied on voluntary compliance with the landfill bans and applying fines in the most egregious cases. It is believed that an increased effort in both outreach and enforcement consistent with the current strategies can achieve a moderate increase of about 3% in overall waste diversion. It is also believed that the provision of authorities available through the SWMP can provide additional regulatory and economic tools to drive very high levels of diversion up to a 10% increase in overall waste.



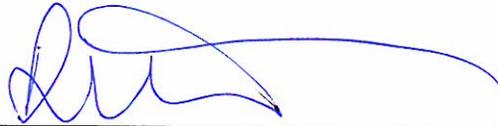
Report Writer



Manager Concurrence



General Manager Concurrence



A/CAO Concurrence

Appendix A: Common Challenges in the IC&I Sector Identified for Waste Diversion

Challenge as identified by: <i>Waste Haulers</i>	Limitation to Diversion
Single stream/co-mingled recycling capacity is limited. ICI businesses do not have access to the co-mingled materials recycling facility (MRF).	Haulers can only offer source separated recycling opportunities to their customers – usually cardboard or mixed paper. The material limitation also limits the amounts of materials that can be diverted
<p>Cost to establish and maintain a recycling program is more than the cost for a single mixed waste stream service.</p> <p>Not all haulers for Multi-Family are involved in the PPP stewardship agency (MMBC) so not same level of service available throughout the region.</p>	Customers expect recycling services to be provided for free or at a considerably reduced rate. Some even expect to be paid for their recycling efforts. If these expectations are not met then disposal alternatives are more fiscally attractive for the waste generator.
Not enough space available for the storage of separated materials (i.e. paper)	The amount and type of recycling that can occur onsite is limited by the space available for the collection and storage infrastructure.
Need to have a single point of contact on the client side who is also a “waste champion”	Without someone being responsible for the recycling programs on the client side, recyclable materials such as cardboard, paper, etc. still end up in the waste stream.
Inability of haulers to pinpoint contamination in a load due to multiple stops on each route to fill up the truck	The lack of ability to track where contamination comes from in the load makes it difficult to impose penalties or even offer feedback to those waste generators who are not participating properly in the programs.
Each customer has very different and unique needs	The need to customize programs for each client creates difficulties in offering efficient programs which in turn limits the haulers’ ability to collect and handle more types and volumes of materials for diversion.

Challenge as identified by: <i>Multi-Tenant building managers including shopping centres</i>	Limitation to Diversion
Lack of clear understanding of roles, responsibilities and fund allocations for common infrastructure	With an unclear assignment of roles, responsibilities and accountability, programs tend not to materialize or function well in multi-tenant buildings. Similarly, the infrastructure used for a common good (such as waste rooms) tends not to receive the funding or priority it requires for maintenance and improvement.
High staff turnover rates for those most likely to be on the front lines of waste management tasks means a loss of program continuity	Lack of training and/or standardized programs makes separating waste seem difficult and may lead to increased contamination rates and decrease in participation in recycling programs.
Lack of overarching regulations to incentivize/force generator responsibility for waste and participation in programs	Independent tenants of a building may have their own waste diversion policies and targets but their ability to meet them may be hindered if the waste infrastructure is provided on a whole building basis and does not meet their needs.

Challenge as identified by: <i>Educational Institutions</i>	Limitation to Diversion
The cost of "extra service" waste management programs is borne by the individual schools and facilities	Schools needing to make budget cuts may look to downsizing or eliminating waste diversion programs as a way to save money.
Lack of available infrastructure to recycle comingled recyclables and organics	Being limited to material specific recycling opportunities (i.e. paper) because of a lack of processing infrastructure in the region has limited the programs the schools can offer for waste diversion activities.

Appendix C: Landfill Bans

Schedule 'C'

"Prohibited Waste"

The following gaseous liquids and municipal solid wastes are not acceptable for disposal at a Solid Waste Management Facility and include, but are not limited to:

1. At the Regional Landfill:
 - (i) Biomedical Waste;
 - (ii) Commercial Organic Waste;
 - (iii) Concrete or asphalt pieces, or rocks greater than 0.03m³ or 70 kg;
 - (iv) Corrugated Cardboard;
 - (v) Drums;
 - (vi) Garden Waste;
 - (vii) Gypsum;
 - (viii) Hazardous Waste;
 - (ix) Household Plastic Containers;
 - (x) Ignitable Wastes;
 - (xi) Land Clearing Waste;
 - (xii) Liquids, except as permitted herein;
 - (xiii) Metal;
 - (xiv) Motor vehicle bodies and farm implements;
 - (xv) Municipal Solid Waste that is on fire or smouldering;
 - (xvi) Radioactive Waste;
 - (xvii) Reactive Wastes;
 - (xviii) Recyclable Paper;
 - (xix) Stewardship Materials;
 - (xx) Special waste, as defined in the *Special Waste Regulation* (British Columbia) except asbestos ;

- (xxi) Tires;
- (xxii) Wood Waste

2. At Church Road Transfer Station: (i)

- Biomedical Waste;
- (ii) Commercial Organic Waste;
- (iii) Concrete or asphalt pieces, or rocks greater than 0.03m³ or 70 kg;
- (iv) Controlled Waste;
- (v) Corrugated Cardboard;
- (vi) Garden Waste;
- (vii) Gypsum;
- (viii) Hazardous Waste;
- (ix) Household Plastic Containers; (x)
Ignitable Wastes;
- (xi) Land Clearing Waste;
- (xii) Liquids, except as permitted herein;
- (xiii) Metal;
- (xiv) Motor vehicle bodies and farm implements;
- (xv) Municipal Solid Waste that is on fire or smouldering;
- (xvi) Radioactive Waste;
- (xvii) Reactive Wastes;
- (xviii) Recyclable Paper;
- (xix) Special waste, as defined in the *Special Waste Regulation* (British Columbia) except asbestos;
- (xx) Stewardship Materials;
- (xxi) Tires;
- (xxii) Wood Waste.

TO: Larry Gardner
Manager, Solid Waste

DATE: March 9, 2016

FROM: Sharon Horsburgh
Senior Solid Waste Planner, Solid Waste

MEETING: RSWAC, March 17, 2016

FILE: 5365-00

SUBJECT: Construction and Demolition Waste – Current State & Future Options

RECOMMENDATION

That the Regional Solid Waste Advisory Committee (RSWAC) receives this report for information.

PURPOSE

To provide background on the current state of the Construction and Demolition (CD) Waste and future options and to estimate additional waste diversion potential from this sector of the waste stream.

BACKGROUND

In the RDN there are a variety of CD waste disposal options available at the Regional Landfill and Church Road Transfer Station (CRTS) as well as at numerous private waste facilities located throughout the region. Please see map in Appendix 1 that provides an overview of waste and recycling facilities located in the RDN.

CD material includes waste from renovation projects that generate a wide range of materials, approximately between 75%-90% is reusable or recyclable. Building materials as referred to in the 2012 Waste Composition study include concrete, asphalt, wood, gypsum wallboard, metal, cardboard, asphalt roofing and plastic. As part of the RDN's Zero Waste Plan, the Construction/Demolition Waste Strategy was approved by the RDN Board in 2007. A copy of the RDN's CD Diversion Strategy is attached as Appendix 2.

Key initiatives in the CD strategy include:

- In January 2008, the RDN banned loads of wood delivered in roll-off bins from RDN Solid Waste Facilities;
- Increased the tipping fee for clean wood waste at RDN Solid Waste Facilities to create incentives to divert this material to licensed recycling facilities; and
- Wood waste received at the Regional Landfill and CRTS is shipped to third party recycling facilities or processed for on-site beneficial use at the Regional Landfill.

This strategy has attracted private sector investment and now the majority of the CD waste is managed at private sector facilities in the RDN and clean wood waste is no longer buried as garbage in the Regional Landfill.

CONSTRUCTION/DEMOLITION WASTE STRATEGY

The RDN promotes diversion of CD materials through disposal bans on cardboard, gypsum (drywall), metal and wood, and high tipping fees on loads of CD waste arriving at the regional facilities. (Roll-off containers of CD materials cannot be delivered to the Regional Landfill or CRTS).

Private sector recycling facilities manage the majority of CD waste in the Region and it is processed as follows:

- Wood waste is chipped and used as hog fuel (fuel substitute) at pulp mills on Vancouver Island;
- Gypsum is recycled into new gypsum wallboard;
- Metal is recycled;
- Concrete and asphalt are recycled; and
- Asphalt shingles are recycled on a limited basis.

There is also significant reuse of building materials and fixtures through salvage operations and retail stores such as Demxx and Habitat for Humanity's ReStore.

In addition to the wood waste ban that was introduced in 2008, the Province cancelled the burn permit for wood waste and the land clearing waste burn site on Weigles Road in Nanaimo. With limited options for disposal, the private sector wood waste drop-off sites are essential to the RDN's waste diversion goals.

LAND CLEARING WASTE MANAGEMENT

Land clearing (LC) waste refers to trees and stumps removed when land is cleared for development. Because of the large and bulky nature of this material, it is difficult to manage at municipal solid waste landfills and composting facilities. There are three private operations in the RDN that receive and process LC waste: Pacific Coast Waste Management, DBL Disposal Services Ltd., and Earth Bank Resource Systems.

In areas of the RDN where LC waste can be disposed of through on-site burning, all fires must be managed in accordance with the BC Open Burning Smoke Control Regulation and the local fire authority.

ALTERNATIVE OPTIONS FOR CD WASTE IN THE REGION

In 2006, the RDN introduced the Waste Stream Management Licensing Bylaw that was part of the CD Waste Management Strategy. There are now several facilities in the RDN dedicated to accepting CD materials and source-separating loads for recycling. Table 1 provides a list of these facilities.

Table 1 - Material & Facility Name

Material	Facility Name
Asphalt	Haylock Bros. Hub City Paving
Asphalt Shingles	DBL Disposal Services Ltd. Pacific Coast Waste Management
Concrete	DBL Disposal Services Ltd. Hub City Paving Haylock Bros. Mayco Mix Pacific Coast Waste Management Parksville Heavy Equipment
Metal	ABC Recycling Alpine Annex Auto Bull Dog Auto Parts Carl's Metal Salvage DBL Disposal Services Ltd. Nanaimo Recycling Exchange Schnitzer Steel
Land Clearing (LC)	DBL Disposal Services Ltd. Earthbank Resource Systems Pacific Coast Waste Management
Wood (lumber)	Alpine Coast Environmental Services DBL Disposal Services Ltd. Gabriola Island Recycling Organization Nanaimo Recycling Exchange Pacific Coast Waste Management

FUTURE DIVERSION POTENTIAL

In 2004, the RDN waste composition study found that building materials, essentially CD waste, was 12% of the total waste stream. In 2012, the proportion of CD waste has remained virtually the same at 11%. The respective tonnage of CD is approximately 2,500 tonnes from the commercial sector and 3,000 tonnes from the self-haulers.

Table 2 outlines the amount of CD materials disposed of by all sectors and provides detailed data of the types of building materials by category and the volumes received from the residential, commercial and self-haul sectors.

Table2: Detailed Data by Waste Category from 2012 Waste Composition Study

Material Category	Residential		Commercial		Self-Haul		Totals	
	Waste Stream Percentage	Estimated Tonnes Disposed						
Building Materials	0.7%	347	4.6%	2,438	5.6%	2,963	10.6%	5,748
Clean Wood	0.3%	145	1.0%	509	0.8%	403	2.0%	1,057
Treated or Painted Wood	0.2%	88	1.4%	759	0.0%	6	1.6%	853
Gypsum/drywall/plaster	0.0%	0	0.3%	186	1.2%	652	1.6%	838
Masonry/bricks	0.0%	0	0.2%	91	0.5%	241	0.6%	332
Asphalt products	0.0%	0	0.1%	52	0.0%	0	0.1%	52
Carpet & Underlay	0.0%	0	0.8%	437	1.9%	1,004	2.7%	1,441
Flooring (non-wood)	0.0%	0	0.0%	0	0.1%	54	0.1%	54
Other (fiberglass insulation)	0.2%	114	0.8%	404	1.1%	604	2.1%	1,122

Depending on the quality of the building materials listed in Table 2, most could have been recycled locally and this would include: gypsum, brick and asphalt, clean wood waste, concrete, and asphalt shingles. Coated/painted wood and asbestos materials (e.g. pre-1990 drywall) have limited potential for recycling. For an overview on the challenges of managing treated or painted wood in the waste stream please see Appendix 3 which is a copy of material presented at the 2015 Coast Waste Management Association jointly by Tauseef Waraich, Cowichan Valley Regional District and Dan Lazaro, Coast Environmental Services.

At the current time, there are no viable markets on Vancouver Island for carpet, flooring and insulation. It is estimated that of the approximately 5,700 tonnes of the CD materials in the waste stream, about 2,300 tonnes may be available for recycling.

The RDN is now well served by private sector facilities and this has contributed to the RDN's high diversion. Table 3 highlights that building materials in the waste stream has decreased overall from 46.8kg's per capita to 37.8kg's per capita between 2004 and 2012 respectively.

Table 3: Comparison of Kg's per capita results from 2004 and 2012 RDN waste composition study

Material Category	Residential				ICI				Self-Haul				Waste Stream Summary			
	2004 Waste Stream %	2004 KG/Cap	2012 Waste Stream %	2012 KG/Cap	2004 Waste Stream %	2004 KG/Cap	2012 Waste Stream %	2012 KG/Cap	2004 Waste Stream %	2004 KG/Cap	2012 Waste Stream %	2012 KG/Cap	2004 Waste Stream %	2004 KG/Cap	2012 Waste Stream %	2012 KG/Cap
	Building Materials	0.9%	3.9	0.7%	2.3	5.4%	23.7	4.6%	16.0	4.3%	19.2	5.3%	19.5	10.6%	46.8	10.6%

The largest decrease was from the IC&I sector that represented 7% of the waste stream in 2012 as compared to 16% in 2004. Diverting roll off containers from RDN waste facilities has contributed to a significant decrease in tonnage from the IC&I sector.

However, the amount of materials independently disposed or recycled at out-of-region facilities is unknown. Increased regulatory authorities could restrict movement of waste and recyclables outside our region. Waste migration presents challenges and opportunities. Waste sent for disposal at public and private facilities within our region is subject to our Zero waste Plan. Waste that migrates from our of our region is not counted in our waste composition study. The material that migrates creates lost economic opportunities for the private sector operators in our region and the RDN facilities lose revenue. Additional regulatory authorities could potentially create economic incentives to keep material in our region that helps to create local economic opportunities.

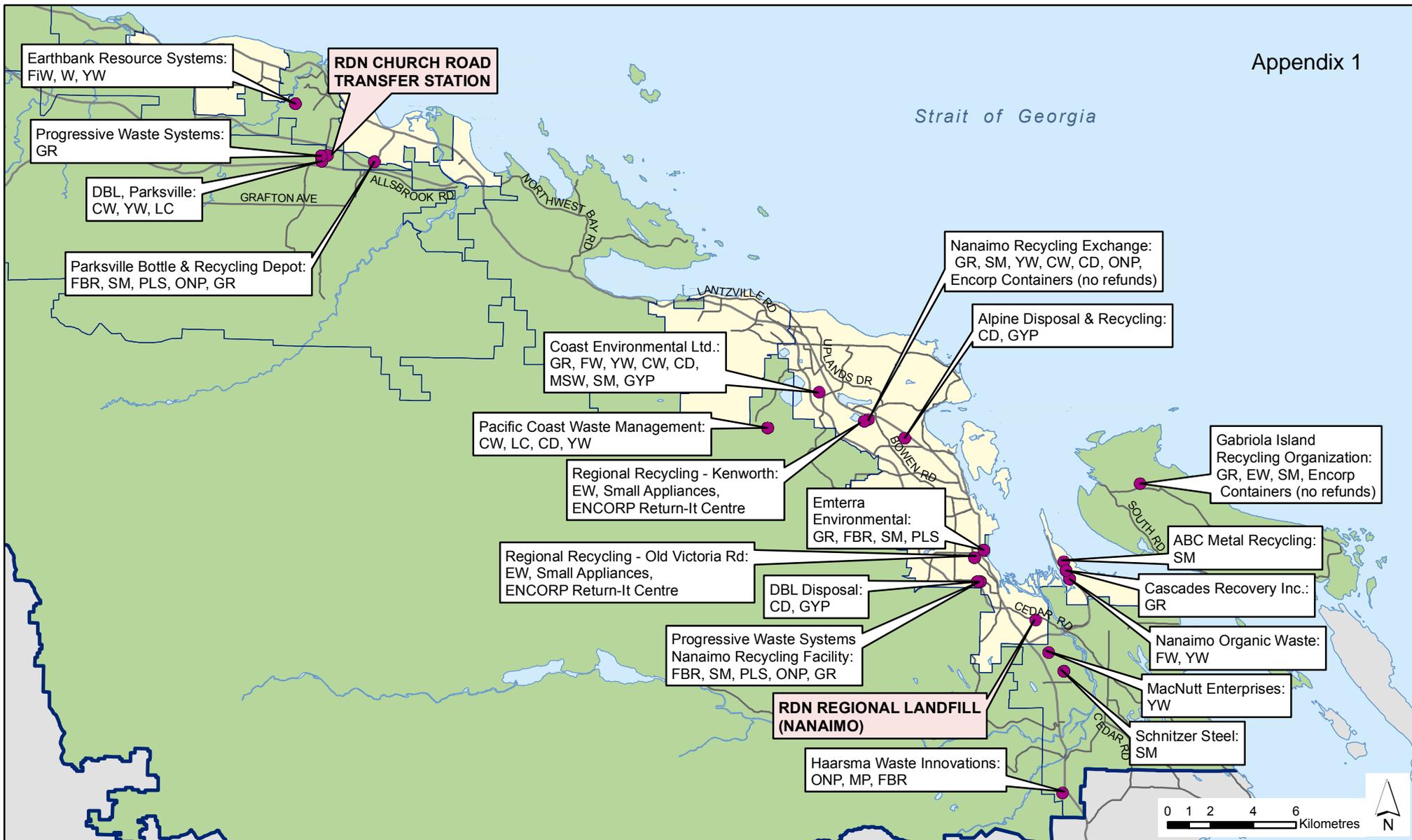
In 2015, RDN staff were made aware of two demolition projects where the waste migrated to other jurisdictions and staff estimate that these projects would have generated roughly 1,000 tonnes. It was reported that this CD material was landfilled out of region. Based on local industry reports approximately; 70% of the material was wood, metal, gypsum, and aggregate which could have been recycled locally. The practice of exporting demolition waste out of region is not uncommon. It is estimated that a typical 1970's two storey basement home would yield roughly 25-30 tonnes and commercial building on average between 400 – 600 tonnes. The residual waste from projects demolished locally could see the residual being brought to the Regional Landfill. Increased regulatory authorities could ensure this type of waste is recycled instead of landfilled. RDN waste diversion calculations would not change as this material is currently not counted.

POTENTIAL UPDATES TO REVISE THE CD STRATEGY

The 2012 Waste Composition results show there are still opportunities to divert wastes in the building materials category to increase diversion. Of this material, it is assumed that 2,300 tonnes is recyclable. According to companies specializing in demolition between 70% - 90% is potentially divertible.

To create the business environment to encourage diversion to follow is a combination of policy tools their estimated diversion potential. The policy tools range from increased education, enhanced regulatory measures and economic incentives:

TYPE OF MEASURE	POLICY TOOL	Diversion Potential of Remaining CD	Diversion Potential of Total Waste Stream
Education & Communication	<ul style="list-style-type: none"> • Educate development community about Demolition and Land Clearing (DLC) recycling at construction/demolition sites. • Commence information campaign to make CD waste generators and haulers aware of alternate facilities. • Encourage the role of building supply retailers and producers in the collection of DLC material for recycling. • Provide technical assistance to municipalities that introduced demolition recycling requirements, based on a sample municipal bylaw. 	20%	1%
Enhanced Regulation Within Existing Authorities	<ul style="list-style-type: none"> • Work with municipalities to develop a process to require DLC recycling at construction/demolition sites. RDN & municipalities to introduce policies to manage waste through building and demolition permits to manage waste and recycling from the construction and demolition industry. • Review Demolition permit requirements in the Region and work with those that do not have any permitting processes for requiring waste management plans as a condition of such permits. 	40%	2%
Additional Regulatory Authorities	<ul style="list-style-type: none"> • Expand RDN authorities for economic incentives or regulatory instruments to further promote waste diversion (e.g. source separation, flow management, licensing of haulers). 	90%	4%



RDN Solid Waste & Recycling Facilities

Legend

- Recycling Facility
- Highway
- Electoral Area
- Municipality
- RDN Boundary

Materials

General Recycling (Blue Box Materials, Re-used Items)	GR	Scrap Metal	SM	Construction Demolition	CD	Gypsum	GYP
News Print	ONP	Fibre	FBR	Food Waste	FW	Biosolids	BS
Mixed Paper	MP	Land Clearing	LC	Yard Waste	YW	E Waste	EW
Plastics	PLS	Clean Wood	CW	Asphalt Shingles	ASHG	Fish Waste	FW
		Municipal Solid Waste	MSW				

Mapping the Way to Zero Waste

Construction/Demolition Waste Diversion Strategy

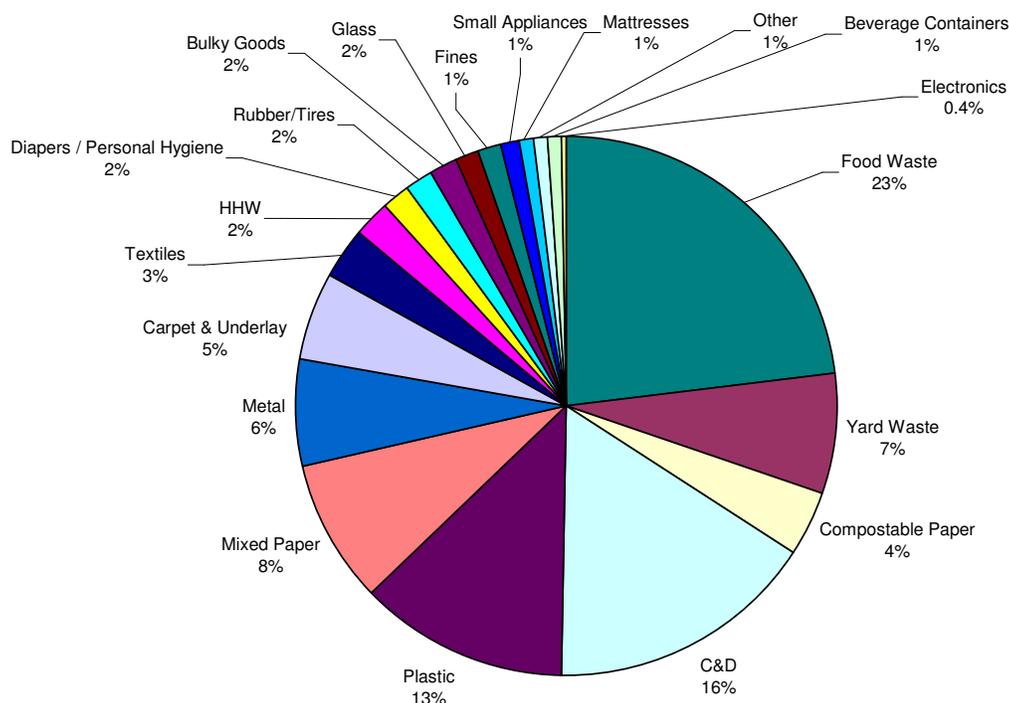
Why Divert Construction/Demolition Waste From Disposal?

It's in the Plan!

When we reduce the amount of waste that goes into the landfill or other disposal sites, we save resources, reduce costs and minimize our footprint on the environment. That's why the RDN adopted the Zero Waste diversion target in 2002 as its long-term goal. Zero Waste builds on the significant successes of the earlier 3Rs Plan (Reduce, Reuse, Recycle), under which, by 2003, we were diverting 57 percent of our solid waste from the landfill. That was more than the 50 percent target set in 1989 by the provincial environment ministry for all regional districts, but it's still too much. The updated Solid Waste Management Plan (SWMP) approved by the RDN Board in 2004 aims to increase this diversion rate to 75 percent by 2010 by diverting additional materials away from landfill. Construction/Demolition Waste (C/D) diversion is an important element of the RDN Zero Waste plan.

C/D is the Second Largest Component of Solid Waste

The following chart shows that C/D comprises 16% of all waste landfilled in the RDN, and next to compostable organics, C/D is the largest component of landfilled waste in the RDN.



C/D Diversion Leads the Way to Zero Waste

In 2005, the RDN Board approved an organics diversion strategy that, when fully implemented, should divert an additional 15% of the overall waste stream from landfill. That leaves C/D waste as the most significant portion of the overall waste stream in the RDN. In 2006, 11,000 tonnes of C/D was landfilled: about 8,000 tonnes of wood waste and 3,000 tonnes of asphalt shingles. The projected RDN diversion rate of 70% after organics diversion is fully implemented would increase to up to 75% by diverting C/D from disposal.

Economic and Infrastructure Development

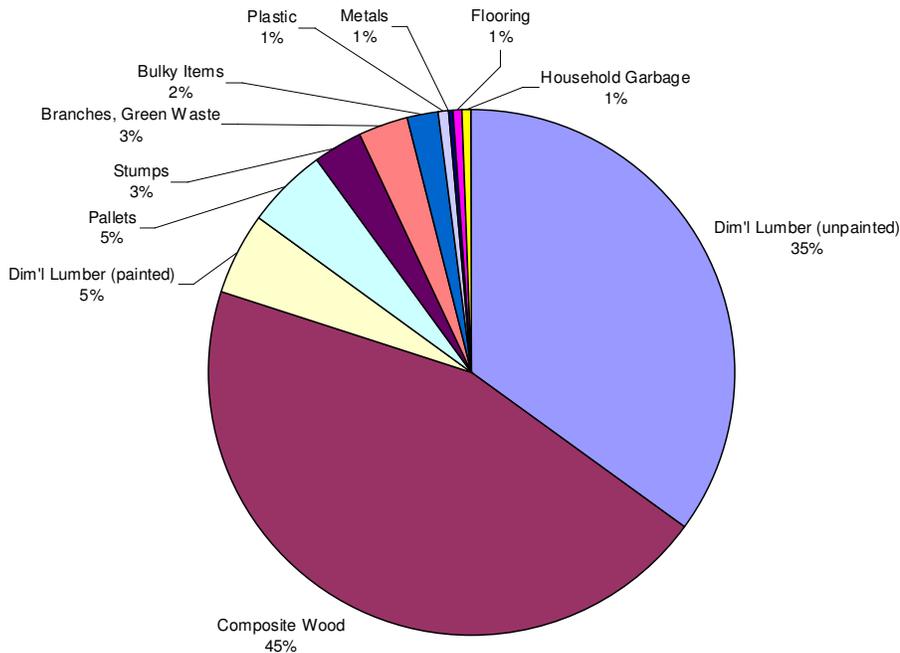
The vision of turning waste into feedstock for a new and beneficial product that creates wealth from waste is a supporting theme of the RDN Zero Waste Plan. That is why the RDN adopted the Waste Stream Management License (WSML) bylaw which not only regulates recycling and waste management facilities but also creates economic activity and jobs.

Diverting C/D to facilities licensed under WSML provides the feedstock to build and maintain sustainable private waste management infrastructure and correctly shifts the financial and physical responsibility for waste away from the public facilities to the generators and receivers of the waste.

What is Construction/Demolition Waste?

Construction/demolition waste (C/D), is wood and mixed waste from demolition and construction activities. It can contain many different types of materials including clean, treated and painted wood waste, plastics and vinyl, carpet, brick and rubble, glass, metal, asphalt roofing and any other material that may be found in construction and demolition.

In terms of C/D received at RDN solid waste facilities, the chart below shows that it is mainly wood waste. Wood waste can be used for a number of other purposes from providing an alternative fuel for pulp mill boilers to a bulking agent for composting and soil manufacture.



The Current Situation for Managing C/D

There are currently two facilities in the RDN that can manage the wood waste component of C/D, one in School District 69, near the Church Road Transfer Station and one at Duke Point in Nanaimo. Two additional facilities under development in Nanaimo will be able to manage C/D in the near future. All of the current and planned facilities in the RDN are recycling wood waste into boiler fuel for heat generation in pulp mills. There is a facility in the Cowichan Valley Regional District that is recycling asphalt shingles into a material that can be used as a supplement in traditional asphalt production.

Clean wood waste is also accepted at the Regional Landfill and is ground, at considerable expense to the RDN, and mixed with soil for landfill operations. The wood waste consumes limited space available at the landfill and the grinding presents safety and liability considerations due to the large numbers of commercial and residential customers in relatively close proximity to the grinding operation. There is a need for some ground wood waste at the landfill, however the supply greatly exceeds the demand.

As the prices of natural gas and hog fuel increase, pulp and paper mills are increasingly interested in C/D as fuel. The market for C/D is expected to strengthen as lumber companies close and consolidate sawmills across BC, eliminating the traditional sources of hog fuel. The price of natural gas is not expected to drop for a sustained period, further strengthening the C/D market over time.

Who Would Divert C/D?

C/D is delivered to the landfill and transfer station from three main sources, commercial haulers hauling for the construction industry, small to medium-sized construction contractors hauling their own waste and residential self-haul customers. Approximately 63% of C/D comes from commercial haulers and 27% from miscellaneous self-haulers, including residential and commercial customers.

The commercial haulers generally deliver larger, homogenous loads of C/D. The construction contractors usually bring pick up loads of C/D while the self-haul customer usually brings a mixed load of waste and recyclables, with C/D comprising a small portion of the load.

How Will We Divert C/D?

For the purposes of developing an effective C/D diversion strategy, the individual components of the C/D waste stream must be dealt with separately. There are facilities available licensed to receive and process wood waste and asphalt roofing material. No open burning of waste is allowed in the SWMP. Most of the materials in C/D can be recycled. With licensed facilities in place, diversion of C/D from the landfill is simply a matter of banning C/D from disposal. When this occurs, the majority of C/D will be processed for recycling and other beneficial uses such as energy production.

What is the Plan?

Tipping Fees

Setting the disposal tipping fees to insure full cost recovery and encourage use of alternate facilities creates a powerful incentive to divert C/D from RDN facilities.

Disposal Bans

Banning C/D from disposal has two parts. The first is to ban large commercial loads (larger than a pick up truck) and commercial customers that haul waste in pick up trucks that are frequent users of the RDN disposal facilities and cumulatively, dispose of large quantities of C/D. The purpose of the large loads and commercial ban is to divert the largest, continuous C/D waste stream to private licensed facilities.

To allow residential customers with small loads of C/D to continue to enjoy the convenience of using the RDN facilities, C/D will continue to be received from these customers. Some of this C/D can be utilized for operational purposes at the landfill. Contracts with licensed facilities can be established to manage any C/D in excess of operational needs.

There are no facilities in the RDN licensed to recycle asphalt roofing, therefore the RDN would continue to receive asphalt roofing, keep it separated and, pending an acceptable contract price, ship it to the asphalt roofing recycling facility in the CVRD.

Next Steps and Implementation

2007

- Commence information campaign to make C/D waste generators and haulers aware of alternate facilities.
- Amend Solid Waste Facilities Bylaw 1428 to include C/D disposal bans and to adjust the tipping fees to insure full cost recovery and encourage use of alternate facilities.
- Establish contracts with licensed, private facilities to accept and process C/D received by the RDN that cannot be utilized for operational purposes at RDN facilities.
- Implement bans.

2008

- Analyze diversion resulting from strategy, adjust strategy as required.
- Analyze cost recovery for program, adjust fees as required.

CWMA presentation - Protocols for managing painted wood - Dan Lazaro, Coast Environmental

C&D Woodwaste - Challenges and Opportunities for Diversion



Why use biomass?

- Sustainably harvested biomass is carbon neutral.
- One tonne of dry biomass (bdt) can displace between 1.5 and 3 barrels of oil, depending on the application, technology and process efficiency applied. (envirochem, 2004)
- Wood to electricity (large scale steam) can produce 900 kWh/bdt
- C&D Wood 7,000-8,200 btu / lb – consider as a fuel, not a waste.
- As comparison, Hog Fuel ~5,500 btu / lb

Regulatory Perspective

- Provincial
- BC Energy Plan
 - BC Bioenergy Strategy
 - Agricultural Waste Control Regulation
 - Environmental Management Act
 - Waste Discharge Regulation
 - Small Electrical Power Generating Facility Code of Practice
 - Safety Authority - Pressure vessels and boilers

- Regional and Municipal
- Waste stream management licenses
 - Local air quality regulations (Metro Vancouver)

Biomass Definition in Various Regulations
 - Includes industrial residue of wood that has "not been treated with glue, paint or preservative, or contain substances harmful to humans, animals or plants"

Painted wood issue

- Estimated upwards of 15,000MT available as potential biomass on Vancouver Island.
- CVRD / Coast – cost sharing for consultant to perform "burn test" analysis on clean wood vs. painted wood samples to determine if painted wood impacts on emissions.



Kiln dried post consumer woodwaste is drier (6-12% moisture) and therefore burns "hotter" than hog fuel (30-60% moisture) and could contribute to lower overall emissions at biomass facilities.

CVRD & Wood Waste – Historically

The CVRD does not have a regional landfill or incinerator. All garbage is shipped with truck, barge and rail to Rabanco Roosevelt Regional Landfill in WA.

Waste Wood Diversion:

In the past, the CVRD diverted all wood waste products from waste disposal with the exception of: treated wood, wood with lead-based paint, arborite, melamine, etc.

Waste Wood Quantitates:

In 2014, CVRD recycling centers collected 1,500 MT of waste wood. Roughly 8,000 MT of waste wood was collected and diverted regionally (private + CVRD facilities). Similar quantities were diverted in earlier years.



CVRD & Wood Waste – Today



As a result of MoE's recent review of local paper mill permits, the CVRD and private facilities can no longer divert painted wood or composite wood products (like particle board/plywood) from landfill.

Painted Wood Waste Bin at Bings Creek Recycling Centre

CVRD & Wood Waste – Today

Wood Diversion:

Based on CVRD 2015 scale data, it is estimated that the CVRD Recycling Centres will divert 800 MT of 'clean wood', while ~700 MT of 'painted wood' will be landfilled.

The CVRD estimates that regionally 4,000 MT of painted wood waste will be landfilled this year.



CVRD – Looking for New Solutions for Painted Wood!



Potential for Code of Practice ?

Suggested screening and sorting procedures to allow partial painted wood inclusion into biomass:

1. Continue to sort out known contaminants: creosote, treated lumber, melamine, laminates, etc.
2. Sort out heavier weighted to low paint ratio wood, example: single sided painted wood, pallets (typically in the 40-60lbs range with a light paint coating).
3. Exclude low weighted to high paint ratio wood, example: <1/2 painted plywood, painted wood shingles (not enough wood weight to painted surface area), wood painted on all sides.
4. Exclude pre 1980's painted wood due to potential for lead contamination (HealthLinkBC).

EPA – Non Hazardous Secondary Material Rule

- C&D can be re-classified from a solid waste to a fuel if it can pass the “legitimacy criteria”
 - 1) Must be managed as a valuable commodity.
 - 2) Have a meaningful heating value.
 - 3) Used as a fuel that recovers energy.
 - 4) Contain contaminants at levels comparable to traditional fuels.
- Properly screened/sorted C&D wood meets all these requirements and the Construction and Demolition Recycling Association (CDRA) developed C&D wood derived product specifications for grading C&D wood for suitable fuel burn (based on 3 grades (contaminant levels) and 4 sizing categories).

TO: Larry Gardner
Manager, Solid Waste Services

DATE: April 5, 2016

FROM: Meghan Larson
Special Projects Coordinator

MEETING: RSWAC, April 14, 2016

FILE: 5365-00

SUBJECT: Solid Waste Management Education

PURPOSE

This report is for information only for the Regional Solid Waste Advisory Committee (RSWAC) regarding the current Solid Waste Management Education strategy in the Regional District of Nanaimo (RDN).

BACKGROUND

Both the City of Nanaimo and the Regional District of Nanaimo (RDN) undertake promotion and education related to solid waste management in a variety of formats. All Solid Waste Management programs include an education component and any new programs introduced by the RDN include an education and outreach component.

Websites

The RDN has information related to solid waste management planning, bylaws, disposal and transfer facilities, and zero waste programs on the Solid Waste and Recycling pages of the RDN's website.

A website dedicated to providing information on curbside recycling in the region was developed in partnership with the City of Nanaimo. Both organizations partner to co-host two distinct websites focusing on recycling in our region (www.recycling2016.ca) and curbside composting (www.beyondcomposting.ca). Although the CoN and RDN operate separate collection programs, there are efficiencies in having a central location to visit for locally relevant information which is the basis for establishing the co-hosted website.

Social Media

Solid waste staff routinely posts information on the RDN Facebook and Twitter feeds. These media are used to promote solid waste related events, newsletters and reminders of program changes. In November 2014, a new curbside collection reminder app and web feature was launched to provide an added level of service to RDN curbside customers. In addition to collection day reminders, the app is a portal for information on materials accepted at the curb. The app is available by keying in "RDN Curbside" through the Apple App Store, or for Android devices through Google Play.

Utility billing insert (2014) & Recycling Brochure (2015)

An information insert outlining the changes to curbside recycling was prepared to accompany the 2014 utility billing inserts sent to Regional District curbside program recipients. In partnership with RDN Finance staff and those at Lantzville and Qualicum Beach, over 22,400 registered property owners received the information. Timing of the Parksville billing cycle precluded the insert being sent to

residents in that municipality. On Parksville collection routes, the contractor's collection staff kept the literature on hand and provided it to residents seeking recycling information.

The content was refreshed in 2015 to create a "Recycling In Our Region" brochure. This is provided to new residents, those seeking additional recycling information, and is available at outreach events.

Newsletters

Three Zero Waste Curbside Program newsletters are produced annually and distributed by Canada Post to 24,000+/- homes receiving RDN curbside service. The 2014 and 2015 editions featured content explaining and promoting the new recycling stewardship program and its impact on our curbside collection program. The newsletters are also accessible via the RDN website and social media feeds.

Additionally, the RDN Solid Waste Services also produces and distributes a bi-yearly Solid Waste Management newsletter region-wide containing updates on the Solid Waste Management planning progress, bylaws, regional trends and zero waste goals.

Curbside Setout Inspections

Utilizing money received from MMBC for administration and education, the aim of the curbside outreach activity is to reach out to residents to clarify common issues and concerns resulting from the MMBC changes to curbside collection, to reinforce residents' good recycling practices, and to provide encouragement where there was room for improvement. RDN Staff from the Solid Waste Service casual labour pool who are comfortable interacting with the public and knowledgeable about recycling within the RDN were employed for the task. Duties included inspection of recyclables set out at the curb for collection, identifying and tagging non-compliant recyclables, talking with residents, and distributing information regarding curbside collection.

The outreach program was well received by many of the residents who had direct contact with the field staff. Many residents indicated they were not aware of the changes to the curbside program or were confused as to what materials were accepted under the program. A small number of interactions involved angry and verbally abusive residents; in those situations the staff did what they could to diffuse the anger and moved on to another street. Some of those tagged as having non-compliant recycling did contact the RDN office or the collection contractor seeking clarification, or to complain that they were singled out. These conversations were opportunities for additional education.

Collection Staff

As part of their collection contract, Progressive Waste Solutions staff both on the trucks and those providing customer service play an important education role. The diligence of the collectors on the routes tagging and leaving behind the most obvious non-compliant materials is critical to reinforcing messages regarding acceptable materials (in all three material streams collected, not just recycling).

School Education Program

The RDN contracts a 3rd party non-profit agency to deliver a zero waste school education program which provides free classroom workshops to schools throughout the RDN. Facilitators bring examples of things made from recycled material to show how recycling is helping work towards the goal of Zero Waste. They discuss how a landfill works and show the results of a recent waste audit using a Garbage Pizza.

Participants learn about natural resources and the importance of wisely using renewable resources. The Zero Waste workshop can be tailored to adults who want to improve home or office recycling.

City of Nanaimo

The City of Nanaimo operates their budget for solid waste education in the city. The City of Nanaimo distributes a “Trash Talk” newsletter to all City addresses in the spring and fall of each year; has a dedicated web page on the City’s website that includes information related to the City’s residential collection services, a link to the RDN recycling directory along with a list of reuse and recycling organizations operating in the City; and promotes solid waste campaigns through traditional print ads, signage (i.e. trucks and bus stops), radio, cinema ads and regular media releases as well as online social media to engage residents in solid waste related topics. Annual curbside collection schedules are also distributed to all serviced homes in the City of Nanaimo. The City has recently started to attend public events to promote and gauge public satisfaction with current services provided. They host and promote an annual “Reuse Rendezvous” event which is a city wide swap meet where residents are encouraged to place unwanted items at the curb for collection by freebie hunters. In 2014, they hosted and promoted the first annual “Zero Waste Challenge” where residents were encouraged to compete to slim their bin and in the Fall of 2015 the City has plans to launch a “Keep Nanaimo Clean” anti-littering campaign. The City works regularly with Shaw TV to produce light hearted and informative solid waste news stories.

Identified Gaps in Current Education Strategy

Based on feedback from our stakeholders including the public, RSWAC, industry and other municipal partners some of the gaps in education that have been identified in the RDN and the City of Nanaimo are:

- *Multi-family Buildings:* Particularly in cities lots of people are living in multi-family buildings and are completely unaware of the services available to them in the region. Most buildings have garbage and some form of recycling collection. In 2010, the RDN conducted a study of multi-family building recycling and found that 86% of complexes in the region were meeting the requirements of the RDN’s landfill bans. It is the responsibility of building managers and/or private haulers to increase waste services to these buildings. The City, RDN and Nanaimo Recycling Exchange are currently conducting a pilot program with The Beacon (118 unit high rise strata condo building in downtown Nanaimo) to introduce organics collection to the residents. As part of the pilot program a “Tool Kit” will be compiled to assist other building managers and residents to implement similar programs in their buildings.
- *Depot Items:* The RDN contributes funds to the Recycling Council of British Columbia to provide communications on stewardship programs that exist in our region however, unless residents are aware of RCBC the RDN typically fields these calls. There is no real comprehensive method of informing residents about what they can take to the depots. In this region, local government does not partner with the various stewardship agencies to provide take-back locations; the depots have taken on the important role, however it is difficult to explain because some depots accept more items than others and the RDN does not control what is and is not accepted at these locations. The RDN does maintain an online recycling directory which includes depot locations through the region but it can be hard to navigate for certain items. Maintaining an up to date directory is an ongoing challenge.
- *New Residents:* People moving into the region do not always receive information about our programs and services. The RDN currently mails out new information to owners of newly constructed homes located in electoral areas or if a single family home has changed hands. The

zero waste newsletters are currently the only tool for reaching new residents with program and service information for rentals or other dwelling units.

OPTIONS FOR IMPLEMENTATION

A number of considerations would need to be made in targeting public education including but not limited to staffing, program development and program delivery.

As an example the Cowichan Valley Regional District (CVRD) provides adult education through a contract with Cowichan Green Community. The contract is funded by three CVRD divisions and offers workshops on sustainable transportation, water conservation and waste reduction to community groups by request as well as at public events. The RDN could consider partnering with other departments to put out a joint RFP for public education.

Alternatively the RDN could consider hiring a full or part time staff person to work under a public education role. Such a role could include writing/editing of zero waste newsletters, development and delivery of public workshops/event displays and focused campaigns/strategies for multifamily or ICI sector, and maintaining an active social media presence.

The RDN could also consider improvements to its current online recycling directory. By partnering with the City of Nanaimo both organizations could implement a Waste Wizard widget similar to the current Online Collection look up feature which could be used online or through the RDN Curbside Collection App. The widget would allow residents to enter the item they are interested in disposing of and the results would produce a list of locations that accept that item for recycling and/or disposal. The widget would require regular updating of information to maintain accurate database but would be locally relevant and easy to use for residents and regional staff. This widget would provide background analytics to help support future outreach and communication based on frequently searched items.

Alternatively, the RDN and City could more actively promote the use of the BC Stewards Recyclepedia App which has a series of drop down lists for EPR items in BC.

COMMUNITY IMPLICATIONS

Depending on the type of adult education delivered to the public there could be improved support/use of current services and facilities for solid waste (both private and public) with no required changes to existing service levels.

There are already a number of organizations and NGOs that provide adult education opportunities in the region, including but not limited to:

- Home Depot: delivers workshops on DIY and reuse projects to promote reuse in the community
- Repair Café: delivers workshops to the community on basic repairs to a variety of household items to promote reuse.
- Stewardship Groups: A number of the stewardship groups in BC visit the region to host displays at public events promoting recycling of stewarded items.

The RDN could explore more opportunities to partner with other organizations to further solid waste education in the region. Other conduits to channel solid waste related information to an adult audience include service clubs, seniors' associations, residents' associations, having a presence at locations such as grocery stores, hardware stores and retailers, and through promoting solid waste messages through schools (with the expectation some or all of the message will make it home to the parents).

IMPACT ON DIVERSION

The impact of more education on diversion is difficult to predict and measure as the number of interactions or participants does not always correlate with a change in behaviour (i.e. higher diversion). It can take time for a behaviour change to become an established habit, meaning messages have to be delivered repeatedly through a range of media formats and kept fresh so as not to become ignored or overlooked.

FINANCIAL IMPLICATIONS

Not all costs listed below would be required, however they are provided for information only as a form of comparison for selecting future education strategies. Please note the information provided here is based on the current RDN program only (with most funded through the curbside collection user fee). Table 1 summarizes the existing solid waste management education budget for 2016.

Table 1: Current Solid Waste Management Education Budget

Current Education Expenses funded by Curbside Collection User Fees	Yearly Budget
Curbside Program Newsletter (3x per year)	\$42,000
Operations and Maintenance for ReCollect collection reminder system	\$8,000
Promotional Materials (Curbside)	\$10,000
Review and upkeep of relevant curbside collection content available on three websites (Beyond Composting, Recycling2016, main RDN site)	\$10,000 major* \$2,000 minor
Advertising Budget (Curbside)	\$10,000
Current Education Expenses funded by RDN Tipping Fees	Yearly Budget
Region Wide Zero Waste Newsletter (2x per year)	\$54,000
RCBC Hotline	\$5,000
Compost Program	\$5,000
Nanaimo Recycling Exchange School Education Program Contract	\$30,000
Total	\$166,000

* In 2016 the RDN has budgeted for a major review and update of website content however most years only require minor updates.

Additionally, the City of Nanaimo has a yearly budget of \$60,000 for solid waste education and promotion.

If the RDN chose to increase the profile of public education as part of the solid waste management plan it is expected to cost in the range of \$20,00-\$40,000 depending on the method of deliver (i.e. contract, part-time staff). This amount is in addition to targeted education as a component of options previously discussed by the RSWAC (i.e. curbside, ICI & Multi-Family Diversion, CD). Table 2 provides a summary of these solid waste management options specially targeted at education:

Table 2: Potential Solid Waste Management Education Options

Option	Yearly Budget
Compliance and Enforcement to Improve Diversion in Curbside Collection	\$36,000
Industrial, Commercial, Institutional & Multi-Family Diversion	\$20,000
Construction Demolition	\$20,000
Increased Solid Waste Public Education	\$20,000-\$40,000

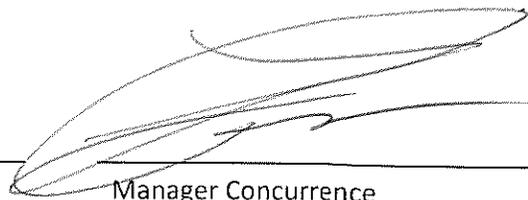
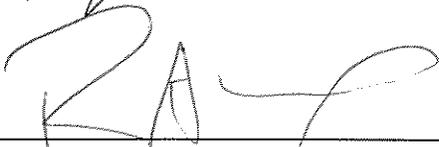
REGULATORY AUTHORITY

No new regulatory authority would be required by the RDN to include an enhanced level of education and outreach within the action items of the Solid Waste Management Plan.

SUMMARY/CONCLUSIONS

Education and promotion related to solid waste management practices and programs is currently provided through a variety of formats, and funded through the existing solid waste budgets for approximately \$166,00/year. A greater emphasis could be placed on "pushing" relevant information to targeted adult audiences through traditional and social media, as well as being more active in locations where the solid waste message would be well received. Increasing the profile of solid waste public education would cost an additional \$20,000-\$40,000/year.

A variety of options are available to the RDN to enhance education, ranging from boosting or refocusing the current education offerings, contracting out for such a service, to employing a staff person to take a proactive role in overseeing and delivering education and solid waste related communications.

 _____ Report Writer	 _____ Manager Concurrence
 _____ General Manager Concurrence	 _____ CAO Concurrence

TO: Larry Gardner
Manager, Solid Waste

DATE: January 5, 2016

FROM: Sharon Horsburgh
Senior Solid Waste Planner

MEETING: RSWAC, January 14, 2016

FILE: 5365-00

SUBJECT: RDN's Zero Waste Plan

RECOMMENDATION

That the Regional Solid Waste Advisory Committee (RSWAC) receives this report for information as part of the 2015 Solid Waste Management Review Process.

PURPOSE

At the November 26, 2015 Regional Solid Waste Advisory Committee (RSWAC) meeting, it was requested that a report be prepared explaining the Regional District of Nanaimo's (RDN) Zero Waste Plan.

BACKGROUND

The RDN's Zero Waste Plan is described in Section 6 of the 2004 Solid Waste Management Plan (SWMP) and is attached as Appendix 1. The SWMP is a long-term vision of how the Regional District will manage its solid waste, including diversion and future disposal needs. The RDN prepared their first SWMP in 1988 and amended that plan in 1996 to include a "3Rs Plan". In 2003, the RDN reviewed the status of the 1996 3Rs Plan and found that most of the programs and policies in the 3Rs Plan had been implemented and the diversion rate in the RDN increased from 45% in 1998 to 57% in 2003. This increased diversion came about despite the fact that two major elements of the plan, an in-vessel composting facility and a construction/demolition waste recycling facility were not constructed.

In 2002, the RDN Board adopted "zero" as the waste diversion target, meaning that the RDN will continuously strive to reduce the amount of waste requiring disposal. In addition, Policy 4H of the RDN's Regional Growth Strategy (adopted June 2003) states: *"The RDN agrees to pursue a solid waste management approach that concentrates on creating less waste, with the ultimate long term goal of eliminating the need for waste disposal (i.e. a "Zero Waste" approach)".* To reflect this new goal, the updated 3Rs Plan was named the Zero Waste Plan. The Zero Waste Plan outlines how the RDN plans to continue reducing the quantity of waste disposed.

The Zero Waste Plan was developed by undertaking the following steps:

- (I) review the existing 3Rs Plan to identify what elements of that plan should be retained and carried forward to become part of the Zero Waste Plan;
- (II) identify new waste reduction opportunities by:
 - reviewing waste diversion initiatives undertaken in other North American jurisdictions that are considered "leading edge";
 - interviewing waste management coordinators in BC and across Canada; and
 - brainstorming RDN-unique ideas;
- (III) develop a menu of components for possible inclusion in the Zero Waste Plan using the initiatives identified in the first two steps;

- (IV) present the menu of possible components to the Regional Solid Waste Advisory Committee (RSWAC) to obtain their feedback; and
- (V) develop a draft Zero Waste Plan based upon RSWAC's and staff input.

As a result of this process, the following components were adopted in the approved 2004 Solid Waste Management Plan.

Ongoing Programs

- Compost Education Program
- School Education Program
- Zero Waste Promotion and Education
- Illegal Dumping Program Expanded Disposal Bans
- Waste Composition Study
- Waste Stream Licensing and Technical Assistance
- Curbside Food and Yard Waste Collection Study
- Yard Waste Composting at RDN Disposal Facilities
- Recycling at RDN Disposal Facilities
- Residential Curbside Garbage and Recycling Collection

New Programs 2005-2007

- Single Family Organics Collection Pilot
- C/D Market Study
- User Pay Review
- RDN Internal Zero Waste Policy
- Single Family Organics Collection Program

In 2013, a review of the current SWMP was initiated with the Stage 1 review, the Existing System Report. The report concluded that the RDN has fully implemented the key components of its 2004 SWMP, including residential food waste collection and banning commercial food waste from landfill disposal. Participation in these programs has resulted in the region diverting 68 per cent of its waste for composting and recycling and achieving a 350 kilogram per capita landfill disposal rate, one of the lowest in Canada.

DISCUSSION

The RDN and its member municipalities, residents and businesses have led the way in reducing the amount of garbage that is landfilled. In 1991, the RDN introduced Canada's first user pay residential garbage collection system. Since then, the RDN and its partners have expanded curbside recycling programs, banned paper, metal, commercial food waste, clean wood waste and other recyclable materials from the landfill, and successfully promoted composting throughout the region.

In the fall of 2012, as a first step in updating the RDN's SWMP, the RDN conducted a waste composition study of the waste sent to the Regional Landfill to determine what types of waste continue to be landfilled and by which sector. The data from the study indicates that roughly 35% of the waste currently landfilled could be composted and 20% could be recycled.

Some of the milestones the RDN has achieved on the road to Zero Waste include:

- 1989 - Residents and businesses divert 10% of solid waste from the landfill.
- 1995 - Recycling, reuse and recycling initiatives divert 26% of solid waste from the landfill.
- 2000 - The RDN and its municipal partners divert 57,000 tonnes of material from the landfill or 54% of the total waste generated in the region, exceeding the 50% target set by the provincial government.
- 2002 - The RDN adopts Zero Waste as its long-term waste diversion target.
2004 - The RDN prepares an updated Solid Waste Management Plan which sets an interim goal of diverting 75% of the region's waste from the landfill by 2010. *[Note that this diversion target included biosolids which are no longer accounted for in the diversion/disposal calculations.]*
- 2005 - The RDN bans commercial food waste from the landfill. A commercial food waste diversion program involving businesses and organizations diverts more than 6,000 tonnes of food waste and organic compostables annually from the landfill.
- 2007 - The RDN and its municipal partners launch a residential food waste collection pilot project that will provide the information needed to develop a region-wide program.
- 2010 – Introduction of region wide food waste curbside collection program.
- 2012 – The region achieved a 68% diversion rate and a per capita waste generation rate of 347 kilograms.
- 2012 - Waste Composition Study was completed.
- 2013 -Stage One - Existing System Report.
- 2013 - Begin to review the 2004 SWMP.

To support the RDN's Zero Waste Plan, the RDN's SWMP includes eight guiding principles and they are as follows:

1. *The consumption of material and energy resources is set at a level that is ecologically sustainable.*
2. *The regional solid waste stream is reduced to the greatest extent possible, in accordance with the hierarchy of reduce, reuse, and recycle, and consistent with local resources and the nature of the regional solid waste stream.*
3. *The goal of environmental policy is to not exceed the capacity of the environment to accept waste and the strategies for achieving that goal cautiously anticipate the environment's capacity.*
4. *Individuals and firms are enabled to make environmentally sound choices about consumption of resources and generation of waste through provision of appropriate information, including user-pay and market-based incentives, wherever possible.*
5. *Reduction policies and strategies are developed through public consultation in a cooperative manner between government, private enterprise and community stakeholders. This may entail more flexibility in existing procedures and the setting precedents. The cost effectiveness of any strategy will be based on full accounting of costs and benefits, both monetary and non-monetary.*
6. *The strategies and policies promote community development whenever possible.*
7. *All parties must have equal access to relevant information and the opportunity to participate effectively throughout the process.*
8. *Openness and trust between stakeholders are the keys to a successful process.*

The RDN is unable to achieve all these goals alone, however, the RDN has been actively promoted these concepts through participation on policy making committees of various national, provincial and regional organizations such as the Solid Waste Association of North America, AVICC, National Zero Waste Council, the Recycling Council of BC, Coast Waste Management Association and Zero Waste Nanaimo. All of these organizations are multi-stakeholder groups that have a good track record of influencing senior government policy. Zero Waste is a very active subject of discussion in all of these groups.

The RDN's existing solid waste management system is diverse and reflects a mature waste management system. The key components of the existing waste management system are:

- Zero waste has been adopted as the waste diversion target – meaning that the RDN will continuously strive to reduce the amount of waste requiring disposal;
- Curbside collection of garbage, kitchen scraps and recyclables for all single-family homes;
- User pay waste management fees for both the landfill and the curbside collection services;
- A policy of banning materials from disposal as garbage once a stable alternative use is identified;
- An organics diversion strategy that enables the diversion of both residential and commercial food and yard waste;
- A Construction/Demolition Waste Strategy that banned the disposal of clean wood waste to drive the development of a recycling industry for waste from construction and demolition activities;
- A Waste Stream Management Licensing system that ensures private waste management facilities operate at a high standard; and
- A comprehensive Illegal Dumping Prevention Strategy.

A number of the key components of the waste management system are discussed in more detail below.

Zero Waste

The RDN's Zero Waste concept is worth highlighting. There are many significant challenges with the implementation of Zero Waste as many aspects are beyond local government's regulatory jurisdiction. For example, local government does not have the authority to regulate products or packaging such as design for environment, end of life return of product, bans or minimum recycled content. However, in these areas, the RDN is proactive and assists with the dissemination of information as well as participating on policy setting committees as noted previously.

Organics Diversion Strategy

The cornerstone of the RDN's 2004 SWMP was the diversion of organic waste from landfilling. The 2004 waste composition study indicated organic waste represented 47 % of the RDN's residential waste stream by weight and 40% of the ICI waste stream. Therefore, diverting organics was determined to be the single most effective means of increasing diversion of waste from landfilling. The 2012 Waste Composition Study showed that the total waste stream organics dropped from 178 kg/person in 2004 to 123 kg/person in 2012. There remains significant opportunity for further organics diversion.

Construction/Demolition Waste Strategy

In February 2007, the Regional Board approved a Construction/Demolition (CD) Waste Strategy. Key initiatives in the strategy include:

- Increasing the tipping fee for clean wood waste at RDN Solid Waste Facilities to create incentives to divert this material to licensed recycling facilities;
- Effective January 1, 2008, the RDN put a ban on disposal of clean wood waste in the Regional Landfill and roll-off containers of wood waste at RDN Solid Waste Facilities; and
- Arranging contracts with third party wood waste recycling facilities to manage wood waste received at the Regional Landfill and Church Road Transfer Station from small self-haulers.

As a result of the strategy, there are currently several CD waste management facilities in the RDN and clean wood waste is no longer buried as garbage in the Regional Landfill.

Construction, demolition and renovation projects generate a wide range of materials, most of which are reusable or recyclable. These include concrete, asphalt, wood, gypsum wallboard, metal, cardboard, asphalt roofing and plastic. The RDN promotes diversion of these materials through disposal bans on cardboard, gypsum (drywall), metal and wood, and high tipping fees on loads of CD waste arriving at the Regional Landfill.

The majority of CD waste is recycled or used as a fuel substitute. The following materials are managed as follows:

- Wood waste is chipped and used as hog fuel at pulp mills on Vancouver Island and in Washington State;
- Drywall (gypsum) is recycled;
- Metal is recycled;
- Concrete and asphalt are recycled; and
- Asphalt shingles are recycled for road base applications.

There is also significant reuse of building materials and fixtures through salvage operations and retail stores such as Demxx and Habitat for Humanity's ReStore.

Waste Stream Management Licensing Bylaw

RDN Bylaw No. 1386, 2004 requires solid waste management facilities operating in the RDN to maintain a Waste Stream Management License (WSML). A similar bylaw is in place in the Cowichan Valley Regional District. The authority to license and regulate solid waste facilities is given to regional districts through BC's Environmental Management Act and the RDN's licensing bylaw was enacted under the 2004 SWMP.

The RDN's licensing Bylaw No.1386 was established to fulfill the following objectives:

1. Create a high standard of operation for waste management facilities.
2. Encourage and protect legitimate waste management operations.
3. Establish a reporting system for the flow of waste materials within the RDN.
4. Protect and enhance the waste reduction rate achieved.
5. To provide a level playing field.

In the RDN, there are currently 13 facilities that hold Waste Stream Management Licenses and five applications are under review.

RDN Waste Stream Management License Holders (as of July 2015)
1. Schnitzer Steel Pacific
2. Parksville Bottle & Recycling Depot
3. Nanaimo Organic Waste (formally ICC)
4. Progressive Waste (formally BFI) Nanaimo Recycling Facility
5. Emterra Environmental
6. Earthbank Resource Systems
7. Alpine Disposal & Recycling (ADR)
8. Pacific Coast Waste Management (PCWM)
9. DBL Disposal Services Ltd. (formally Porter Wood Recycling Ltd.)
10. DBL Disposal Service Ltd.
11. Progressive Waste (formally BFI Canada), Springhill
12. Cascades Recovery Inc.
13. Coast Environmental Services
RDN Waste Stream Licenses (In Progress)
14. Haarsma Waste Solutions
15. Gabriola Island Recycling Organization
16. Nanaimo Recycling Exchange
17. ABC Metal Recycling
18. MacNutt

Illegal Dumping Prevention Strategy

The RDN has implemented an Illegal Dumping Prevention Strategy and works collaboratively with community groups. The key components of the program include prevention of illegal dumping through education; funding the clean-up of illegal dumpsites; waiving of landfill tipping fees and illegal dumping surveillance and enforcement activities. The program cost is approximately \$100,000 annually.

Education & Outreach

Both the RDN and the City of Nanaimo undertake promotion and education related to solid waste management. The RDN has information related to the solid waste management planning, bylaws and zero waste programs on the Solid Waste and Recycling pages of the RDN's website. The RDN and the City of Nanaimo distribute approximately seven Zero Waste/Solid Waste related newsletters each year to homes across the region. The RDN contracts the Nanaimo Recycling Exchange to provide a zero waste school education program, which provides free classroom workshops to schools throughout the RDN. It is estimated that the RDN spends approximately \$200,000 annually on education.

ALTERNATIVES

There are no alternatives for this report.

FINANCIAL IMPLICATIONS

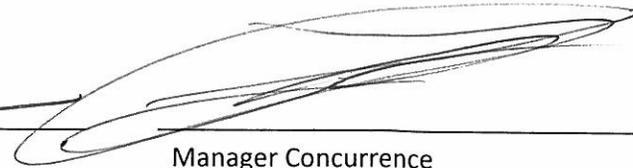
This report is presented for information purposes only therefore there are no financial implications.

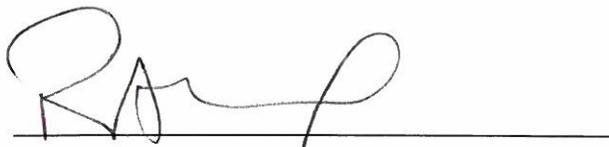
SUMMARY/CONCLUSIONS

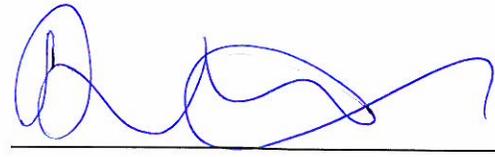
In 2002, the RDN Board endorsed the adoption of a Zero Waste Plan for inclusion in the Solid Waste Management Plan. Since that time, the RDN has introduced a number of strategies and policies, and has taken action, to reduce the amount of waste being landfilled. The RDN is considered a leader in North America with respect to its Zero Waste programs.

Through community cooperation and support, the RDN has achieved 68% waste diversion and an annual per capita disposal rate of 347 kilograms. According to the Province of BC 2012 Waste Diversion Calculator, this is one of the lowest disposal rates in Canada. Furthermore, the RDN and Cowichan Valley Regional Districts are believed to have the lowest per capita disposal rates in the world. With a continued promotion of Zero Waste concepts, there is expected to be continued improvements that will meet the future needs of the RDN.


Report Writer


Manager Concurrence


General Manager Concurrence


A/CAO Concurrence

Solid Waste Management Plan

6. Zero Waste Plan

In April 2003, the RDN reviewed the implementation status of their 1996 *3Rs Plan* as a first step in updating this component of the Solid Waste Management Plan. Most of the programs and policies in the 3Rs Plan were implemented and the diversion rate in the RDN increased from 45% in 1998 to 57% in 2003. This increased diversion came about despite the fact that two major elements of the plan, an in-vessel composting facility and a construction/demolition waste recycling facility were not constructed.

In 2002 the RDN adopted “zero” as their waste diversion target, meaning that the RDN will continuously strive to reduce the amount of waste requiring disposal. In addition, Policy 4H of the RDN’s Regional Growth Strategy (adopted June 2003) states: *The RDN agrees to pursue a solid waste management approach that concentrates on creating less waste, with the ultimate long term goal of eliminating the need for waste disposal (i.e. a “Zero Waste” approach).* To reflect this new goal, the updated 3Rs Plan is called the *Zero Waste Plan*. The Zero Waste Plan outlines how the RDN plans to continue reducing the quantity of waste disposed.

The Zero Waste Plan was developed by undertaking the following steps:

- (I) review the existing 3Rs Plan to identify what elements of that plan should be retained and carried forward to become part of the Zero Waste Plan;
- (II) identify new waste reduction opportunities by:
 - reviewing waste diversion initiatives undertaken in other North American jurisdictions that are considered “leading edge”;
 - interviewing waste management coordinators in BC and across Canada; and
 - brainstorming RDN-unique ideas;
- (III) develop a menu of components for possible inclusion in the Zero Waste Plan using the initiatives identified in the first two steps;
- (IV) present the menu of possible components to the Regional Waste Advisory Committee (RWAC) to obtain their feedback; and
- (V) develop a draft Zero Waste Plan based upon RWAC’s and staff input.

This section briefly describes each component of the Zero Waste Plan. The components are organized into two sections:

1. **Ongoing Programs** –programs that were part of the 1996 3Rs plan, were implemented and continue to operate, including programs identified in the annual budget for 2004;
2. **New Programs** – programs that have new diversion potential that will be implemented in 2005 to 2007 upon adoption of this Solid Waste Management Plan.

final draft

Solid Waste Management Plan

All costs are presented in 2004 dollars.

Solid Waste Management Plan

◆ **On-Going Programs 2004**

Program	Budget
<p>Compost Education Program</p> <p>The Zero Waste compost education program has several components, including:</p> <ul style="list-style-type: none"> • enhance, maintain and promote demonstration gardens; • promote usage of the yard waste management educational materials available on the RDN's website; • conduct spring and fall seminars on composting, grasscycling, zero waste landscaping, natural garden and lawn care, etc. Partnering with local garden centres that sell backyard composters and native plants will be explored. 	<p>\$5,000</p>
<p>School Education Program</p> <p>Continue contracting out design and delivery of a primary school program that focuses on the concept of zero waste.</p>	<p>\$15,000</p>
<p>Zero Waste Promotion and Education</p> <p>The Zero Waste Promotion and Education program contains the following elements:</p> <ul style="list-style-type: none"> • Continue and enhance current zero waste information initiatives including the web site, newsletters and participation in community events. • Maintain funding to the Recycling Council of BC for operation of the hotline. Promote the hotline to RDN residents and businesses. • Continue annual financial support to Recycling Council of BC for their ICI waste exchange service. Promote this service to RDN businesses and institutions. • Maintain and print the Zero Waste (recycling) directory and the online directory on the RDN web site and ensure data is up to date through annual reviews of the listings. Promote directory and reuse awareness, particularly with customers that bring reusable goods to RDN disposal. • Continue television advertising on Shaw Cable. • Promote to all sectors the availability of Zero Waste tools, particularly those available on the web such as the Recycling Directory, Zero Waste Business Tool Kit, Zero Waste Landscaping Tips, and Composting Information. Additional tools will be accessed from other jurisdictions and, with permission, modified for use in the RDN. 	<p>\$58,500</p>

Solid Waste Management Plan

Program	Budget
<p>Illegal Dumping Program</p> <p>The Illegal Dumping Program includes surveillance and enforcements activities as well as on-going clean-up of illegal dumping sites and free disposal (tipping fees are waived) for community clean-up events. To encourage community clean-ups, groups that undertake these activities will be recognized in the RDN newsletter or other media.</p>	<p>\$63,000</p>
<p>Expanded Disposal Bans</p> <p>International Composting Corporation (ICC) opened their private composting facility in Nanaimo in April 2004. Consequently, in accordance with RDN Board policy, organic waste from commercial generators (e.g. grocery stores, institutions, and restaurants) will be banned at the Regional Landfill and Church Road Transfer Station in the fall of 2004.</p> <p>Implementation of the ban would involve a “ramp up” period of increasing enforcement starting with advanced notice of upcoming ban, then notices (rather than financial penalties) for the first months of the bans implementation, and eventually implementing financial penalties that are double the tipping fees for loads containing banned materials.</p> <p>In addition, yard waste and products covered under province-wide stewardship programs will also be banned, as opportunities to divert these materials are readily available in the RDN.</p>	<p>\$24,000</p>
<p>Waste Composition Study</p> <p>Conduct a waste composition study to estimate the quantity of recyclable materials remaining in the waste stream and the source of those materials (residential, ICI or DLC). This study will assist in focusing waste diversion programs and policies where they will have the greatest impact.</p>	<p>\$25,000</p>
<p>Waste Stream Management Licensing Technical Assistance</p> <p>To support the implementation of the Waste Stream Management Licensing Bylaw (which is ultimately intended to enhance diversion in the RDN), technical assistance will be required on an annual basis to prepare site specific operating plans and requirements</p>	<p>\$15,000</p>

Solid Waste Management Plan

Program	Budget
<p>Curbside Food and Yard Waste Collection Study</p> <p>Organic waste collection could divert food waste, non-recyclable paper products and other organic waste materials in addition to providing yard waste removal service to residents in the RDN curbside collection service area. Based on a 2002 CRD waste composition study, approximately 45% of the residential waste stream is compostable. In the RDN, if only half of the residential-based organic waste is diverted through an organics collection program, 5,600 tonnes of waste would be diverted from the landfill annually. This study will research collection methods and successes in other North American jurisdictions</p>	<p>\$10,000</p>
<p>Yard Waste Composting at RDN Disposal Facilities</p> <p>To ensure an on-going opportunity to dispose of yard waste, the RDN will continue to accept source-separated yard waste at the landfill and transfer station. The drop-offs are for self-haul customers (small loads). Yard waste is transferred to private composting facilities. The tipping fee at the RDN facilities is based on the market cost of composting. Drop-off opportunities are promoted by RDN and municipalities. (Note: The cost associated with this program is directly related to volumes received at the RDN's facilities.)</p>	<p>\$268,000</p>
<p>Recycling at RDN Disposal Facilities</p> <p>The RDN provides the opportunity for self-haul customers at the disposal facilities to recycle batteries, appliances, propane tanks, fluorescent light tubes, scrap metal, tires, gypsum (at CRTS), cardboard, paper, glass, and metal and plastic food and beverage containers.</p>	<p>\$161,500</p>
<p>Residential Curbside Garbage and Recycling Collection</p> <p>Continue with residential garbage and recycling collection programs including strict can limits and comprehensive range of recyclable materials including rigid plastic containers. Provide service to approximately 23,000 households.</p>	<p>\$1,766,970</p>

Solid Waste Management Plan

◆ **New Programs 2005 - 2007**

2005	Budget
<p>Single Family Organics Collection Pilot</p> <p>Design and conduct a pilot organics collection program. Conduct pre and post surveys with participants and measure actual diversion. This pilot would address the feasibility of organics collection for some or all of the residents on the curbside collection program and help to refine the final program design.</p>	\$82,000
<p>C/D Market Study</p> <p>Conduct an analysis of the local market capacity for wood waste and construction/demolition wastes to determine the viability of a ban on all or a portion of this waste.</p> <p>In the event that a private sector C/D processing facility is established, licensed and operational by 2005 the C/D market study will not be done.</p>	\$10,000
2006	Budget
<p>User Pay Review</p> <p>Before tendering next curbside contract, re-assess feasibility of going to full user pay or a subscription-based system for garbage collection. A full user pay program would provide users with a financial incentive to further reduce waste and reward those households that already have achieved significant waste reduction. If viable, a “pay-as-you-throw” request for proposal or tender would be designed for the new curbside waste collection contract (scheduled to begin in 2007).</p>	\$20,000
<p>RDN Internal Zero Waste Policy</p> <p>Using existing municipal models, develop an internal Zero Waste Policy to ensure that the environmental impact of RDN purchasing and operations of the RDN is minimized. Environmental purchasing policies developed by other municipalities, such as the City of Richmond, will be used as a template.</p>	\$4,000

Solid Waste Management Plan

2007	Budget
<p>Single Family Organics Collection Program</p> <p>Based on the results of the curbside yard and food waste collection study undertaken in 2004 as well as the pilot collection project undertaken in 2005, a full single family curbside collection program could be implemented in 2007 based on the results of the tender process undertaken in 2006.</p> <p>The costs presented for full program implementation are rough estimates of a household organic waste collection program (food waste and soiled paper). Yard waste collection is not included at this time since not all households may require this service. The types of organic wastes collected, collection method and frequency, and composting facility tipping fees have not yet been defined. This cost estimate includes only the households serviced by the RDN although it is assumed that the City of Nanaimo will also consider implementing a similar program if it is found to be cost-effective.</p>	<p>Start-up costs (one-time): \$97,000</p> <p>On-going annual costs: \$460,000</p>

Zero Waste Plan Summary

i. Diversion Potential

The diversion potential of the Zero Waste Plan ranges from an *additional* diversion of 4% in 2004 to an additional 41% in 2009, as shown in Table 6-1. Although many of the programs listed in the plan do not contribute directly to diversion, they are believed to be essential to supporting existing and planned zero waste initiatives and without them the diversion potential of the other programs could not be realized. Upon full implementation, the RDN could achieve an *overall* diversion rate of 76%.

Table 6-1 Zero Waste Plan New Diversion Potential

Year	2004 (%)	2005 (%)	2006 (%)	2007 (%)	2008 (%)	2009 (%)
New Programs						
Expanded Disposal Bans	4	13	24	31	34	34
Waste Composition Study						
Construction/Demo Waste Market Study						
Single Family Organics Collection				5	5	5
User Pay Review						
RDN Internal Zero Waste Policy						
New Diversion (based on 2003 baseline)	4	13	24	38	39	39
Total Cumulative Diversion (based on 2003 baseline of 57%)	59	63	68	75	76	76

Solid Waste Management Plan

ii. Costs

Table 6-2 shows the annual cost for the Zero Waste Plan from 2004 to 2009.

Table 6-2. Zero Waste Plan Costs

Year	2004	2005	2006	2007	2008	2009
Ongoing Programs						
Residential Curbside Garbage and Recycling Collection*	\$ 1,766,970	\$ 1,802,309	\$ 1,838,356	\$ 1,875,123	\$ 1,912,625	\$ 1,950,878
Illegal Dumping Program	\$ 63,000	\$ 63,000	\$ 63,000	\$ 63,000	\$ 63,000	\$ 63,000
Recycling at RDN Disposal Facilities	\$ 161,500	\$ 161,500	\$ 161,500	\$ 161,500	\$ 161,500	\$ 161,500
Yard Waste Composting	\$ 268,000	\$ 165,000	\$ 165,000	\$ 165,000	\$ 165,000	\$ 165,000
Zero Waste Promotion and Education	\$ 58,500	\$ 58,500	\$ 58,500	\$ 58,500	\$ 58,500	\$ 58,500
School Education Program	\$ 15,000	\$ 15,000	\$ 15,000	\$ 15,000	\$ 15,000	\$ 15,000
Compost Education Program	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000
New Programs						
Expanded Disposal Bans	\$ 24,000	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500
Centralized Composting Facility	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Waste Composition Study	\$ 25,000	\$ -	\$ -	\$ -	\$ -	\$ -
Curbside Organics Collection Study	\$ 10,000	\$ -	\$ -	\$ -	\$ -	\$ -
Single Family Organics Collection Pilot	\$ -	\$ 82,000	\$ -	\$ -	\$ -	\$ -
Single Family Organics Collection	\$ -	\$ -	\$ -	\$ 557,000	\$ 460,000	\$ 460,000
WSML Technical Assistance	\$ 15,000	\$ 10,000	\$ 10,000	\$ 5,000	\$ 5,000	\$ 5,000
CD Waste Market Study	\$ -	\$ 10,000	\$ -	\$ -	\$ -	\$ -
User Pay Review	\$ -	\$ -	\$ 10,000	\$ -	\$ -	\$ -
RDN Internal Zero Waste Policy	\$ -	\$ -	\$ 4,000	\$ -	\$ -	\$ -
Total Cost per Year	\$ 2,411,970	\$ 2,372,809	\$ 2,330,856	\$ 2,905,623	\$ 2,846,125	\$ 2,884,378

* based on 2% estimated annual contract cost increase

iii. Staffing

The Zero Waste Plan is to be implemented with the RDN's existing solid waste staff complement. As needed, research, studies and some services will be contracted out.

TO: Larry Gardner
Manager of Solid Waste

DATE: July 31, 2015

FROM: Sharon Horsburgh
Senior Solid Waste Planner

FILE: 5365-00

SUBJECT: Residual Management Assessment – Scope of Work

OBJECTIVE

The objective is to consider alternatives to landfilling within the Regional District of Nanaimo (RDN). This is a preliminary level assessment and should consider thermal systems, biological systems and waste to fuel. It is intended to assess cost/benefit at a high level to be used to eliminate non-viable options from further consideration or, to determine what criteria or thresholds might make a specific option viable. “Benefit” includes application of the 5R hierarchy to further advance zero waste.

DELIVERABLES

The final report should include, but not be limited to:

- The amount (i.e. percentage of the waste stream) of additional material that may be diverted for recycling as part of waste processing associated with the technology. Provide comments on the material types, expected quality, marketability and residual waste.
- The amount of material that would go to recovery (i.e. energy or fuel), existing or potential markets, expected value of the fuel and the amount of residual waste from the recovery process.
- Order of magnitude costs including capital, operating and maintenance.
- Consideration of a source separated waste stream under two scenarios (i.e. 70% and 80% diversion) as explained in more detail below.

BACKGROUND

The RDN is currently in Stage 2 of the Solid Waste Management Plan (SWMP) review process. Numerous options have been suggested for changes or improved services with respect to education, recycling, expanded curbside collection, regulatory activities and residual waste management. RDN staff is currently undertaking a high level assessment of each of the options which will be used to develop a short list of preferred options.

In regards to residual management, waste is currently landfill at the RDN’s Cedar Road Landfill. The landfill has a projected life of about 25 years. During the Stage 2 planning process, alternatives for residual waste management were introduced and included thermal systems, biological systems and waste to energy/fuel systems. The decision was to proceed with a high level assessment of each of these technologies to determine their viability in the RDN.

In discussing residual management options with the Regional Solid Waste Advisory Committee (RSWAC) continuation of source separation of waste is preferred over attempting to mechanically separate a mixed waste stream. The RDN currently relies on a three stream curbside collection system and material bans at the landfill (e.g. clean wood waste, commercial organics) to advance source separation. For the purpose of this study, source separation of waste is expected to continue in the RDN for the foreseeable future.

Waste Generation

Waste generation within the RDN has been forecast until 2025 and this report is available as attachment 1. A summary of the RDN's results are set out in the attached Technical Memo. The projections were extrapolated from information provided by BC Stats report titled *Solid Waste Generation in British Columbia, 2010-2025 Forecast, June 2012*. Waste generation projections in the RDN are forecasted as follows:

- At 70% diversion, residual waste in 2015 is expected to be 52,000 tonnes and increasing to 57,000 tonnes in 2025.
- At 80% diversion, residual waste in 2015 is expected to be 52,000 tonnes and decreasing to 36,000 tonnes in 2025.

Waste diversion in the RDN is currently at 68%. The 80% diversion scenario relies on improvements to the organics diversion programs with only a modest increase from provincial stewardship programs. This is because current RDN policies are believed to have largely achieved the same results of what is expected to be accomplished by the introduction of new provincial stewardship programs over this same period.

Organic Wastes

Source separated food waste and depot collected yard and garden is currently composted under contract to the RDN by Nanaimo Organics Waste (NOW). At the current time, the resulting compost has a low value primarily due to plastics contamination. The amounts of food and yard/garden waste processed and composted at NOW is 6,225 metric tonnes (M/T) of food waste and 7,900 m/t of yard waste respectively. Additionally, an estimated 1,000 tonnes of food waste generated in the region is composted at alternate sites in neighbouring jurisdictions.

Under the RDN's Waste Stream Management Licensing Bylaw 1386 several "for profit" waste management facilities have received licenses to process land clearing, wood waste and yard/garden waste these materials may be used for composting, soil blending and as a fuel source by local pulp mills.

Based on annual reporting by the WSML holders the aggregated annual volume is 64,200 m/t tonnes and this is comprised of approximately 18,000 m/t land clearing, 14,700 m/t wood waste and is 19,400 m/t for yard waste and 6,225 m/t food waste. The aggregated totals for material composted/soil blended is approximately 20,000 m/t. It is estimated that the total of organic material shipped as a fuel source to local mills is 44,200 m/t and this consists of landclearing material, wood waste and some yard waste.

Furthermore, approximately 1,200 m/t of de-watered biosolids are generated annually from the two waste water treatment plants operated by the RDN. The Class B digester sludge is currently land

applied. Facility upgrades underway are expected to increase biosolids production to approximately 1,600 m/t per year.

Assessment of waste to energy or waste to fuel options should consider the above referenced organic waste as a potential material source.

Previous Studies

Previous studies that are pertinent to this assessment are found in following attachments:

1. *Regional District Of Nanaimo Waste Generation Projections*, RDN, Technical Report, March 2015
2. *Solid Waste Composition Study Report*, Maura Walker & Associates, 2012.
3. *Tri-Regional District Solid Waste Study*, AECOM, May 2011.

APPENDIX 1

Prohibited Waste at RDN Facilities

At the Regional Landfill:

- (i) Biomedical Waste;
- (ii) Commercial Organic Waste;
- (iii) Concrete or asphalt pieces, or rocks greater than 0.03m³ or 70 kg;
- (iv) Corrugated Cardboard;
- (v) Drums;
- (vi) Garden Waste;
- (vii) Gypsum;
- (viii) Hazardous Waste;
- (ix) Household Plastic Containers;
- (x) Ignitable Wastes;
- (xi) Land Clearing Waste;
- (xii) Liquids, except as permitted herein;
- (xiii) Metal;
- (xiv) Motor vehicle bodies and farm implements;
- (xv) Municipal Solid Waste that is on fire or smouldering;
- (xvi) Radioactive Waste;
- (xvii) Reactive Wastes;
- (xviii) Recyclable Paper;
- (xix) Stewardship Materials;
- (xx) Special waste, as defined in the Special Waste Regulation (British Columbia) except asbestos ;
- (xxi) Tires;
- (xxii) Wood Waste

At Church Road Transfer Station:

- (i) Biomedical Waste;
- (ii) Commercial Organic Waste;
- (iii) Concrete or asphalt pieces, or rocks greater than 0.03m³ or 70 kg;
- (iv) Controlled Waste;
- (v) Corrugated Cardboard;
- (vi) Garden Waste;
- (vii) Gypsum;
- (viii) Hazardous Waste;
- (ix) Household Plastic Containers;
- (x) Ignitable Wastes;
- (xi) Land Clearing Waste;
- (xii) Liquids, except as permitted herein;
- (xiii) Metal;
- (xiv) Motor vehicle bodies and farm implements;
- (xv) Municipal Solid Waste that is on fire or smouldering;
- (xvi) Radioactive Waste;
- (xvii) Reactive Wastes;
- (xviii) Recyclable Paper;
- (xix) Special waste, as defined in the Special Waste Regulation (British Columbia) except asbestos;
- (xx) Stewardship Materials;
- (xxi) Tires;
- (xxii) Wood Waste.

TO: Daniel Pearce
A/General Manager, Transportation and Solid Waste

DATE: March 27, 2015

FROM: Sharon Horsburgh
Senior Solid Waste Planner

Meghan Larson
Special Projects Assistant

FILE: 5365-00

SUBJECT: Authority under the RDN's Solid Waste Management Plan to Regulate Municipal Solid Waste

PURPOSE

To bring forward a report on information regarding flow management as a measure to regulate Municipal Solid Waste (MSW) generated in the Region.

BACKGROUND

The RDN has experienced a significant reduction in tipping fee revenue over the last two years. While the majority of this revenue loss is likely due to the export of residual waste out of the Regional District of Nanaimo (RDN) by private haulers, additional waste diversion activity may also be contributing to the shortfall. The loss of revenue associated with waste flow out of the RDN has a significant impact on the financial sustainability of the RDN solid waste management system. The recent trend in regional government has been to consider flow management as a regulatory tool to maintain the sustainability of current regional solid waste management systems.

In February 2015, the RDN hired Carey McIver & Associates to undertake a detailed analysis of the extent to which waste export is occurring, what the motivation is for waste export, what barriers exist to waste export and, based on the foregoing, an opinion on whether or not waste export is likely to increase and on what timeline. The RDN has experienced a significant reduction in tipping fee revenue since 2012. Based on a detailed examination of RDN scale data, RDN disposal facilities experienced a net reduction of 7,251 tonnes of MSW from commercial haulers over two years from 2013 to 2014. This equates to an average net loss of 3,625 tonnes annually. Indicators, as noted above, suggest that the amount of waste being transferred out of region, referred to as "leakage," has the potential to increase if the RDN does not consider options to address the loss of revenue to RDN disposal facilities.

One option under consideration is the authority to regulate waste flow by local governments. On October 17, 2014 the Minister of Environment denied approval of Metro Vancouver's proposed Bylaw 280, which would have regulated waste flow to prevent leakage. In denying approval of the Bylaw, the Minister cited concerns of creating a monopoly, increased illegal dumping, negative effects on recycling of packaging and printed paper and destabilizing private sector collection and handling. This decision by the Minister has the potential to exacerbate leakage in both Metro and the RDN.

Metro Vancouver concluded that without regulatory controls on waste export, if large loads continue to be charged at a rate higher than the competitive market, commercial haulers will exit the regional system at an increasing rate. They also noted that large loads subsidize small loads because the cost of managing large loads is less on a per tonne basis than small loads. As a result, on February 14, 2015, Metro Vancouver responded to the risk of increasing leakage by adopting Bylaw 288 (Tipping Fee Bylaw) that reduces the tip fee for large loads. They have also introduced a Transaction Fee recognizing there are fixed costs regardless of load size, e.g. scales, tip floor, attendant staff. The basis of the fee structure is as follows:

- Previous Rate:
 - \$109 per tonne for all loads
 - Minimum \$10 load per load
- Bylaw 288 Rates:
 - Transaction Fee: \$5 per load + per tonne charge
 - Minimum Fee including Transaction Fee: \$15 per load
 - Per Tonne Charge:
 - Small Loads < 1 tonne: \$130 per tonne to a max of \$109
 - Medium Loads < 9 tonnes: \$109 per tonne to max \$720
 - Large Loads > 9 tonnes: \$80 per tonne

Metro Vancouver believes this rate structure is still high enough to encourage waste diversion and that waste currently being exported will return to the Metro system over the next five years. Continuing with a user pay model, fees are forecasted to increase over the next five years as follows: small loads at \$157/tonne, medium loads at \$138/tonne and large loads at \$85/tonne. Had Metro continued with a set rate of \$109/tonne for large loads, tip fees were forecasted to increase to over \$200/tonne under a user pay model for the same period, which would only serve to exacerbate waste export and further increases to tip fees. Metro Vancouver recognized the uncertainties with the alternatives explored but concluded that adjusting the tip fees is a necessary step to address long term sustainability of the solid waste function.

Discussion

One of the major issues identified for review in the 2015 Solid Waste Management Plan (SWMP) is how to finance the Solid Waste Management System in the RDN. Currently, the majority of funding for the Solid Waste function is drawn from RDN tipping fees. Since 2014, expenses are exceeding revenues with the deficit being funded by increasing the tax requisition. Private waste export of MSW was identified during Stage 1 of the SWMP Review as an issue that could destabilize the current RDN waste management system.

The regulatory provisions of the Provincial *Environmental Management Act*, extend authority to Regional Districts to regulate Solid Waste according to the region's SWMP. If the Board chooses to include flow management in the draft SWMP, there are two options: (i) prepare a Bylaw for approval with the draft plan; or (ii) submit the plan for approval to the Minister and prepare a Bylaw that would require consultation and later be submitted to the Province for final adoption.

Authority to manage municipal solid waste and recyclable material generally referred to as "flow control" can cover:

- the types, quality or quantities of municipal solid waste or recyclable material that may be brought onto or removed from a site;
- the burning of any class or quantity of municipal solid waste or recyclable material;

- set fees for the services of a waste hauler and require waste haulers to act as agents of the regional district to collect and remit fees.

Staff will be providing the Board with updates on the SWMP as the stakeholder and public consultation processes are completed, including information on options to move forward with flow management in the both the short and long term.

ALTERNATIVES

There are no alternatives for this report.

FINANCIAL IMPLICATIONS

There are no financial implications with this report.

STRATEGIC PLAN IMPLICATIONS

Solid Waste flow management impacts the RDN Strategic Plan's ability to consider future options for waste management, disposal and facility development to meet the needs of a growing population.

SUMMARY / CONCLUSIONS

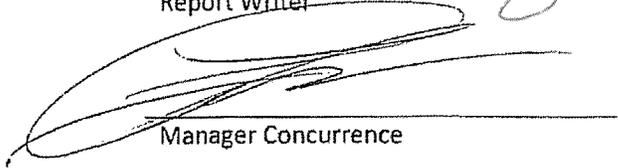
The regulatory provisions of the Provincial *Environmental Management Act* extends authority to Regional Districts to regulate Solid Waste. The RDN is proposing to review waste flow management options as part of the SWMP process and to potentially develop a Bylaw designed to ensure waste generated in the RDN is handled at a regional facility. The intent of the Bylaw will be to create a level playing field for participants, ensure a cost effective and equitable solid waste management system, support future waste diversion targets and promote private sector innovation and economic opportunities.

RECOMMENDATIONS

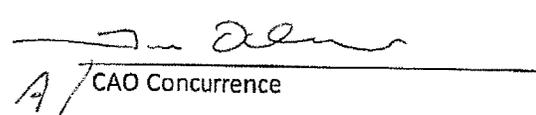
That the Board receive this report for information.


Report Writer


Report Writer


Manager Concurrence


A/General Manager Concurrence


A/CAO Concurrence

TO: Daniel Pearce
A/General Manager, Transportation and Solid Waste

DATE: March 27, 2015

FROM: Jane MacIntosh
A/Superintendent of Landfill Operations

FILE: 5365-00

SUBJECT: Disposal Facility Future Cost Projections

PURPOSE

To bring forward a report on information regarding *Disposal Facility Future Cost Projections* based on two potential scenarios.

BACKGROUND

Over the past two years the Regional District of Nanaimo (RDN) has experienced a decreasing trend in the volume of waste being delivered to the Regional Landfill. The road to Zero Waste, as per our Solid Waste Management Plan, has included many initiatives to divert materials from the landfill for re-use, recycling, etc.; however, the magnitude of this decrease is attributed more to the current practice of commercial waste export than the success of waste diversion programs.

Management of the lifespan of the landfill includes the evaluation of available airspace for waste filling, a predicted annual tonnage of waste material and an overall compaction rate for the waste. What is developed is called a fill-plan that basically tells us how much waste can be fit in the space available. Based on historical events the public preference is to maximize the life of the existing landfill rather than construct a new landfill. Given this general mandate, engineers have developed a fill-plan that includes various expansions to the landfill over time to expand the available footprint and achieve the longest lifespan possible for the site. In addition to the operating costs of the landfill, there are also capital costs associated with various projects to complete engineered expansions such as berms.

There are currently no mechanisms in place to control the destination of waste generated within the RDN. Given the recent commercial practice of exporting waste outside of the RDN, the tonnages delivered to the landfill from 2010 to 2014 have dropped from approximately 70,700 metric tonnes (MTs) to 51,400 MTs. The loss of revenue associated with this change in tonnage is approximately \$2,412,500. With no means to control the leakage of residual waste from the district, the ability to forecast future projections and generate an engineered fill-plan becomes increasingly challenging.

Looking ahead, there are a number of scenarios that could occur at this point. The observed decreasing trend could continue or, conversely, management directives or changes in market conditions could result in a return of waste to the landfill. The development of the landfill site must allow for either option to ensure the landfill is prepared and there is a place for the waste should the volumes return to a "normal level." The RDN tasked the engineers to review a number of options, three of which are discussed in more detail in the following paragraphs.

Scenario 1: This scenario evaluated the effects of a continued decreasing trend in waste volume. It assumes there are no mechanisms in place to control the flow of waste from the district and the continued success of waste diversion programs would drop the annual tonnage to approximately 20,000 MTs. At this volume and with current tipping fees, which include allowances for general inflation, growth rates for garbage generation and interest rates, the landfill life could extend until the year 2075. The net present value for the site until closure in 2075 and including 25 years post-closure care is -\$67.9 million.

Scenario 2: This scenario evaluated the outcome if the Zero Waste Program achieved an 80% diversion rate and assumes 10% of waste generated is exported outside the region. At our current volume and existing tipping fees, which include allowances for general inflation, growth rates for garbage generation and interest rates, the landfill life could extend until the year 2052. The net present value for the site until closure in 2052 and including 25 years post closure care is -\$47.9 million.

Scenario 3: This scenario evaluated the outcome if the Zero Waste Program achieved an 80% diversion rate and flow control measures directed all RDN generated waste to the local landfill. At our current volume and existing tipping fees, which include a 2% tip fee increase over inflation, growth rates for garbage generation and interest rates, the landfill life could extend until the year 2048. The net present value for the site until closure in 2048 and including 25 years post-closure care is \$12.4 million.

Normalizing Net Present Values: To aid with comparing each scenario, net present values were normalized for a 25 year period (2015 to 2050). The results are summarized below:

Scenario	Alternative Description	Closure Year	Net Present Value (25 year period)	Net Present Value (closure + 25 years)
1	Waste Volume Decrease - 22,000 tonnes, no flow control	2075	-\$40.4 million	-\$67.9 million
2	80 percent waste diversion, <u>no</u> flow control in place (10% waste export)	2052	-\$37.9 million	-\$47.9 million
3	80 percent waste diversion, flow control in place	2048	-\$3.7 million	\$12.4 million

While the landfill may last a much longer time if the annual tonnage drops and waste continues to leave the district, the financial implications are stark. Each scenario has implications to waste management practices to mitigate the cost such as closing the landfill, constructing a transfer station and also exporting waste off-Island for final disposal.

ALTERNATIVES

There are no alternatives for this report.

FINANCIAL IMPLICATIONS

There are no financial implications with this report.

STRATEGIC PLAN IMPLICATIONS

Flow Management impacts the ability of the RDN Strategic Plan to consider future options for waste management, disposal and facility development to meet the needs of a growing population.

SUMMARY / CONCLUSIONS

The operation of the Regional Landfill requires preparing future fill-plan options for maximizing the use of air-space and landfill life. The fill-plan guides the day-to-day operation of the site and development of expansion areas to achieve optimal capacity within a defined footprint space. Decreasing trends in waste volumes over the past few years have generated a concern in the ability to adequately predict the future development and costs associated with operating the landfill. Realistic scenarios that evaluate the status quo and flow control measures generate significantly different cost implications and indicate further attention to managing solid waste in the district is economically imperative to the district.

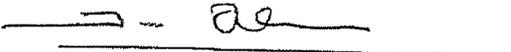
RECOMMENDATIONS

That the Board receive this report for information.


Report Writer Jane McIntosh


Manager Concurrence


A/General Manager Concurrence


A /CAO Concurrence

TO: Larry Gardner
Manager, Solid Waste Services

DATE: March 3, 2015

FROM: Meghan Larson
Special Projects Assistant

FILE: 5365-00

SUBJECT: REGIONAL DISTRICT OF NANAIMO WASTE GENERATION PROJECTIONS

Issue: Forecasting future waste quantities is fundamental for planning waste management programs and services.

Background:

The Regional District of Nanaimo (RDN) is currently reviewing and updating the Solid Waste Management Plan. Ministry of Environment guidelines, for developing Solid Waste Management Plans, suggest a minimum of a 10 year planning horizon; therefore, forecasting waste generation until at least 2025 is fundamental in developing the Plan.

This *Technical Memorandum* first reviews forecasting of waste generation carried out by the province for the period between 2010 and 2015 and documented in the BC Stats report *Solid Waste Generation in British Columbia, 2010-2025 Forecast, June 2012*. Secondly, the memorandum considers where the RDN currently fits in with the provincial model. And lastly, the memorandum discusses where the RDN might vary with respect to future forecasting.

Discussion:

1. Provincial Forecasting of Waste Generation

The BC Stats report defined key sectors for waste generation and recycling/diversion as follows:

Residential - Residential waste is solid waste produced by all residences and includes waste that is picked up by the municipality (either using its own staff or through contracting firms), and waste from residential sources that is self-hauled to depots, transfer stations and disposal facilities.

Industrial, Commercial and Institutional - IC&I wastes include: industrial materials, which are generated by manufacturing, and primary and secondary industries, and are managed off-site from the manufacturing operation; commercial materials, which are generated by commercial operations, such as shopping centres, restaurants, offices and others; and institutional materials that are generated by institutional facilities, such as schools, hospitals, government facilities, seniors homes, universities, and others.

Construction, Renovation & Demolition - CR&D wastes refer to wastes generated by construction, renovation and demolition activities. It generally includes materials such as wood, drywall, certain metals, cardboard, doors, windows, wiring and others. It excludes materials from land clearing on areas not previously developed as well as materials that include asphalt, concrete, bricks and clean sand or gravel.

Local Government Recycling/Diversion - Local government recycling/diversion programs include material recycling, organics composting and other waste diversion programs offered by local governments. Recycling is the process whereby a material (for example, glass, metal, plastic, paper) is diverted from the waste stream and potentially remanufactured into a new product or used as a raw material substitute. Local government recycling/diversion figures do not include industry product stewardship, which is measured separately. For instance, it does not include materials picked up under stewardship programs such as materials picked up by local government under contract to Multi-Material BC (MMBC).

Industry Product Stewardship Recycling/Diversion - Industry product stewardship is another form of diversion of waste from landfills. It refers specifically to the collection of materials for reuse or recycling that may offer some sort of incentive for the consumer. Many manufacturers now provide programs to their consumers to recycle or safely dispose of their products. In some cases, consumers pay environmental fees to recover the costs of these programs, and deposits as incentives to participate in the return programs. This term most frequently refers to the return of materials such as beverage containers, tires, paints, batteries, pesticides and motor oil.

The report highlights three projection scenarios with varying degrees of measures taken to divert waste from disposal:

Scenario 1 - 2010 diversion and recycling programs continue as planned; plans for new industry product stewardship programs proceed as expected (e.g. Printed Paper and Packaging); and, enhanced construction, renovation and demolition (CR&D) waste programs do not materialize as quickly as expected.

Scenario 2 – Diversion and recycling programs increase collection rates; construction and demolition waste programs are implemented; and, organic material diversion programs expand significantly.

Scenario 3 – Diversion and recycling programs significantly increase collection rates; high performing construction demolition waste programs are implemented; and, organic material diversion programs expand dramatically.

Under all Scenarios overall waste generation in BC will continue to rise (+17.7%). Refer to the BC Stats report for full details on how their projections were calculated.

Scenario 1 findings:

“Current and planned diversion and recycling programs continue as planned, but enhanced construction and demolition waste programs do not materialize as quickly as expected”

- Assumes maintenance of current programs plus the addition of new programs already identified for implementation (i.e. Packaging and Printed Paper).
- More waste will be generated and, although diversion will remain at 43%, the total amount of waste requiring disposal will increase by 17.5% over 15 years.
- Materials recycled by local government will decline by 16.4% as responsibility is transferred to industry stewards. (i.e. Packaging and Printed Paper; although that material is largely collected by local government through curbside programs, the responsibility rests with the industry steward).

Scenario 2 findings:

“Current and planned diversion and recycling programs increase collection rates, construction and demolition waste programs are implemented and organic material diversion programs expand significantly”

- Assumes a stewardship program for construction, renovation and demolition (CRD) waste and moderately stronger growth in collection from newer programs.
- Assumes greater diversion of organics by local government.
- Assumes a provincial diversion rate of 62% by 2025.
- Results in a projected decline in waste disposal by 21.8% between 2010 and 2025.
- States: *“Given the trend toward increased recycling, stewardship and other practices, a scenario whereby waste diversion efforts experience moderate expansion appears to be a fairly realistic one.”*

Scenario 3 findings:

“Current and planned diversion and recycling programs increase collection rates, construction and demolition waste programs are implemented and organic material diversion programs expand significantly”

- Assumes significant advancement of all diversion strategies.
- Assumes the main driver for increased diversion over Scenario 2 is further advancement of organics programs by local government.
- Assumes a provincial diversion rate of 81% by 2025.
- Results in a projected decline in waste disposal by 61.6% between 2010 and 2025.
- *“While this may seem a somewhat unlikely scenario, it is nonetheless worth examining as something for BC to strive for.”*

2. Waste Generation Trends

Over the 20 year period from 1990 to 2010 the total waste generation for the province increased by 40%. What this means is that while great strides were made in increasing waste diversion, per capita waste disposal was not decreasing. The BC Stats report shows a linear projection for waste generation trends over the next 10 years i.e. waste generation increases at the same rate as population. This indicates the province is projecting that per capita waste generation will remain relatively static over the next 10 years.

3. RDN Waste Generation in Relation to the Provincial Model

Applying the provincial model to local waste management practices, the RDN is considered to currently fall within the scope of Scenario 2. Scenario 2 is based on stewardship programs for CRD waste, organics diversion programs by local government and that a stewardship program for packaging and printed paper is in place. The following describes how RDN waste management practices are consistent with Scenario 2:

- *Construction, Renovation and Demolition (CRD) Waste Diversion by Local Government:*

A 2004 waste composition study determined that after organics, CRD waste was the largest component of solid waste disposed of in the Regional Landfill. The RDN's Zero Waste Plan identified the need to divert the clean wood waste from construction demolition sites from the landfill.

In February 2007, the Regional Board approved a Construction/Demolition Waste Strategy. Key initiatives in the strategy included:

- Increasing the tipping fee for clean wood waste at RDN Solid Waste Facilities to create incentives to divert this material to licensed recycling facilities;
- A ban on disposal of clean wood waste in the Regional Landfill and roll-off containers of wood waste at RDN Solid Waste Facilities; and
- Arranging contracts with third party wood waste recycling facilities to manage wood waste received at the landfill and transfer station from small self-haulers.

Effective January 1, 2008, the RDN banned clean wood waste from disposal in the Regional Landfill and roll-off containers of wood waste at RDN Solid Waste Facilities. The initiatives of the RDN are believed to largely meet the diversion goals of what a provincially mandated CRD strategy might look like.

- *Organics Diversion by Local Government:*

The RDN currently has a two-step approach to organics diversion; Commercial Food Waste Diversion and Green Bin Residential Food Waste Collection.

In June 2005, the RDN banned disposal of food and other organic waste from commercial and institutional sources at the region's solid waste facilities, putting the first phase of its organics diversion strategy into action.

The ban on commercial food waste in the Regional Landfill followed the opening of International Composting Corporation in Nanaimo, the first composting facility licensed under the RDN Waste Stream

Management Licensing Bylaw. The International Composting Corporation is currently under the ownership of Nanaimo Organic Waste.

Extensive consultation preceded the commercial food waste and organics disposal ban in 2005 with follow-up site visits to over 200 businesses and organizations. Landfill disposal of compostable organic waste from a commercial or institutional facility is not permitted under Bylaw 1531.

The expectation is for all commercial and institutional facilities such as restaurants, grocery stores, and school and hospital cafeterias to have food waste diversion systems in place. Commercial food waste includes raw and cooked food and other compostable organic material from commercial and institutional premises.

The RDN has encouraged participation in the commercial food waste ban with little regulatory enforcement to date. The strategy has allowed affected businesses and organizations to comply using the most cost-effective and efficient methods for their operations. The second step, providing region-wide Green Bin residential food waste collection, was accomplished in October 2011. Again, the driver was the 2004 waste composition analysis which showed that food waste and compostable paper made up approximately 50 per cent of household garbage. The residential Green Bin Program enables households to help divert all food waste in the region from the landfill for processing into compost and potentially renewable fuels.

The green bin goes beyond what can be composted at home. Not just fruit and vegetable scraps but cooked food, meat, fish, bones, food soiled paper and paper packaging such as waxed fast food cups and milk cartons will be accepted in your green bin. Currently, the green bin program diverts an estimated 106kg per household of food waste from the Regional Landfill each year from the residential curbside collection program.

- *Packaging and Printed Paper Provincial Stewardship Program*

The curbside collection programs operated by the RDN and the City of Nanaimo (City) are funded through user fees sent out on their utility bills, not through taxes. By partnering with MMBC in May 2014, the City and the RDN became Packaging and Printed Paper collectors on MMBC's behalf and receive appropriate financial incentives from MMBC. As a result, the recycling portion of annual user fees charged to single family residential households has been reduced. Prior to partnering with MMBC, the RDN and the City provided residential recycling collection to all single family residential homes in the region. So far, there has been no measurable difference in the amount of recyclable material collected through the curbside collection program before and after the partnership with MMBC.

Since 1991, the RDN has progressively banned materials from landfill disposal as local recycling and processing facilities became available.

In 2010, household plastic containers were added to recyclable paper, cardboard, and metal already banned from the landfill.

Thanks to the cooperation of waste haulers and the owners and management of multi-family dwellings, 86% of complexes in the region are now meeting the requirements of the ban on landfill disposal of

household recyclable materials. All multi-family complexes should have a system in place to collect and recycle all household recyclables subject to the landfill disposal bans.

Currently, the RDN is at a diversion rate of 68% which is above the provincial diversion rate of 49% by 2014 for Scenario 2. However, the BC Stats projections are based on a provincial average which includes many districts that have less mature and developed programs such as exist in the RDN. In other words, Scenario 2 is a composite of regions having both lower and higher diversion rates yielding a provincial average of 49%. However, in considering the description of programs of Scenario 2, they mirror almost exactly what exists in the RDN.

4. Future Waste Generation

The following section discusses future waste generation in the RDN relative to provincial Scenarios 2 and 3. The RDN is considered to currently fall within Scenario 2, so this is really a “status quo” future option. Scenario 3 anticipates significant advancements in diversion strategies particularly in regards to organics management. Such advancements do apply to the RDN.

Scenario 2

Under Scenario 2, it is projected that the RDN would see an increase (+8%) in the amount of waste disposed to landfill with yearly tonnages increasing from 52,635 metric tonnes in 2014 to 56,629 metric tonnes in 2025. This increase is largely due to an increase in population in the region and the assumption that waste diversion rates nominally increase.

Scenario 2 Projections												
	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Population	151,687	153,551	155,540	157,629	159,730	161,831	163,922	165,996	168,049	170,087	172,094	174,077
Per capita waste disposal (kg)	347	336	325	325	325	325	325	325	325	325	325	325
Waste Disposal (m/t)	52,635	51,617	50,599	51,279	51,962	52,646	53,326	54,001	54,668	55,331	55,984	56,629
Total Recycled (m/t)	111,850	114,890	118,065	119,650	121,245	122,840	124,427	126,001	127,560	129,107	130,630	132,135
Total Generated (m/t)	164,486	166,507	168,664	170,929	173,207	175,485	177,753	180,002	182,228	184,438	186,614	188,765
Diversion Rate	68%	69%	70%	70%	70%	70%	70%	70%	70%	70%	70%	70%

Note: Baseline waste generation for 2014 had not been calculated at the time of this report. A per capita waste disposal rate of 347kg was assumed for the purposes of future projections.

Scenario 3

Under Scenario 3 it is projected that the RDN would see a decline (-32%) in the amount of waste disposal to landfill with yearly tonnages decreasing from 52,635 metric tonnes in 2014 to 35,865 metric tonnes in 2025. This Scenario assumes provincially recycling/diversion rates increase dramatically including both government recycling/diversion as well as industry product stewardship recycling/diversion causing the volume of waste disposed of in landfills to shrink drastically. For the RDN specifically, reductions would be realized through improvements to the organics diversion programs with only a modest increase from provincial stewardship programs. This is because current RDN policies are believed to largely achieve the same results of a provincial CRD stewardship program.

Scenario 3 Projections												
	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Population	151,687	153,551	155,540	157,629	159,730	161,831	163,922	165,996	168,049	170,087	172,094	174,077
Per capita Waste disposal (kg)	347	336	325	304	293	282	271	260	249	239	228	206
Waste Disposal (m/t)	52,635	51,617	50,599	47,860	46,766	45,626	44,438	43,200	41,912	40,576	39,189	35,865
Total Recycled (m/t)	111,850	114,890	118,065	123,069	126,441	129,859	133,315	136,801	140,316	143,862	147,425	152,899
Total Generated (m/t)	164,486	166,507	168,664	170,929	173,207	175,485	177,753	180,002	182,228	184,438	186,614	188,765
Diversion Rate	68%	69%	70%	72%	73%	74%	75%	76%	77%	78%	79%	81%

Note: Baseline waste generation for 2014 had not been calculated at the time of this report. A per capita waste disposal rate of 347kg was assumed for the purposes of future projections.

Data Limitations

It is important to keep in mind that these are projections only and there are a number of factors that can change these projected outcomes as well as influence the type of service that might be provided:

- Regional Growth – aging population, increased densification in some areas
- Industry Product Stewardship programs – rate of successful diversion
- Waste Export – where is the waste in our region being disposed of
- Consumerism – Are individual buying habits staying the same or are individuals buying more or less

All of these factors will play a role in how much waste is actually produced in the future.

Conclusion:

Applying the Provincial model for waste generation suggests the following:

- Under a status quo scenario of 70% diversion over the next 10 years forecasts a per capita waste disposal of 325kg with a total amount of residuals of 56,629 metric tonnes annually by 2025
- Under the Province's most optimistic forecast of 81% diversion over the next 10 years forecasts a per capita waste disposal of 206kg with a total amount of residuals of 35,865 metric tonnes annually by 2025

The Province states in reference to an 81% diversion that *"While this may seem a somewhat unlikely scenario, it is nonetheless worth examining as something for BC to strive for"*. It is important to note that this level of diversion is based on a Provincial average with different areas having high and lower diversion. Although the report is not explicit that all areas of the province would have to have high levels of diversion to reach this target, it definitely implies such.

Nevertheless, given that the RDN has a mature waste management system and currently has all of the elements to promote further levels of diversion, 81% diversion appears to be achievable in the context of the provincial forecast.

- 3) The regulation of:
- a. the types, quality or quantities of municipal solid waste or recyclable material that may be brought onto or removed from a site;
 - b. discarding or burning of municipal solid waste or recyclable material;
 - c. the transport of municipal solid waste or recyclable material within or through the area covered by the Waste Management Plan;
 - d. requiring the owner or operator of a site or a hauler to hold a recycler license, a waste stream management license or a hauler license, or comply with a code of practice;
 - e. establishing different prohibitions, conditions, requirements and exemptions for different classes of persons, sites, operations, activities, municipal solid wastes or recyclable materials;

The first step to gaining the regulatory authorities is to have the intention stated in the SWMP along with a statement that consultation will be carried out with those affected. Enactment of these authorities is through bylaw which requires prior approval of the Minister of the Environment.

Of the available additional authorities, the current RDN SWMP (2004) only includes waste stream licensing described in 3(d) above. The specific licensing provisions were enacted by Bylaw No. 1386 (Appendix 1) which was approved by the Minister of the Environment on April 6, 2005. The goal of the waste stream licensing system is to ensure proper management of privately operated facilities by specifying operating requirements so as to protect the environment, to ensure that regional and municipal facilities and private facilities operate to equivalent standards, and to achieve the objectives of the SWMP.

SUMMARY/CONCLUSIONS

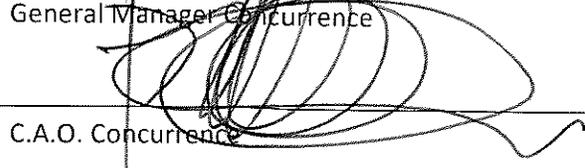
Through a SWMP, Regional Districts can access additional authorities to manage municipal solid waste and recyclables. The RDN is updating 2004 SWMP and may want to revisit the existing authority the province has granted with respect to waste stream licensing. Furthermore, other available authorities that might aid in managing waste and achieving the goals of the SWMP should be considered.



Report Writer



General Manager Concurrence



C.A.O. Concurrence

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REGIONAL DISTRICT OF NANAIMO

BYLAW NO. 1386

(consolidated for convenience to include up to 1386.01)

A BYLAW OF THE REGIONAL DISTRICT OF NANAIMO TO REGULATE THE MANAGEMENT OF MUNICIPAL SOLID WASTE AND RECYCLABLE MATERIAL

WHEREAS:

- A. The Regional District of Nanaimo and the Province of British Columbia are jointly committed to the regulation and management of municipal solid waste and recyclable material within the district so as to encourage waste reduction and recycling and ensure that residual materials are disposed of in a manner consistent with the Solid Waste Management Plan approved by the Minister of Water, Land and Air Protection;
- B. The Regional District of Nanaimo is authorized pursuant to the *Environmental Management Act* to regulate with respect to municipal solid waste and recyclable material;
- C. The Regional District of Nanaimo is operating under a Solid Waste Management Plan which defines a regulatory system for the management of all privately operated municipal solid waste and recyclable material operations. The goal of the regulatory system is to ensure proper management of privately operated facilities by specifying operating requirements so as to protect the environment, to ensure that regional and municipal facilities and private facilities operate to equivalent standards, and to achieve the objectives of the Solid Waste Management Plan.

NOW THEREFORE the board of the Regional District of Nanaimo in open meeting duly assembled enacts as follows:

ARTICLE 1

1. INTERPRETATION

- 1.1 **Definitions.** In this bylaw, terms defined in the *Environmental Management Act* shall have the meaning set out therein for the purpose of this bylaw unless otherwise defined in this bylaw. In this bylaw:

“**biosolids**” means stabilized municipal sewage sludge resulting from a municipal waste water treatment process or septage treatment process which has been sufficiently treated to reduce pathogen densities and vector attraction to allow the sludge to be beneficially recycled in accordance with the requirements of the Province of BC Organic Matter Recycling Regulation.

“**board**” means the Regional board of the Regional District of Nanaimo.

“**charitable organization**” is an organization as defined in the *Income Tax Act* (Canada) as a registered charity.

“**composting facility**” means a facility that processes organic matter that may include biosolids to produce compost.

“**depot**” means an operation, facility or retail premises, or an association of operations, facilities or retail premises, identified by or operating under or in fulfillment of a *Environmental Management Act* Stewardship Program.

“**district**” means the Regional District of Nanaimo.

“**Environmental Management Act**” means the Province of BC *Environmental Management Act*, SBC 2004 c.30, as amended or replaced and any successor legislation and any regulations thereunder.

“**facility license**” means a waste stream management license or a recycler license issued by the district.

“**General Manager**” means a person appointed to the position of General Manager of the Regional District of Nanaimo.

“**leachate**” means:

- a) effluent originating from municipal solid waste and/or recyclable material being received, processed, composted, cured or stored at a facility,
- b) effluent originating from municipal solid waste and/or recyclable material being stored, or
- c) precipitation, storm water, equipment wash water or other water which has come into contact with, or mixed with, municipal solid waste and/or recyclable material being received, processed, composted, cured or stored.

“**licensee**” means the owner or operator to whom a valid and subsisting facility license has been issued.

“**litter**” means loose refuse deposited, discarded or stored in an open place other than in a container.

“**non-profit organization**” is an organization as defined in the *Income Tax Act* (Canada) as a non-profit organization.

“**odour**” means smells which are ill-smelling, unpleasant, disgusting, offensive, nauseous or obnoxious as reported to and considered as such by the General Manager.

“**process**” or “**processing**” means sorting, baling, repackaging, grinding, crushing or any other management activity that requires hauled recyclable material or municipal solid waste to be unloaded from the delivery vehicle.

“**qualified professional**” means a person who:

- a) is registered in British Columbia with his or her appropriate professional association, acts under that professional association's code of ethics, and is subject to disciplinary action by that professional association, and
- b) through suitable education, experience, accreditation and knowledge may be reasonably relied

on to provide advice within his or her area of expertise as it relates to this bylaw.

“**recycle**” or any variation thereof, means any process by which municipal solid waste or recyclable material is transformed into new products or a feedstock to manufacture or process products that meet internationally or other approved specifications and standards using current available technology.

“**reprocessing**” means conversion of recyclable materials or municipal solid waste into a form suitable for transportation or manufacture into new products.

“**resale**” refers to selling of a material that has been purchased but not processed.

“**residue**” or “**residual**” means the portion of municipal solid waste or recyclable material that remains unusable after the manager of the municipal solid waste or recyclable material has no further use for it.

“**runoff**” means any rainwater, leachate, or other liquid which drains over land from any part of a facility.

“**sludge**” means an unstabilized, semi-solid by product of wastewater treatment.

“**Solid Waste Management Plan**” means the district’s Solid Waste Management Plan, as amended from time to time.

“**store**” and “**storage**” means to keep on land or water, whether or not open to the air, covered, in a structure or container.

“**transfer station**” means any land and related improvements or buildings and related improvements at which municipal solid waste from collection vehicles is received, compacted, or rearranged for subsequent transport.

“**vector**” means a carrier organism that is capable of transmitting a pathogen from one facility, waste source, product or organism to another facility, waste source, product or organism.

1.2 Schedules. The schedules listed below and annexed hereto, shall be deemed to be an integral part of this bylaw,

- Schedule “A” - Exemptions from Licensing Requirements
- Schedule “B” - Plan Facilities (Public)
- Schedule “C” - Fees – Facilities
- Schedule “D” - Publishing and Billboard Posting Requirements

1.3 No Conflict with Municipal Requirements. The requirements under this bylaw are distinct and separate from the requirements of a municipality. For greater clarity, municipalities may impose further restrictions or require further conditions than those imposed under this bylaw by the district.

- 1.4 Compliance with Other Laws.** Nothing in this bylaw, including, *inter alia*, a license, excuses any person from complying with all other applicable enactments.
- 1.5 Purpose of Bylaw.** This bylaw is enacted for the purposes of regulating waste management facilities within the regional district in the general public interest. It is not contemplated nor intended, nor does the purpose of this bylaw extend:
- (1) to the protection of any person from economic loss;
 - (2) to the assumption by the regional district or any employee of any responsibility for ensuring the compliance by a facility operator, his or her representatives or any employees, retained by him or her, with the requirements of this bylaw or any other applicable codes, enactments or standards;
 - (3) to providing to any person a warranty with respect to any facility for which a License is issued under this bylaw;
 - (4) to providing to any person a warranty that a facility operation is in compliance with this bylaw or any other applicable enactment.
- 1.6 Licensees to Comply.** Neither the issuance of a license under this bylaw nor the acceptance or review of plans or specifications or supporting documents, nor any inspections made by or on behalf of the regional district shall in any way relieve the owner, operator or licensee from full and sole responsibility to operate in accordance with this bylaw and all other applicable enactments, codes and standards.

ARTICLE 2

2 FACILITIES REQUIRING FACILITY LICENSES

- 2.1 Prohibition.** Subject to Section 2.2, no person or organization shall own or operate within the area of the Regional District of Nanaimo a site, facility or premises where municipal solid waste or recyclable material is managed unless that person holds with respect thereto and strictly complies with a valid and subsisting facility license.
- 2.2 Exclusions.** Notwithstanding Section 2.1, no facility license is required for:
- a) facilities owned and operated by the district or its member municipalities,
 - b) those facilities set out in Schedules “A” and “B” to this bylaw,
 - c) a facility or operation that is registered under and that is fully in compliance with a code of practice under Article 5,
 - d) those facilities otherwise exempted under this bylaw.

- 2.3 **Type of Facility License.** Type I facility licenses are required for all facilities except any facility which is owned or operated by a charitable organization or non-profit organization which requires a Type II facility license.

ARTICLE 3

3 FACILITY LICENSE APPLICATION

- 3.1 **Form of Application.** A facility license application under this bylaw shall be filed at the district's office in the form prescribed by the district. Applications must be accompanied by:
- a) the application fee specified in Schedule "C",
 - b) a written statement from the owner (if other than the applicant) of the property on which the facility is located or is to be located acknowledging and approving of the proposed use of the property,
 - c) a written statement from the senior manager of the land use planning department of the municipality or electoral area in which the facility is located or is to be located stating that the applied for use is a permitted use under the municipality's or district's zoning bylaws or under Section 911 of the *Local Government Act*, and
 - d) a proposed operating plan for the facility as provided in Section 9.1.
- 3.2 **Procedure on Application for all Facilities.** The following application requirements must be met by all operations requiring a facility license:
- a) The applicant must publish, not more than 30 days from the date of submission of the application, at the applicant's expense, a notice that has been reviewed and approved by the General Manager, in a local newspaper that is distributed at least weekly in the area where the facility is located or proposed to be located, in accordance with Section 1 of Schedule "D", and within 30 days after the date of publication provide to the General Manager a copy of the full page tear sheet as proof of publication.
 - b) The applicant must post a clearly legible copy of the details of application as described in Schedule "D", protected from the weather, to the satisfaction of the General Manager, in a conspicuous place at all entrances to the land fronting on a public road on which the facility is located or proposed to be located within 15 days after the date of the application and keep the copy posted for a period of not less than 30 days.
 - c) The General Manager may give written notice of an application to any person that the General Manager considers may be affected by the application or full details of the application to any authority the General Manager deems necessary to assist with regulatory requirements.

- d) Persons who consider themselves adversely affected by the granting of a facility license, may within 45 days of the date of the first posting, publishing, service or display required by this bylaw, notify the General Manager in writing setting out the reasons why they consider themselves adversely affected, and the General Manager will provide a copy of the written reasons submitted by the persons who consider themselves adversely affected to the applicant and allow the applicant to respond.
 - e) The General Manager may take into consideration any information received after the 45-day period prescribed by Subsection 3.2(d) if the General Manager has not made a decision on the facility license within that time period.
- 3.3 Adequate Notice.** Despite Subsection 3.2, if, in the opinion of the General Manager, any method of giving notice set out in Subsection 3.2 is not adequate or practical, the General Manager may, within 30 days of receipt of the application, require an applicant to give notice of the application by another method that is, in the opinion of the General Manager, more effective.
- 3.4 Evaluation of a Facility License Application.** The General Manager will consider the following matters with respect to the facility proposed in the application:
- a) the potential risk posed to the environment and/or public health,
 - b) the protection of the environment,
 - c) comments from the host municipality relating to compliance with the local zoning or other bylaws that may affect a facility design and/or operating plan,
 - d) comments from persons who consider themselves adversely affected,
 - e) information received as a result of the fulfillment of the requirements set out in Sections 3.2 and 3.3,
 - f) compliance with the Solid Waste Management Plan,
 - g) any operating plan submitted to the General Manager under Article 9, and
 - h) compliance by the applicant with the requirements to pay fees and report as required under this bylaw.
- 3.5 Issuance of a Facility License.** After receipt of a facility license application and completion of requirements in this Article 3 to the satisfaction of the General Manager, the General Manager may issue a facility license on such terms and conditions set out in Section 4.1 and 4.2 as the General Manager considers necessary to protect the environment and to achieve the objectives of this bylaw and the Solid Waste Management Plan.

ARTICLE 4

4 FACILITY OPERATING REQUIREMENTS

4.1 **Operating Conditions for Facilities.** All owners and operators of facilities that are required under this bylaw to obtain a facility license must comply with the following operating conditions:

- a) install and maintain locking gates on all access roads into the facility to prevent unauthorized access and ensure that the gates are locked at all times when the facility is unattended,
- b) construct access roads to and through the facility from suitable material satisfactory to the General Manager and capable of providing all weather access for all emergency vehicles,
- c) install and maintain, as required by the General Manager, barriers to limit access to the facility except by the access roads (in the form of fencing, trees, shrubbery, natural features or other barriers),
- d) ensure that at all times the facility has telephone service or other functioning communication equipment with which to immediately summon fire, police or other emergency service personnel in the event of an emergency,
- e) prevent the escape of litter, mud or debris from the facility site to adjoining roads or adjacent lands,
- f) prevent the escape of any leachate from the facility to a surface not covered by an impermeable barrier and not equipped with a leachate containment system,
- g) ensure that an employee is present at all times that the facility is open for business or accepting municipal solid waste or recyclable material,
- h) inspect every load received before mixing with any other loads,
- i) maintain a record of all rejected loads including date, time, type of material, hauler's name, generator's name and vehicle license number,
- j) ensure that any municipal solid waste or recyclable material that is removed from the facility is taken to a site or facility that complies with all applicable provincial, state or federal regulations and with zoning and any other applicable enactments and hold any license, permit or approval required by the local government(s) of the jurisdiction in which the facility is located and be able to produce documentary evidence confirming the above,
- k) ensure that there is no burning of municipal solid waste or recyclable material at the facility, and take all precautionary measures possible required by the General Manager to reduce the potential risk of ignition of such materials,
- l) produce and comply with an operating plan acceptable to the General Manager under Article 9,
- m) require the licensee to provide and maintain security in such amount and in a form satisfactory to the General Manager under Section 8.1,

- n) ensure access to, and provide and maintain necessary related works associated with an adequate water supply or other suitable fire suppressant on site for extinguishing fires on site, and
- o) if there is a fire, immediately notify the local fire department and the General Manager and take all measures necessary to extinguish the fire.

4.2 Terms and Conditions for Facility Licenses. In addition to and without limiting the requirements set out in Section 4.1 or otherwise, where sufficient cause exists, as determined by the General Manager, the General Manager may do the following in a facility license:

- a) specify, prohibit, or restrict the type, quality, or quantity of municipal solid waste or recyclable material that may be brought onto or removed from a facility,
- b) require the licensee to contain the municipal solid waste or recyclable material within a height or heights and spatial area or areas specified by the General Manager,
- c) require the licensee, at its sole cost, to submit to the General Manager a quantity survey or a land survey of the municipal solid waste or recyclable material at the facility, prepared by a British Columbia Land Surveyor,
- d) require the licensee to recover, for the purpose of recycling, any recyclable materials which are subject to material bans imposed by bylaw or by resolution of the district,
- e) require the licensee to construct, install, repair, alter, remove, or maintain works, and provide plans and specifications prepared by a registered professional engineer (or any other qualified professional as appropriate and recognized as such by the General Manager) prior to the commencement of any construction, installation, repair, alteration, removal or maintenance of such works,
- f) require the licensee to submit plans, procedures, and specifications prepared by a registered professional engineer (or any other qualified professional as appropriate and recognized as such by the General Manager), for or relating to the handling of spills, fires, floods, earthquakes, and other emergencies at the facility,
- g) require the licensee to provide and maintain risk insurance in such amount and in a form satisfactory to the General Manager under Section 8.12,
- h) require the licensee, at such times and in such manner as is acceptable to the General Manager, to measure, record, and submit information to the General Manager relating to:
 - (i) the type, quality, and quantity of municipal solid waste and recyclable material brought onto and removed from the facility,
 - (ii) the handling of municipal solid waste and recyclable material at the facility,
 - (iii) the quantity and characteristics of leachate, runoff, and odour generated by the facility,

- (iv) the characteristics of the surface water, groundwater and soil at the facility to assess for existing degradation or contamination,
- (v) the characteristics of surface water and groundwater in the surrounding area which may be affected by leachate or other runoff from the facility,
- (vi) the condition of roads and public utilities located at or adjacent to the facility insofar as the condition of the roads and public utilities affects or are affected by the operation of the facility,
- (vii) slope stability, settlement, and erosion at the facility, and
- (viii) the operation and maintenance of equipment and works at the facility, including leachate collection and treatment systems, runoff, water management systems, and air quality and air quality control systems,
- i) require that any or all of the information required in Subsection 4.2 (h) be prepared by a registered professional engineer (or any other qualified professional as appropriate and recognized as such by the General Manager), and
- j) provide for implementing terms and conditions of a facility license in phases or provide for varying dates for compliance with the terms and conditions of a facility license.

ARTICLE 5

5 CODES OF PRACTICE

- 5.1 Establishment of Codes of Practice.** The board may, from time to time, establish codes of practice setting out different prohibitions, regulations, conditions, requirements, exemptions, and rates or levels of fees for different classes of persons, facilities, operations, activities, trades, businesses, municipal solid waste, or recyclable material for the purpose of prohibiting, regulating, or controlling the handling of municipal solid waste and recyclable material. Codes of practice will be established by way of adoption of a code of practice as an amendment to this bylaw.
- 5.2 Conditions of a Code of Practice.** A code of practice may set such terms and conditions and specify such requirements as the district considers advisable and, without limiting in any way the generality of the foregoing, the district may in a code of practice:
- a) require that facilities or operations, to be as specified by the district, register with the district in order to qualify under a code of practice,
 - b) include any of the requirements set out in Article 4, and
 - c) require security in an amount and form and subject to conditions set out in Article 8, or as defined in the code of practice itself.

- 5.3 **Registration Fee.** An application to register under a code of practice under this bylaw must be filed at the district's office in the prescribed form accompanied by the applicable registration fee set out in column 2 of Schedule "C" to this bylaw.

ARTICLE 6

6 ILLEGAL DUMPING

6.1 **Definitions.** In this article:

"responsible person" means one or more of the following:

- a) a person who generated municipal solid waste or recyclable material that has been delivered, deposited, stored, or abandoned, and/or
- b) a person who hauled municipal solid waste or recyclable material that has been delivered, deposited, stored, or abandoned, and/or
- c) a person who had or has charge or control of the land or buildings on which municipal solid waste or recyclable material has been deposited, stored, or abandoned or to which municipal solid waste or recyclable material has been delivered.

6.2 **Prohibition.** No responsible person shall deliver, deposit, store, or abandon, cause or allow to be delivered, deposited, stored or abandoned, municipal solid waste or recyclable material on or within any lands or improvements except a facility that holds a valid and subsisting facility license within the area of the Regional District of Nanaimo unless the municipal solid waste or recyclable material:

- a) is placed in a receptacle for scheduled curbside collection by a hauler or a local government, or
- b) is taken to a facility outside the boundaries of the Regional District of Nanaimo that complies with all applicable enactments, including without limitation, land use bylaws.

6.3 **Liability for Illegal Dumping.** In addition to any other penalty imposed under this bylaw, the General Manager may require, by written notice, a responsible person to remove to a licensed facility any municipal solid waste or recyclable material that has been deposited in contravention of Section 6.2. Such removal shall be at the responsible person's cost. If a responsible person fails to remove the municipal solid waste or recyclable material within the time period specified in the notice, the General Manager may cause the municipal solid waste or recyclable material to be disposed at a licensed facility, and the responsible person shall pay all of the costs associated with the disposal.

6.4 **Proof of Compliance** The General Manager may require a responsible person who wishes to manage municipal solid waste or recyclable material in accordance with paragraph 6.2 b) to provide to the district documents evidencing that the facility complies with the enactments referred to in that paragraph.

ARTICLE 7

7 AMENDMENTS

7.1 **Amendment of a Facility License.** The General Manager may amend the terms and conditions of a facility license either in whole or in part:

- a) on its own initiative where it considers necessary due to changes in the facility's practices, or
- b) on application in writing by a licensee,
- c) on its own initiative where it considers necessary due to changes external to the operations of the facility

7.2 **Major and Minor Amendment.** For the purposes of this article:

- a) **“major amendment”** to a facility license means any amendment which is not a minor amendment, and
- b) **“minor amendment”** to a facility license means:
 - (i) a change of ownership, control, or name,
 - (ii) a change of legal address or mailing address,
 - (iii) a change to the hours of operation,
 - (iv) a decrease in the authorized quantity of municipal solid waste or recyclable material, accepted or stored,
 - (v) an increase in the authorized quantity of municipal solid waste or recyclable material accepted or stored that does not exceed 10% of the authorized quantity specified in the license first received by the facility,
 - (vi) a change in the authorized quantity of municipal solid waste or recyclable material accepted or stored such that, in the opinion of the General Manager, the change has or will have less impact on the environment,
 - (vii) a change in a requirement to record and submit information, or
 - (viii) a change to the works, method of treatment, or any other condition in a facility license such that, in the opinion of the General Manager, the change has or will have less impact on the environment.

7.3 **Procedure on Amendment Application.**

- a) For all applications for major amendments, the provisions set out in Sections 3.1 to 3.5 shall apply subject to necessary modification as deemed appropriate by the General Manager.
- b) For all applications for minor amendments, the General Manager may, at his discretion, require that any of the provisions set out in Sections 3.1 to 3.5 also apply, subject to

necessary modification as considered appropriate by the General Manager.

ARTICLE 8

8 SECURITY AND RISK INSURANCE

8.1 Requirement for Security. The General Manager, as a precondition to issuing a facility license, or as a term or condition of a facility license or by written notice at any time prior to or after the issuance of the facility license, requires an owner, operator or licensee of a facility to provide and maintain security in an amount and form satisfactory to the General Manager and for such period as may be required, to ensure:

- a) compliance with this bylaw or a facility license, and
- b) that sufficient funding is available for facility operations and maintenance, remediation of the facility, facility closure, and post-closure monitoring of the facility, in accordance with the terms and conditions of the license.

8.2 Form of Security. The security held by the district under Section 8.1 may be in the following form, provided that the particular form of security is satisfactory to the district, acting reasonably:

- a) cash,
- b) certified cheque,
- c) an irrevocable standby letter of credit issued by a Canadian Schedule I chartered bank.

8.3 Amount of Security. The security held by the district under Section 8.1 in respect of a facility shall be in such amounts as may be reasonably satisfactory to the General Manager and be based primarily on the maximum tonnage of pre-processed material allowed at the facility at one time, multiplied by the current per tonne cost to haul and dispose of the material. This shall be done for each material type allowed at the facility. Calculations for material types that may result in a positive value shall also be shown when determining the amount of security required, but these values cannot be used to offset the total security required. In addition, the security may, without limitation, vary depending on any or all of the following:

- a) the type of facility,
- b) the type of operations and maintenance activities performed or to be performed at the facility,
- c) the anticipated or actual activities required for closure and post-closure monitoring of the facility,

- d) the types of discharges that could have the potential to result from the operation, remediation, closure, and post-closure monitoring of the facility, including, without limitation, leachate, storm water, odours, dust, litter, and erosion, and the cost of installing, operating, repairing, and maintaining works that may be required to control such discharges at the facility,
- e) the geotechnical and other physical characteristics of the facility site,
- f) possible administrative or contingency fees for site clean-up activities coordinated by the General Manager, and
- g) such other factors as the General Manager may reasonably determine.

Without limiting the generality of the foregoing, the General Manager may, in an amendment to a facility license under Section 7.1, amend the amount of security required under Section 8.1 for the facility.

8.4 Conditions for Drawing on Security. Where a licensee, owner or operator defaults under this bylaw or a facility license, the General Manager may, by written notice to the licensee, require the default to be remedied within a period specified by the district and if the default is not remedied within the specified time, the district may draw down in whole or in part on the security for purposes as described in Section 8.5.

8.5 Use of Security. The security drawn down by the district, under Section 8.4, may be used to ensure compliance with the provisions of this bylaw and the facility license, including without limitation funding for the following:

- a) the handling of municipal solid waste, recyclable material, or any other materials at the facility,
- b) the carrying out of operations and maintenance activities at the facility in compliance with an operating plan accepted by the General Manager under Section 9.3,
- c) the control, abatement or prevention of leachate or contaminants escaping from the facility,
- d) the expenses incurred by the district, including legal expenses, in
 - (i) carrying out or causing to be carried out any of the activities described in this section, and
 - (ii) complying with any laws or enactments of the federal, provincial or any local government, including the district.

8.6 Additional Conditions for Drawing on Security. Notwithstanding Section 8.4, the district shall be entitled to draw down, in whole or in part, on any security it holds under Section 8.1, where:

- a) such security is not renewed, replaced, or extended at least 30 days in advance of its scheduled expiry date, or
- b) the General Manager is satisfied on reasonable grounds that the value and utility of the security may otherwise be compromised.

In this event, the district shall hold and deal with the proceeds thereof as security in the same manner as the district is entitled to hold and deal with the original security.

- 8.7 Replenishment of Security.** If the district draws down in whole or in part on the security under this article, the owner, operator or licensee of a facility must replenish the security drawn down within 30 days if required to do so in writing by the General Manager and the provisions of this article, with the necessary changes, shall apply to such replenished security.
- 8.8 Survival.** Notwithstanding any suspension, cancellation, expiration, or other termination of a facility license, all owners, operators, or licensees of a facility shall continue to be bound by the requirements in a facility license to provide and maintain security, which requirements shall survive any such suspension, cancellation, expiration, or other termination until otherwise notified by the General Manager.
- 8.9 Return of Security.** Provided the owner, operator or licensee of a facility is in full compliance with this bylaw and a facility license, the district may return to the owner, operator or licensee of a facility the security held by it:
- (a) upon completion, to the reasonable satisfaction of the General Manager, of all activities required for the closure or post-closure of the facility,
 - (b) upon receipt by the district of substitute or replacement security satisfactory to the General Manager, or
 - (c) where the General Manager otherwise deems expedient.
- 8.10 Unclaimed Security.** If after making reasonable efforts the district is unable to effect return of the security under Section 8.9, title of the security shall vest absolutely in the district after the fifth anniversary of the initial attempt to return the security.
- 8.11 Interest on Cash Security.** If the security or any portion thereof provided under Section 8.1 is in the form of cash, the interest earned thereon at the rate referred to below will be added to and form part of the principle amount of the security, and may be used under Section 8.4. Any portion of the principle amount of the security and accrued interest not utilized will be returned pursuant to Section 8.9. The interest rate for the security will be the prime rate charged by the Canadian Imperial Bank of Commerce for Canadian dollar loans, from time to time, less two percentage points.
- 8.12 Security in the Form of Insurance.** Notwithstanding Section 8.2, the General Manager may require that an owner, operator, or licensee obtain environmental risk insurance from an insurance broker approved by the General Manager, that covers risks associated with such events as floods, earthquakes, toxic spills, fires, leachate breakouts, and water, sewer, and gas pipe breaks.

ARTICLE 9

9 OPERATING PLANS

9.1 Operating Plan Requirements. Every person who submits an application for a facility license under Section 3.1 must include with the application a proposed operating plan for the facility described in the application. Proposed operating plans must provide full and complete details on all of the following:

- a) the site and location of all works within the facility,
- b) the types, quantity, and quality of municipal solid waste and recyclable material that will be managed within the facility,
- c) the methods for handling municipal solid waste and recyclable material within the facility,
- d) the measures that will be taken to protect the environment, the site, and the lands adjacent to the facility,
- e) a monitoring program to assess the measures in paragraph (d) above,
- f) the methods for complying with regional disposal bans and recycling requirements,
- g) the methods for dust, odour, vector, mud, and litter control and prevention,
- h) the methods for handling any waste delivered to the facility which is not authorized by the license,
- i) the procedures for weigh scale operation at the facility, or other site where municipal solid waste and recyclable material is weighed for acceptance at the facility or removal from the facility,
- j) the frequency and method of facility inspection to be carried out by facility staff,
- k) measures to protect the site and adjacent lands in case of fire, seismic disturbance, or flood,
- l) the methods for containment and treatment of runoff at the facility and the prevention of runoff from the facility to adjacent lands,
- m) the actions that will be taken if ground or surface water becomes contaminated as a result of operations at the facility, and
- n) any other matter specified by the General Manager regarding the management of municipal solid waste and recyclable material at the facility.

9.2 Professional Engineering Involvement. The General Manager, at his sole discretion may require any or all of the information required in Subsections 9.1 (a) through (n) inclusive to be prepared by a registered professional engineer (or any other qualified professional as appropriate and recognized as such by the district).

9.3 Review and Acceptance of Operating Plans. The General Manager will review all proposed

operating plans submitted under Section 9.1, and may require amendments.

- 9.4 Further Amendments to Operating Plans.** Following the acceptance of an operating plan under Section 9.3, the General Manager may require the terms, conditions or other aspects of the operating plan to be amended:
- a) on the General Manager's own initiative where the General Manager considers it necessary and after consultation with the licensee, or
 - b) on request in writing by the licensee, subject to approval by the General Manager.

ARTICLE 10

10 FEES AND MONTHLY STATEMENTS

- 10.1 Application Fees.** Every person who requires an amendment as described in Section 7.1 (a) or applies for a facility license or any amendment as described in Section 7.1 (b) shall pay to the district, on application or commencement of amendment process, for a facility set out in column 1 of Schedule "C" to this bylaw, the corresponding license application fee or amendment application fee as set out in columns 2, 3 or 4, respectively, as applicable. An application fee will not be refunded if a license is not issued or amended.
- 10.2 Payment of Security.** Applications for a facility license for facilities not established prior to enactment of the bylaw must provide the amount of security required under Section 8.2 with the submission of the application. For a facility license for facilities existing at the time of enactment of the bylaw, up to 50% of the amount of security may be deferred for a period of one year from the date of submission of the application.
- 10.3 Annual Administration Fee.** Every licensee shall pay to the district upon the date of issuance of a facility license and thereafter annually on the anniversary date of the issuance of the license, the annual administration fee set out in column 5 of Schedule "C". The district will provide to all licensees annual invoices setting out the annual administration fee due and payable in accordance with Schedule "C".
- 10.4 Monthly Statement.** Unless requested at greater frequency by the General Manager, every licensee shall deliver to the district, a monthly (twelve times per year) written statement signed by an officer or a principal of the owner or operator of the facility setting out either the amount or quantity in metric tonnes of all municipal solid waste and recyclable materials received, shipped from, and the maximum net tonnage on site at any one time during the month at the facility as measured in the delivery vehicle. The statement shall be delivered monthly to the district within 21 days after the last day of the previous month.
- 10.5 District Invoices.** All invoices rendered by the district shall be due and payable 30 days from the date of the invoice. Late payments will accrue interest computed at the rate of one and one quarter percent (1.25%) per month on the outstanding balance, calculated and compounded monthly, from the date such amounts become due and payable until the date they are paid in full.
- 10.6 Records.** Every licensee must make and maintain for a period of seven years from the date when they were made, accurate records, books of account, copies of the monthly statements referred to in

Section 10.4, and copies of all electronic and hard copy information and data upon which those statements were prepared (for the purposes of this article called "records"). The records must identify either:

- a) the amount or quantity in metric tonnes (or cubic metres) of municipal solid waste and recyclable materials received, shipped from, and the maximum net tonnage on site at any one time during the month at the facility, or
- b) the number of container and vehicle loads and the size or capacity of the containers and vehicles carrying municipal solid waste received, shipped from, and the maximum net tonnage on site at any one time during the month at the facility.

10.7 Inspection and Copying of Records. The General Manager may inspect, make copies and take away such copies of any records referred to in Section 10.6 maintained by and for any person who is required to provide a monthly statement under Section 10.4 during normal hours of business, at any business premises where the records are maintained. The General Manager may take with them to the business premises such other persons and equipment as may be necessary.

10.8 Proof of Identity. An employee or agent of the district inspecting records under Section 10.7 must, when requested, provide proof of identity to any person present at the location where the records are maintained.

10.9 Audit. A person who is required to provide a monthly statement under Section 10.4, if requested in writing by the General Manager, shall at that person's expense provide to the General Manager within 45 days of such request, an audited statement of the total amount of fees payable under Sections 10.1, 10.2, and 10.3, for a specified period of time. This statement must be prepared by a Chartered Accountant or Certified General Accountant in accordance with Generally Accepted Auditing Principles.

ARTICLE 11

11 DUTY TO REPORT

11.1 Discharge of Waste at Facility. Where, out of the normal course of events, there occurs at a facility a discharge of waste to the environment or a serious and imminent danger thereof by reason of any condition, and where any damage or danger to land, water or air may reasonably be expected to result therefrom, any person who at any material time:

- (a) owns the waste or has the charge, management or control of the waste, or
- (b) causes or contributes to the discharge or danger of discharge

shall verbally report such occurrence to the General Manager as soon as practicably possible and shall report such occurrence to the General Manager in writing within 48 hours.

11.2 Deviation from Normal Operating Practices. Where, during the normal course of operations, there occurs at a facility a situation or combination of events that is a deviation from the approved operating practices as set out by the terms and conditions set out in the license, operating plan, code of practice, or this bylaw, the facility operator shall verbally report such occurrence to the

General Manager as soon as practicably possible and shall report such occurrence to the General Manager in writing within 48 hours.

11.3 Duty to take all Reasonable Measures. A person who is referred to in Section 11.1 shall, as soon as possible in the circumstances, take all reasonable measures consistent with safety, protection of the environment, and compliance with the terms and conditions of the license, operating plan, code of practice, or this bylaw, and thereby counteract, mitigate or remedy any adverse effects that result or may reasonably be expected to result from the occurrences referred to in Section 11.1 or 11.2.

11.4 Compliance. Compliance with Article 11 and Article 12 of this bylaw does not signify compliance with any other requirements found within the bylaw. The district retains the right to pursue any actions available to remedy non-compliance with any other section of this bylaw, notwithstanding compliance with Article 11 and Article 12.

ARTICLE 12

12 INVESTIGATION, INSPECTION AND RECORDS

12.1 Powers of the District. The powers of the district under this article may be exercised in relation to any site, facility, or premises which is, or which the General Manager upon reasonable grounds believes to be, among those described in Article 2.1 of this bylaw, and any site, facility, or premises associated therewith.

12.2 Residential Structures. Nothing in this section authorizes the entry of any structure used primarily as a residence, or any residential accommodation in any other structure.

12.3 Investigation. A bylaw enforcement officer or other employee or agent of the regional district may at any reasonable time enter any facility, site or premises and investigate any works, process or activity that is related to, used for or capable of being used for the production or handling of municipal solid waste or recyclable material.

12.4 Additional Powers. The powers of a district under Section 12.3 include the following powers:

- a) to examine, take away and make copies of records relating to:
 - (i) the causing or the potential to cause pollution by municipal solid waste or recyclable material,
 - (ii) the production and managing of municipal solid waste or recyclable material,
 - (iii) the characteristics of the municipal solid waste or recyclable material produced or managed, and
 - (iv) a potential contravention,
- b) to carry out inspections, observations, measurements, tests and sampling and to otherwise ascertain whether the terms of this bylaw or a facility license have been or are being complied with and take away samples of leachate, runoff, groundwater, soil, articles, substances,

municipal solid waste or recyclable material as they consider appropriate.

- 12.5 Return of Documents.** Where the district has taken away original records from a facility, site or premises under Subsection 12.4(a), the district, upon written request from the owner or operator of the facility, will return copies of the records to the owner or operator within 24 hours of the inspection or if that is not possible, as soon thereafter as is practicable.
- 12.6 Assistance.** The employee or representative of the district may take with him or her onto any facility, site, or premises such other persons and equipment as may be necessary to carry out the actions authorized in Section 12.4.
- 12.7 Identification.** The employee or representative of the district shall, forthwith upon arrival at a facility, site, or premises, provide proof of identity to a person present at the facility, site, or premises.
- 12.8 Records.** Notwithstanding Sections 2.2, 4.1, and 10.4, the General Manager may require the owner or operator of a facility, site, or premises at which municipal solid waste or recyclable material is managed to keep records of volumes, weights, types, amounts, quantities, and composition of municipal solid waste or recyclable material originating from within the Regional District of Nanaimo that is brought onto or removed from the facility, site, or premises and to submit, on request annually, the records to the district.

ARTICLE 13

13 SUSPENSION AND CANCELLATION

- 13.1 Suspension and Cancellation of Facility Licenses.** Without limiting any other provision of this bylaw, the General Manager, after giving notice to a licensee, may suspend for any period or cancel a facility license in whole or in part where the following has occurred or is occurring:
- a) the licensee fails to comply with any term, condition, or requirement of the facility license or any provision of this bylaw,
 - b) the licensee has made a material misstatement or material misrepresentation in the application for the facility license,
 - c) the licensee has failed to:
 - (i) provide the monthly statement of quantities in accordance with Section 10.4, or
 - (ii) make payment of fees in accordance with Article 10,
 - d) the licensee does not exercise any rights under the facility license for a period of 3 years,
 - e) the facility license is no longer necessary by reason of a code of practice under this bylaw,
 - f) the licensee is an individual who has died,
 - g) the licensee is a corporation that is struck off the register or is dissolved under its incorporating enactment,

- h) the licensee is a partnership that is dissolved,
 - i) the licensee requests that the facility license be cancelled, or
 - j) the land and related improvements or buildings and related improvements licensed under this bylaw are no longer a facility.
- 13.2 Notice.** A notice served under Section 13.1 must state the time at and the date on which the suspension or cancellation is to take effect.
- 13.3 Suspended or Cancelled License Not Valid.** A facility license that is suspended or cancelled is not a valid and subsisting license. Notwithstanding the foregoing, the provisions in a facility license relating to security continue to survive as set out in Section 8.5.

ARTICLE 14

14 OFFENCES AND PENALTIES

- 14.1 Offence.** Any person who contravenes a provision of this bylaw, a facility license, an order, a code of practice, or a requirement made or imposed under this bylaw commits an offence and is liable to a fine not exceeding \$200,000.
- 14.2 Separate Offences.** Where there is contravention that continues for more than one day, each day or part of a day on which the contravention occurs is a separate offence.
- 14.3 Offences by Employees, Officers, Directors or Agents.** If a corporation commits an offence under this bylaw, an employee, officer, director, or agent of the corporation who authorized, permitted or acquiesces in the offence commits the offence even though the corporation is convicted.
- 14.4 Remedies Cumulative.** The rights and remedies available to the district under this bylaw shall be cumulative and not alternative and shall be in addition to and not a limitation of any other rights and remedies that would otherwise be available to the district at law.

ARTICLE 15

15 APPEALS

- 15.1 Appeals to Board.** An applicant or licensee affected by a decision of the General Manager under Section 3.5, 4.2, 7.1, 8.1, 8.3 or 8.12 to this bylaw may appeal the decision to the board by advising the board in writing of the order or requirement being appealed from and setting out the reason for the appeal and attaching any relevant documents.
- 15.2 Time Limit for Commencing Appeal.** The written notice of appeal under Section 15.1 must be delivered to the board within 30 days of the decision from which the appeal is made.
- 15.3 Review by the Board.** The matter will be reviewed by the board pursuant to Section 15.4.
- 15.4 Power of the Board.** Upon considering the matter under appeal, the board may:
- a) confirm, reverse or vary the decision under appeal, and
 - b) make any decision that the board considers appropriate.
- 15.5 Appeal Does Not Operate as Stay.** An appeal under this section does not operate as a stay or suspend the operation of the decision being reviewed unless the board orders otherwise.

ARTICLE 16

16 GENERAL

- 16.1 Notification of Change in Control.** A licensee shall notify the district in writing of a change in ownership or control of the license within 10 days after such a change.
- 16.2 Delivery of Notices.** Any notice required to be given to an owner or operator of a facility or a licensee shall be deemed to have been delivered if such notice is delivered personally to an owner or operator of a facility or a licensee or is mailed by double registered mail to the registered or records office of an owner or operator of a facility or a licensee or to the address for service set out in a license. If delivery of a notice is unable to be effected by double registered mail then delivery may be affected by any of the following:
- a) personal delivery to the registered or records office of an owner or operator of a facility or a licensee,
 - b) personal delivery to a director, officer, liquidator, trustee in bankruptcy or receiver manager of an owner or operator of a facility or a licensee,
 - c) personal delivery to an adult individual at the facility who appears to be an employee of an owner or operator of a facility or a licensee or appears to be in control of the facility, and
 - d) posting on the door or gate of the facility, when no one is present at the facility or the facility appears to be abandoned.
- 16.3 No Transfer or Assignment.** A transfer or assignment of a facility license is without effect

without the prior written approval of the General Manager. Approval will be given if all license requirements are being fulfilled and no license or license amendment fees are owed to the district.

16.4 Headings. The headings in this bylaw are for convenience only and shall not limit, enlarge or affect the scope of any of the provisions in this bylaw.

16.5 Severability. If any portion of this bylaw is deemed *ultra vires*, illegal, invalid or unenforceable in any way in whole or in part by any court of competent jurisdiction, such decision shall not invalidate or void the remainder of this bylaw. The parts so held to be *ultra vires*, illegal, invalid or unenforceable shall be deemed to have been stricken from this bylaw with the same force and effect as if such parts had never been included in this bylaw or revised and reduced in scope so as to be valid and enforceable.

ARTICLE 17

17 TITLE

This bylaw may be cited for all purposes as the “Regional District of Nanaimo Waste Stream Management Licensing Bylaw No. 1386, 2004”.

Read three times the 10th day of August, 2004.

Received approval from the Ministry of Water, Land and Air Protection this 6th day of April, 2005.

Adopted this 26th day of April, 2005.

Chairperson

Deputy Administrator

SCHEDULE "A"

EXEMPTIONS FROM LICENSING REQUIREMENTS

For greater certainty and without limiting the generality of Section 2.1 of the bylaw, the following facilities, or any portion of a facility managing recyclable material or municipal solid waste in accordance with the following specifications, shall be exempt from the licensing requirements under Section 2.1:

1. any facility which accepts exclusively asphalt and concrete for the purposes of reprocessing, resale and reuse;
2. any retail food, grocery, beverage or drug establishment that accepts recyclable products on a return-to-retail basis;
3. any depot operating under or in fulfillment of the *Environmental Management Act* Beverage Container Stewardship Program Regulation, 1997; and
4. any facility operating under or in fulfillment of a *Environmental Management Act* Stewardship Program.

A facility that manages recyclable material or municipal solid waste in accordance with the above and also manages recyclable material or municipal solid waste in a manner not specified above will be required to be licensed within the provisions of this bylaw for the portion(s) of the operation not specified as exemptions in this Schedule A.

SCHEDULE "B"

PLAN FACILITIES (PUBLIC)

FACILITY	LOCATION
Regional District of Nanaimo Landfill	1105 Cedar Rd, Nanaimo
RDN Church Road Transfer Station	860 Church Rd, Parksville

SCHEDULE "C"

FEES - FACILITIES

The fees payable to the district by owners or operators of facilities under this bylaw shall be as follows:

1. Application, Amendment, Annual Administration and Other Fees

Column 1	Column 2 License Application Fee	Column 3 Major Amendment Application Fee	Column 4 Minor Amendment Application Fee	Column 5 Annual Administration Fee
Facility license Type I	\$1,000	\$500	\$100	\$500
Facility license Type II	\$100	\$100	\$50	\$100
Code of Practice Registration	\$100	-	-	\$100

SCHEDULE "D"

PUBLISHING AND BILLBOARD POSTING REQUIREMENTS

1. Publishing Notice Details for all Applications

A published notice in a newspaper must:

- (i) be at least 8 centimetres in width,
- (ii) be at least 100 square centimetres in area,
- (iii) be entitled "FACILITY LICENSE APPLICATION NOTICE" in a minimum type size of 12 points,
- (iv) have the text of the license application in a minimum type size of 8 points,
- (v) include the civic address of the proposed facility,
- (vi) include the name of the owner of the land on which the facility is proposed to be located,
- (vii) include the full name and address of the operator of the proposed facility,
- (viii) include a complete description of the activity to be carried out and the types and quantities of municipal solid waste or recyclable material to be managed at the facility, and
- (ix) include such other information as the General Manager considers necessary.

TO: Dennis Trudeau
General Manager,
Transportation and Solid Waste

DATE: August 31, 2015

FROM: Larry Gardner
Manager, Solid Waste Services

MEETING: RSWAC, Sept. 17, 2015

FILE: 0360-20-RSWAC

SUBJECT: Regulatory Tools to Promote Increased Waste Diversion – Regional Solid Waste Advisory Committee

RECOMMENDATION

That the Regional Solid Waste Advisory Committee (RSWAC) receive this report for information.

PURPOSE

The purpose of the report is to explore, at a conceptual level, regulatory approaches that might be applied to increase waste diversion as part of the Regional District of Nanaimo's (RDN) Solid Waste Management Plan (SWMP).

BACKGROUND

The RSWAC has been advised of the authorities Regional Districts have regarding waste management, and, additional authorities that are available and may be accessed through Ministerial approval of a SWMP (staff report: *Authorities Provided to Regional Districts Through an Approved SWMP –RSWAC, July 2, 2015*). Furthermore, the RSWAC has been advised that Regional Districts do not have the authority to regulate consumer products (staff report: *Regional District Bylaw Authority to Manage Consumer Products – RSWAC, May 15, 2015*).

It is recognized that education, promotion and incentives are valuable tools to encourage and foster waste diversion efforts. However, the purpose of this report is to consider regulatory concepts that might push greater levels of diversion. A range of regulatory options are presented below and each is discussed in more detail in subsequent sections of this report:

1. *Mandatory Waste Collection Service* – This is akin to the residential curbside collection service provided throughout the RDN but expanded to all waste generators including multi-family, institutional and commercial. The current residential curbside collection system is mandatory and every single-family residential dwelling must pay for the service and there is no ability to opt out. A mandatory system could be provided by local government staff or contracted out to a private hauler. This is actually a “service” and not exclusively “regulatory”, however, it is a concept that closely aligns with other regulatory approaches and, therefore, is discussed in this report. An expanded mandatory service for all waste collection is within local government's authority to introduce without additional authorities obtained through the Solid Waste Management Planning process.

2. *Waste Hauler Franchise* - This is a system where the RDN would sign contractual agreements with waste haulers to provide waste collection services for the multi-family, commercial or institutional sector within the RDN. Under these agreements, waste haulers would abide by specific standards (e.g. waste/recyclables separation), set an established fee schedule, have reporting obligations and potentially remit fees to the RDN. A franchise system does not require mandatory participation by waste generators, although if a generator chooses to hire a service, it could only be done by a franchise hauler. A franchise system can be set up with a defined operating area for the franchisee or to allow many franchisees to offer service within a common area. To introduce a franchise system, additional authorities provided by the SWMP are required.
3. *Waste Hauler As Agents* – This is similar to a franchise system but does not establish contractual agreements with each hauler operating in the area. It does allow for setting fee levels based on the quantity or type of waste and varying fees by class of persons, activities or businesses. Haulers can be required to act as agents and collect and remit fees on behalf of the RDN. To establish haulers as agents, additional authorities provided by the SWMP are required.
4. *Flow Management* – Flow management is the ability to direct the hauling of waste, or the hauling of recyclables, within or through the area covered by the Solid Waste Management Plan. To establish flow management regulation, additional authorities provided by the SWMP are required.
5. *Waste Source Regulation* – This is the ability to impose requirements on waste generators such as the requirement for waste and recyclable separation. Regulations or Codes of Practices could be developed that might apply to different sectors or business areas such as multi-family homes, food preparation, or demolition projects. To impose waste source regulations, additional authorities provided by the Solid Waste Management Plan are required.

Mandatory Waste Collection Service

Diversion Implication

In general, there is a propensity for most people to use a service that is provided. So where collection is provided for different material types (i.e. garbage, organics, recyclables), it is expected that most waste generators would begin to use the expanded service of their own accord, thereby significantly improving waste diversion. To further increase diversion, there is the ability to include limitations or variable rates for the amount of garbage that is set out. As well, there is the ability to require waste/recyclable separation or material bans.

Administration and Enforcement Implication

A mandatory system is a significant administrative burden to collect utility fees and either deliver the collection service directly or through contract.

Through a mandatory system, materials separation could be progressively implemented from education to enforcement aimed at higher diversion. Inspection at waste generators sites of trash and recyclables could be carried out to determine compliance with waste separation rules.

Community Implications

At the two RDN waste receiving sites, there are approximately 170,000 customer visits annually. About 150,000 visits are self-haul customers with the balance being commercial haulers. A mandatory waste collection service would be expected to significantly reduce this traffic as essentially everyone would be provided with a waste collection service. Although the greenhouse gas benefit of less traffic would be difficult to predict, it is believed that a mandatory collection system would have some positive environmental benefit in this regard.

There are seven large waste hauling companies and many independent waste haulers that currently operate in the RDN. A mandatory collection system would essentially eliminate the free enterprise system that currently exists in the RDN. It is expected that this industry group would oppose an expanded mandatory waste collection system.

Community cost implications of such a system are not known at this time.

Waste Hauler Franchise

Diversion Implication

There are numerous examples of waste hauler franchises, particularly in the United States, and a couple of examples are:

- The City of Tampa, Florida requires those providing a waste hauling service to obtain a "Hauler Agreement" and those self-hauling to obtain a "Haul Your Own Permit". Commercial waste franchisees are required to remit 15% of their gross revenue to the City to support the City's solid waste system. The franchisees are compelled to collect trash, recyclable materials and green waste separately.
- The City of Gardena, California requires that all waste haulers working in the area must be franchisees. The franchise gives the hauler the right to collect waste and recyclable materials generated or accumulated with the City. A requirement of the franchise is to annually submit a Source Reduction and Recycling Plan that is reviewed by the City to ensure that it meets the state-mandated recycling requirements. Further, the franchisee is required to prepare and follow a C&D Waste Diversion Plan to assure conformance with the City's requirement that 50% of regulated C&D Wastes must be diverted.

A waste hauler franchise system in the RDN has the potential for significant increases in diversion consistent with that of a mandatory waste collection service described above.

Administration and Enforcement Implication

A waste hauler franchise system is a significant administrative burden to set up the contracts and to monitor waste hauler performance but likely less onerous than what is required for a mandatory waste collection system. The level of compliance and enforcement oversight is likely to be higher than for a mandatory system. Overall, the resource demand on local government to support either system is anticipated to be similar.

Community Implications

Depending on how a franchise system is designed (e.g. requiring a self-haul permit, levy on commercial waste collection), it could work as an incentive or disincentive for self-haul customers thereby increasing or decreasing traffic at RDN waste receiving sites.

A franchise system can be compatible with free enterprise and, as such, it is more likely to gain acceptance to the waste hauling industry as compared to a mandatory waste collection system.

Community cost implications of such a system are not known at this time.

Waste Hauler As Agents

Diversion Implication

The previous two examples of systems, mandatory collection and franchising, are based on *compelling* an action and *enforcement* to make it happen (e.g. waste separation). Assigning waste haulers as agents, does have an enforcement component but it is more focused on an economic driver to affect the desired behavior. For example, it is possible to require waste haulers to collect and remit a fee to the RDN where a customer's waste is not separated or where a recycling or organics collection service is not provided. Such a system provides an economic driver to encourage waste diversion efforts and removes the enticement of low cost disposal. Such a system has similar waste diversion potential to the previous systems discussed. There is no known model of such a system in existence.

Administration and Enforcement Implication

Such a system is expected to be a moderate administration and a minor enforcement burden. Waste haulers would have some increased administration through the collection and remittance of fees as well as reporting. There would be a minor level of enforcement to ensure haulers are complying but very little enforcement activity at the waste source.

Community Implications

Such a system is entirely market based and promotes industry innovation to achieve the lowest cost with highest diversion. Haulers would be compensated for the additional administrative tasks associated with fee collection and remittance on behalf of the RDN. For these reasons, the waste hauling industry may be more amenable to such a system as compared to the others discussed.

Although community cost implications of such a system are not known at this time, this is considered to be a lower cost option than the other concepts presented.

Flow Management

Diversion Implication

It is a well-recognized universal concept that with increasing costs, alternatives to avoid those costs are sought out. This concept applies equally to waste management and, therefore, those communities with the highest waste disposal costs also have the highest waste diversion success. Much of the RDN's waste diversion success can be at least indirectly attributed to high disposal costs. Often the high "tip fee" gives the waste an artificial value where there is a willingness to pay to have the waste recycled. So, as tip fees are inflated higher, it encourages more diversion even if true costs for disposal have not changed. This works until the tip fee exceeds other disposal options. This is the exact circumstance that currently exists in the RDN where waste is being exported out of the region for low cost disposal.

Flow management provides the ability to restore high cost disposal as an incentive for waste diversion. As local government can authorize where waste is shipped for disposal, low cost disposal options can be excluded. Flow management has at least the potential, or possibly greater, of achieving high diversion as compared to the other options presented above. The high potential is related to its simplicity of the approach and that it covers all waste types and sources.

It is worthy of note that in 2014, the Minister of the Environment, rejected a Metro Vancouver bylaw that proposed to introduce flow management. The bylaw also proposed to regulate facilities so it is not know to what extent the flow management component or facilities management component influenced the final decision. Reasons stated by the Minister in denying the bylaw were:

- The potential to create a monopoly on waste management;
- The potential for increased illegal dumping;
- The possible negative effects on the new packaging and printed paper recycling program; and
- The destabilizing effect it may have on private-sector collection and hauling.

Administration and Enforcement Implication

Such a system is expected to be a very low administration burden and a minor enforcement burden. Compliance and enforcement activities would be related to checking that waste is not being shipped outside the region for low cost disposal. It is expected that if flow management was brought into force that all major waste haulers would comply and not attempt to evade the regulations.

Community Implications

Overall waste management costs may be very similar to the other systems presented but there is likely to be a perception of high cost if tipping fees are high. Due to this perception, there may be reluctance to raise tipping fees high enough to encourage the desired diversion behavior. Such a system is entirely user pay and costs are not socialized (i.e. taxation). Other areas that have considered flow management have typically had industry opposition to this type of regulation.

Waste Source Regulation

Diversion Implication

This is the ability to impose requirements on waste generators such as the requirement for waste and recyclable separation. An example of this is the City of Vancouver's Green Demolition bylaw which requires 75% recycling of materials on demolition of pre-1940 homes and 90% on pre-1940 character homes. Examples of this type of source control applied to all business sectors do exist in some United States communities. Diversion potential is likely higher than what exists with the other concepts, as strict requirements can be applied and enforced at the source site.

Administration and Enforcement Implication

Such a system is expected to be a moderate administration burden to develop and maintain regulations. Of all the concepts presented here, this has the highest compliance and enforcement burden as it attempts to regulate every waste source site.

Community Implications

This system is entirely regulatory and attempts to compel an action with no incentive to encourage the desired behavior. As such, this system is likely to result in the most conflict.

Cost implications of such a system are not known at this time but are potentially the highest due to the necessary level of compliance and enforcement work necessary.

JURISDICTIONAL TRENDS

A jurisdictional search of communities throughout North America show that there is a trend to ban materials from disposal. This is most evident with the banning of organic waste illustrated by the following examples:

- Scotland – in 2014 regulations came into force requiring all businesses and organizations to separate key materials (i.e. plastic, glass, metals, paper and card) and most food businesses to separate food waste. Maximum fines for failing to comply are £10,000.
- Seattle, Washington – is introducing fines to residents and businesses. Residents will receive a warning and then a \$1 fine is added to their bill when their trash contains 10% or greater food waste or certain paper products. Commercial properties will receive two warnings followed by a \$50 fine on their next bill.
- Vermont – a Universal Recycling law introduced in 2012 imposes landfill bans on plastic, aluminum and metal container, paper, yard & garden waste, and food scraps. Mandatory compliance is being phased in over 6 years beginning with the largest generators of food scraps who must start separating them if there is a permitted composting facility located within 20 miles. They are introducing a “pay-as-you-throw” variable rate pricing to incentivize recycling. Waste haulers must pick up residential recycling at no charge.
- Massachusetts – Starting in October 2015, food waste generators that produce more than one ton of food waste per week, must divert it from landfills.
- San Francisco, California – 2011 regulations came into effect allowing fines to be applied to those not effectively separating food scraps and recyclables. Following warnings, fines are \$100 for small businesses and single family homes and \$1000 for large businesses and multi-family buildings. The ability to fine came after decades of voluntary, convenient programs and financial incentives. San Francisco concluded that they would not achieve their diversion goals without mandatory recycling and composting.
- Capital Regional District – 2015 CRD introduced a ban on kitchen scraps at the Hartland Landfill. Commonly a Bylaws Enforcement Officer is situated at the landfill disposal area and applies fines to non-compliant waste haulers that range from \$100 to \$1000.
- Whistler, BC – They are considering an organics and recycling ban with the intention that haulers are fined if the load contains the banned materials.
- Metro Vancouver – They recently introduced an organics ban at the landfill and transfer station. As of July 1, 2015, waste loads with more than 25% visible food will be surcharged 50% of the cost of disposal. Metro plans to reduce the amount of food scrap allowed over time.

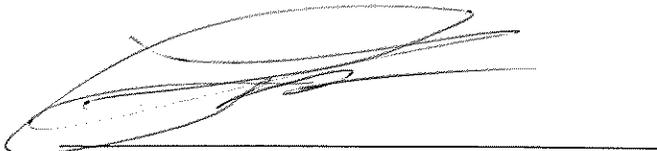
If the material bans are to be effective, there needs to be an absence of low cost disposal of mixed waste or the bans need to be undertaken in conjunction with some other regulatory control such as hauler franchising or waste source regulation. A number of the examples above rely on some combination of regulatory tools.

Starting 1991, under Bylaw 1531, the RDN has increased the number of banned materials at the landfill and transfer station including commercial organic waste, recyclable paper and stewardship materials (see Appendix 1 for the complete list). Currently enforcement of the bans is lax and fines are only applied to the most egregious violations. Although the RDN could immediately apply more aggressive enforcement of disposal bans it is more likely to exacerbate waste export and disposal rather than have the desired effect of increasing waste diversion. Enforcement of bans in combination with some other regulatory measures discussed here improves the certainty of higher diversion goals.

SUMMARY/CONCLUSIONS

The intent of this report is not to delve into the detail of alternate regulatory schemes. It is, however, intended to present alternative concepts that are likely to increase waste diversion.

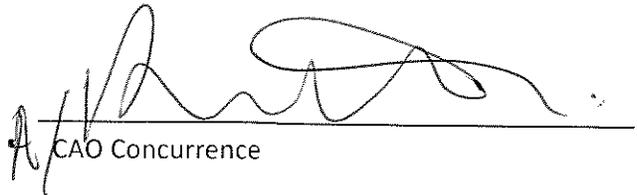
Other than *mandatory waste collection*, all the other regulatory approached presented in this report require additional authorities gained through Ministerial approval of the amended SWMP. In other words, the SWMP must state the desire for any or all of these authorities before they can be utilized. The actual implementation of the authorities would not happen until such time as they are adopted by the RDN at some future date and following extensive consultation on the specific bylaw. If such intent is not stated in the SWMP, the RDN can not take actions in these areas.



Report Writer



General Manager Concurrence



CAO Concurrence

APPENDIX 1

Prohibited Waste at RDN Facilities

At the Regional Landfill:

- (i) Biomedical Waste;
- (ii) Commercial Organic Waste;
- (iii) Concrete or asphalt pieces, or rocks greater than 0.03m³ or 70 kg;
- (iv) Corrugated Cardboard;
- (v) Drums;
- (vi) Garden Waste;
- (vii) Gypsum;
- (viii) Hazardous Waste;
- (ix) Household Plastic Containers;
- (x) Ignitable Wastes;
- (xi) Land Clearing Waste;
- (xii) Liquids, except as permitted herein;
- (xiii) Metal;
- (xiv) Motor vehicle bodies and farm implements;
- (xv) Municipal Solid Waste that is on fire or smouldering;
- (xvi) Radioactive Waste;
- (xvii) Reactive Wastes;
- (xviii) Recyclable Paper;
- (xix) Stewardship Materials;
- (xx) Special waste, as defined in the Special Waste Regulation (British Columbia) except asbestos ;
- (xxi) Tires;
- (xxii) Wood Waste

At Church Road Transfer Station:

- (i) Biomedical Waste;
- (ii) Commercial Organic Waste;
- (iii) Concrete or asphalt pieces, or rocks greater than 0.03m³ or 70 kg;
- (iv) Controlled Waste;
- (v) Corrugated Cardboard;
- (vi) Garden Waste;
- (vii) Gypsum;
- (viii) Hazardous Waste;
- (ix) Household Plastic Containers;
- (x) Ignitable Wastes;
- (xi) Land Clearing Waste;
- (xii) Liquids, except as permitted herein;
- (xiii) Metal;
- (xiv) Motor vehicle bodies and farm implements;
- (xv) Municipal Solid Waste that is on fire or smouldering;
- (xvi) Radioactive Waste;
- (xvii) Reactive Wastes;
- (xviii) Recyclable Paper;
- (xix) Special waste, as defined in the Special Waste Regulation (British Columbia) except asbestos;
- (xx) Stewardship Materials;
- (xxi) Tires;
- (xxii) Wood Waste.

TO:	Larry Gardner Manager, Solid Waste Services	DATE:	May 10, 2016
FROM:	Sharon Horsburgh Senior Solid Waste Planner	MEETING:	RSWAC, May 19, 2016
		FILE:	5365-00
SUBJECT:	Options for the Management of Household Hazardous Waste (HHW)		

RECOMMENDATION

That the report on Options for the Management of Household Hazardous Waste be received for information.

PURPOSE

This report has been prepared in response to the RSWAC requesting a report regarding funding household hazardous waste collection events.

BACKGROUND

Household hazardous waste (HHW) is any waste from your home that is considered dangerous. It includes any leftover household product that is marked flammable, corrosive, explosive or poisonous. Common examples are pesticides, varnishes, paints, cleaners, and batteries.

In British Columbia, HHW is primarily managed through Provincial government established Extended Producer Responsibility programs (EPR). These programs cover the following materials: paint, oil, household lighting, CO and smoke alarms, small appliances, cell phones, batteries, thermostats, and pharmaceuticals, among others. These EPR programs are designed to ensure these materials which are or contain hazardous waste is handled, stored, transported, treated and disposed of properly.

Typically HHW materials are dropped off at depots where they are packed into containers, placed in a truck and transported to a warehouse. The waste is re-sorted and sent to the appropriate facilities for treatment or disposal. The disposal method depends on the type of product: some is sent to Swan Hills, Alberta for incineration; PCBs go to Quebec; some pesticides are incinerated, while others go to secure landfills in BC; solvents and waste oils are recycled or reused in heat recovery fuel in Alberta.

RDN HHW Management

In the RDN, HHW management has been left to the private sector. Currently, there are several for-profit and non-profit depots in the Nanaimo and Parksville areas where EPR items are accepted. The RDN is one of the highest subscribers to EPR programs in the Province and this is an important consideration when evaluating the effectiveness of the existing programs. The RDN does not provide HHW drop off programs at its facilities as many items are covered by EPR programs. A number of depots throughout the RDN accept the majority of EPR materials in the region and they have indicated that non EPR materials are prevalent and can pose a financial burden on the organization if abandoned at these depots. In 2015, the Nanaimo Recycling Exchange (NRE) spent \$12,000 on handling and disposal of non-stewarded HHW items.

The Province’s strategy to manage HHW is through industry-led EPR programs. These programs place the responsibility to provide end-of-life recycling and appropriate disposal on the producers and retailers of the product. This system shifts the cost burden from the general taxpayer or local government on to the producer and consumer. At the RDN’s regional facilities, staff advise customers to take materials not accepted at the landfill to appropriate locations for safe disposal. Hazardous waste companies like Terra Pure, Hetherington, and Arrowsmith Environmental will accept hazardous waste which is not part of the EPR programs at a cost.

RDN staff have indicated they do occasionally set aside HHW material that has been left at the landfill or transfer station. Those materials are stored securely until there is sufficient quantity for transportation. There are usually 2 shipments per year and the RDN budgets approximately \$1,000 per annum for abandoned HHW.

The RDN’s 2012 Waste Composition Study identified that HHW consisted of less than 1% of the waste stream and the majority of the materials found were covered by EPR programs. Table 1 below categorizes the materials considered HHW:

Table 1: Categories of Household Hazardous Waste in Residual Waste Stream

HOUSEHOLD HAZARDOUS WASTE	EPR PROGRAM (Residential Products Only)
Batteries	✓
Medical/Biological Waste	No program
Stains	✓
Preservatives	✓
Latex Paint	✓
Oil-based Paint	✓
Aerosols	✓
Solvents	✓
Pesticides	✓
Herbicides	Some items
Fungicides	Some items
Motor Oil	✓
Oil Filters	✓
Anti-Freeze	✓
Pharmaceuticals	✓
Flammable Products Other Petroleum based Products	✓
Mercury Containing items Thermostats & lightbulbs	✓

JURISDICTIONAL SCAN ON HHW MANAGEMENT OPTIONS

Some Regional Districts with limited access to drop off depots work collaboratively with EPR organizations and local government to provide mobile collection events. EPR organizations determine the site requirements, which could include secure storage, protection from weather, supervised collection, and paved surfaces for safe pickup of large bins. Typically, if the EPR organizations determine there is adequate collection coverage in an area, they decline the expansion of depot services or participating in mobile collection events.

Columbia Shuswap Regional District (CSRD)

The CSRD conducts Household Hazardous Waste Round-up events in the communities of Salmon Arm, Revelstoke and Golden to collect a backlog of hazardous household material. These events take place every two years. This program provides an opportunity for residents to safely dispose of materials that are toxic, corrosive, reactive or ignitable.

In 2016, the CSRD has budgeted \$80,000 to provide this services to residents at no charge. The CSRD offers residents this opportunity because this material is not accepted in the landfill but it requires safe disposal. While some products such as pesticides and herbicides are regulated through an Extended Producer Responsibility Program administered by Product Care, not every community has a Product Care depot, and not all products are accepted as part of the stewardship program, so this program helps consumers with their non-conforming leftovers.

Capital Regional District (CRD)

The Hartland recycling area accepts almost all types of household hazardous waste from residents only. The program does not include industrial waste from commercial businesses. The Capital Regional District recently issued a contract for Household Hazardous Waste Management and Hazmat Services, in the amount of \$382,544.69. It is estimated that the CRD handles 65 tonnes per year of HHW previously managed through a private depot. In addition to the Hartland Landfill, there are several for-profit and non-profit depots that accept EPR items at more convenient drop off locations across the Capital region.

Thompson-Nicola Regional District (TNRD)

The TNRD host HHW events in cooperation with the City of Kamloops as well as a few events in some of the smaller municipalities. Events are typically held in larger towns/cities (Kamloops/Merritt) every year and other smaller communities every two or three years. The Region's hazardous waste contractor receives all materials not covered by Product Care. Product Care also sends their contractor to accept their materials. The cost of the events greatly depends on the amount of material received. The event costs range from \$8,000 - \$20,000 for one day events.

TNRD have indicated they are starting to phase out the drop off events as they are working towards accepting HHW year round at their full service eco-depots. They have found a significant amount of the material that comes into the events is paint and oil that are already covered through EPR stewardship programs. There is minimal non-EPR material and it is proposed this can be collected for a fee by their contractor. Depot service provides much better service to residents as the service is year round opposed to one day a year.

Regional District of North Okanagan (RDNO)

RDNO have introduced a full service Eco Depot at a cost of \$200,000. The stewardship agencies pay to participate in the Eco Depot. However the costs to run the regional roundup events was approximately \$75,000 per year.

Regional District of Okanagan Similkameen (RDOS)

RDOS's Penticton landfill accepts hazardous waste at their landfill and provides a round up service for approximately \$80,000.

Regional District of Central Okanagan (RDCO)

The RDCO has a contractor in the City of Kelowna that runs a year round depot. The contractor receives material directly from the public at the contractor's facility, and then the contractor invoices the RDCO for all non-program materials. The Annual budget for this service is approximately \$80,000.

City of Chilliwack

HHW annual service is approximately \$35,000 per year.

District of Mission

Newalta HHW annual service is approximately \$30,000 per year.

OPTIONS FOR CONSIDERATION

There are a number of options that can be introduced to manage HHW drop off events in the Regional District. These could involve going out for an RFP to determine the costs associated with hosting a Regional Round up Event and involving existing service providers of HHW services that currently offer EPR programs as well as managing non EPR material.

IMPACT ON DIVERSION

By changing how HHW programs are administered it is not expected to significantly impact diversion of the 297 metric tonnes or >1% of the waste stream as the majority of this material is already captured by EPR programs. Furthermore, the RDN's waste composition is generally reflective of other regional districts with more expensive means of managing HHW. However, by offering a service to handle this material annually may generate a higher percentage of material. Based on data from other programs the range is from 50 – 500 tonnes over 2 – 5 yrs.

FINANCIAL IMPLICATIONS

Currently the RDN budgets \$1,000 to manage orphaned HHW that is left on site at regional facilities. In 2015, the NRE spent \$12,000 on disposal of non-stewarded HHW items. Based on the information gathered from other regional districts, if the RDN was to consider taking on the role of managing non-stewarded HHW region it would like be best done through a contracted service and to allocate \$80,000-\$100,000 for budgeting purposes to cover two bi-annual HHW collection events.

Table 2 summarizes the Projected Costs to manage Non-EPR materials.

Table 2: Projected Costs to manage Non-EPR materials

Projected Costs to manage Non-EPR materials	Yearly Budget
Contractor	\$70,000
Communications & Advertising	\$5,000
Rentals	\$5,000
Total	\$80,000

REGULATORY AUTHORITY

No new regulatory authority would be required by the RDN to enhance the existing EPR programs in place. The programs current in place are well subscribed and provide a safe option for collection. Adding collection events would potentially reduce material following to these drop off depots and could potentially drive more material to community based HHW Round up events shifting the costs to the RDN.

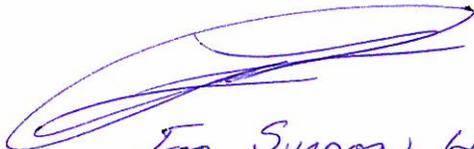
STRATEGIC PLAN IMPLICATIONS

There are no strategic plan implications.

SUMMARY/CONCLUSIONS

In the RDN, HHW management is carried out by the private sector and there are currently several for-profit and non-profit depots in the Nanaimo and Parksville area where EPR items are accepted. The RDN is one of the highest subscribers to EPR programs. The RDN does not provide HHW drop off programs at its facilities as many items are covered by EPR programs and based on our waste stream analysis there are minimal non EPR material that requires special handling. The NRE accepts the majority of EPR materials in the region and they have indicated that non EPR materials are prevalent and they are financial burden on the organization. In 2015, the NRE spent \$12,000 including handling on disposal of non-stewarded HHW items.

While the mandate for this material rests with the Provincial government there are numerous regional districts that have taken on the role of managing HHW collection in order to protect the environment as there are no convenient programs available. It is estimated that if the RDN to takes a more active role in HHW management similar to other regional districts we should budget between \$80,000-100,000 annually. This would augment existing service levels and round up events could be carried out in different areas of the RDN.



For Sharon Horsburgh
Report Writer



Manager Concurrence



General Manager Concurrence



CAO Concurrence

Appendix E – Consultation and Communications Plan



Consultation & Communications Plan

Solid Waste Management Plan Review:

Regional District of Nanaimo

March 3, 2015

Background

The Regional District of Nanaimo (RDN) is undertaking a review of its Solid Waste Management Plan (SWMP), which has been amended three times since provincial approval of the original Plan in 1988. The RDN has fully implemented their last SWMP, which was prepared in 2004. The current plan review is intended to identify “what’s next” and chart the course for solid waste management for the coming years.

The process to review and update the region’s SWMP is as follows:

- Stage 1 (completed report in 2013) – Review and analysis of current solid waste management system, action status of the 2005 Plan, and identification of issues and opportunities for improvement;
- Stage 2 (current stage) – Identify and review options to address the region’s future waste management requirements, select preferred options and prepare report presenting the findings; and
- Stage 3 – Prepare a draft amended SWMP, carry out a public review of the draft plan, incorporate changes from the public review and finalize the plan for Regional Board and Ministerial approval.

Community consultation is a mandatory component of the planning process and is critical to the creation of a plan that can be supported by the public. Consultation is carried out throughout the process and commonly begins with dissemination of information to more active dialogue with the community in Stages 2 and 3 as options are reviewed and selected.

Spectrum of Consultation



The Ministry of Environment outlines the expected components of a community consultation process in their document *Guide to the Preparation of Regional Solid Waste Management Plans by Regional Districts*. In addition, the RDN has a public consultation / communication framework to ensure a consistent, comprehensive and cost-effective approach to public consultation and communication

initiatives. This framework, along with the Ministry's guide, was used to prepare the following Consultation & Communications Plan.

Objectives

A Consultation & Communications and Plan is intended to achieve the following objectives:

- i. Ensure that the process to develop the plan is collaborative and reflects a broad range of perspectives
- ii. Provide opportunities to educate the public about the Solid Waste Management Plan and future options for managing waste
- iii. Provide opportunities for public input on a range of options and estimated costs
- iv. Increase support for the resultant solid waste management planning and programs
- v. Meet the consultation expectations of the Ministry of Environment.

Participants

There are several groups that may be directly and indirectly affected by the outcomes of the SWMP process. It is critical to the success of the SWMP that affected stakeholders are participants in the planning process. The following is a list of potential stakeholders:

- RDN staff
- Regional Board
- Municipal staff
- Municipal councils
- First Nations
- Ministry of Environment
- Residents throughout the region
- Businesses
- Construction and demolition industry
- Major institutions (Nanaimo General Hospital, School District 68 and 69, Vancouver Island University)
- Waste haulers
- Waste management facility owners and operators
- Neighbouring regional districts (Cowichan Valley, Alberni Valley, Comox Valley).

Consultation and Communications Plan

The RDN's framework has adopted 3 components to the plan: Participation, Engagement, and Communications. The activities associated with these three components, described in the following sections, have been employed by a number of regional districts to ensure their planning process meets the objectives listed above.

Participation

Participation refers to activities that enable a two-way conversation between those tasked with developing the SWMP and affected stakeholders, including the public. These activities provide opportunities for collaboration. Participation tools include:

- The Regional Solid Waste Advisory Committee
- The Solid Waste Select Committee
- Stakeholder Workshops

The Regional Solid Waste Advisory Committee (RSWAC) is the cornerstone of the Consultation and Communications Plan and will be in place throughout the planning process. This committee is a combination of public advisory representatives and technical advisory representatives that meets regularly throughout the planning process. The RSWAC provides advice to the Regional District Board in regards to the content of the plan and associated consultation activities. Members of RSWAC include representatives of the general public, business, waste management industry, local governments and First Nations from across the region. Terms of reference for the RDN's RSWAC are provided in Appendix A. These terms of reference have been approved by the RDN Board and applied to the establishment of the current RSWAC.

The Solid Waste Management Select Committee is made up of directors of the Regional District Board and acts as a steering committee during the process of developing the SWMP. The committee forms a direct link between the RSWAC and the Board. They are able to provide direct feedback to the RSWAC to ensure that the outcomes of the planning process are politically supportable, and also ensure that the Board is aware of the direction that the planning process is taking.

Stakeholder workshops will be held throughout the planning process as the need for them is identified. Workshops are intended to create a dialogue on specific elements of the SWMP, including generating new ideas and perspectives on issues, as well as deepening the collective understanding of those involved. The outcomes of the workshops will be used to supplement the discussions at the RSWAC meetings.

Engagement

Engagement refers to activities where the community is drawn into the conversation and input is sought from the public. The focus is on receiving information rather than providing it. For purposes of developing a solid waste management plan, engagement activities can be used to solicit input on the public's current perceptions of solid waste management as well as their feedback on options identified during the planning process.

Engagement activities will include a dedicated email address to receive email comments and inquiries, an on-line survey to identify residents' issues and concerns regarding solid waste management, and stakeholder meetings. Stakeholder meetings may be held to obtain input on options affecting a specific industry groups (e.g. construction/demolition/ renovation contractors, multi-family building managers, etc.). The broader public will be solicited for their feedback on the RDN's solid waste system.

Stage 2 & 3 involves a range of activities intended to obtain feedback on the draft plan's recommendations, including:

- Public open houses and meetings
- Exit survey at the public open houses and meetings
- On-line surveys for those unable to attend an open house or meeting
- Stakeholder meetings
- Presentations to Municipal and First Nation Councils.

The variety and breadth of engagement activities selected should be reflective of the type and range of actions proposed in the SWMP and how best to involve the affected stakeholders. Consequently, the specific tools to be employed during the Stage 3 consultation process are best identified once Stage 2 is completed or nearing completion.

Communications

Communications refers to providing information to the public and is generally one-way communication. Communication activities during the planning process will include:

- SWMP Updates for Councils
- A SWMP webpage on the Regional District website
- Newsletters
- Information display
- Promotion (e.g. newspaper and radio ads, posters, Facebook, Twitter)

Regular communications with municipal and First Nation councils are intended to keep these organizations informed on the development of the plan. The format for these communications will be through circulation of RSWAC meeting minutes to the member municipalities and First Nations as well as through regular RDN Solid Waste Newsletters

The RDN's website will be used to make SWMP resources available to the public and other interested parties on an on-going basis. A dedicated solid waste management plan web page has been developed and will include:

- Reports and memoranda prepared by the consultants (e.g. Stage 1 report)
- Advisory committee minutes and presentations
- A "tell us what you think" link to a dedicated email address
- A link to sign up for regular SWMP updates
- Information on consultation events and other opportunities for input

At any point during the planning process, information can be distributed to update residents of the key issues under discussion, as well as opportunities and ongoing encouragement for them to participate in available consultation activities. Often this information can be part of a regular regional communication, such as the RDN's Regional Perspectives or Zero Waste Newsletter. A Stage 3 newsletter can be used to provide information on the key recommendations in the draft SWMP and how residents and businesses can provide their feedback.

A mobile information display is being developed for use in malls, regional disposal facilities, community centres and at community events. Similar to the newsletter, the display will feature information on the key recommendations in the draft SWMP and how to provide input.

During the Stage 3 Consultation process, promotion is used to inform the public and affected stakeholders about the draft plan and the opportunities available to them for providing input. It is important to use a variety of tools to increase awareness and encourage people to attend or provide feedback via the website. Possible promotional tools include:

- Campaign slogan or brand to use on all materials to increase recognition and awareness
- Posters in public areas (city halls, rec centres, senior centres, other facilities) to promote open houses and other events
- Distribute hard copies of newsletter / poster to key locations
- Email distribution to key contacts (local governments, neighbourhood groups, associations, Chamber of Commerce, etc.) including information for their websites and newsletters
- Significant draw prize to increase participation (in surveys, at open houses)
- Newspaper advertising
- Radio advertising
- Media releases to all media (TV, Radio, Newspaper, Shaw, etc) and follow up to increase interviews and media coverage
- Public service announcements
- Website copy, including link to online survey and display panels and presentation materials
Include offer to sign up for email project updates
- Facebook updates
- Twitter updates
- Promote at special events and community gatherings
- Promote via presentations to community groups and service clubs
- Signage at all solid waste facilities
- Inserts and/or notification via Regional Districts' and member municipalities' mailers (if available during the consultation process)
- Signage on-site at events.

The extent that the above tools are used will be based on the content of the draft plan and the appropriate level of promotion and consultation required.

A Consultation and Communications Plan for the RDN's SWMP

A presentation on SWMP communications and consultation was provided to RSWAC at their meeting on December 11, 2014. Based on feedback from the committee, a consultation plan for the RDN's SWMP has been prepared. The following table provides an overview of the proposed communication and consultation activities planned for each stage of the process to develop the SWMP. As noted above, the breadth of the consultation and communication activities in Stage 2 & 3 will be defined once the content of the draft plan is known; a list of *potential* activities is provided below.

STAGE	PARTICIPATION	CONSULTATION	COMMUNICATIONS
Stage 1	<ul style="list-style-type: none"> • Establish Regional Solid Waste Advisory (RSWAC) and Steering Committee • RSWAC Meetings • Steering Committee Meetings 	<ul style="list-style-type: none"> • Establish protocol for tracking email and telephone input • Public workshop on waste management issues and solutions 	<ul style="list-style-type: none"> • Establish SWMP webpage on RDN website ○ Technical memos and reports ○ Advisory committee meeting minutes

			<ul style="list-style-type: none"> ○ Notices of consultation events ● Establish on-line sign-up for email updates Send out press release ● Article in RDN newsletter
Stage 2 (potential consultation and communication activities)	<ul style="list-style-type: none"> ● Regional Solid Waste Advisory Committee meetings ● Steering Committee meetings ● Stakeholder workshops 	<ul style="list-style-type: none"> ● Track email and telephone input ● Survey ● Stakeholder meetings ● Public information meetings /Open Houses ● Meeting(s) with neighbouring regional districts ● Stakeholder meetings ● Presentations to community groups and other interested organizations ● Exit surveys (at open houses and public meetings) ● On-line Survey (website link to survey) 	<ul style="list-style-type: none"> ● Website updates ● Newsletter ● Local government update for Municipal and First Nation councils ● Send out email update to distribution list ● Presentations to interested organizations (as requested)
Stage 3 (potential consultation and communication activities)	<ul style="list-style-type: none"> ● Regional Solid Waste Advisory Committee meetings ● Steering Committee meetings 	<ul style="list-style-type: none"> ● Open Houses ● Public Meetings ● Presentations to Municipal and First Nation Councils ● Meeting(s) with neighbouring regional districts ● Stakeholder meetings ● Presentations to community groups and other interested organizations ● Exit surveys (at open houses and public meetings) ● On-line Survey (website link to 	<ul style="list-style-type: none"> ● Website updates ● Newsletter, including <ul style="list-style-type: none"> ○ Key components of draft plan ○ Opportunities for input ○ Offer of presentations to interested groups ● Newspaper advertising of consultation opportunities ● Media releases ● Media interviews ● Local government update ● Facebook and Twitter

- survey)
- Receive and track email and telephone input
- postings
- FAQs (available on website and in hard copy)
- Notifications in local government publications
- Notifications on municipal websites (with link to SWMP webpage)
- Updates to email distribution list
- Public service announcements
- Information display (for use in recreation centres, libraries and other public venues)

Summarizing Input

Upon completion of consultation activities, all of the input received from the public and affected stakeholders will be collated and summarized so that it can be reported to the RSWAC. The input can be reviewed by RSWAC with the intention of determining if modifications to the SWMP should be recommended to the Board.

Once the SWMP document meets with the Board's approval, the Plan will need to be submitted to the Minister of Environment for approval, along with:

- i. Written commitments from municipalities and First Nations that are tasked to undertake measures identified in the SWMP
- ii. A report on the Public Review and Consultation Process.

The *Public Review and Consultation Process Report* should include:

- A description of all consultation activities undertaken during the course of the planning process, including:
 - RSWAC meetings
 - Steering Committee meetings
 - Workshops
 - Website
 - Stakeholder outreach, including meetings
 - Presentations to community groups
 - Newsletters
 - Media releases
 - Community displays
 - Advertising

- Social media
 - Copies of newsletters, advertising, press releases and other tools used to communicate with the general public and affected stakeholders
 - A description of First Nation engagement activities
 - The RSWAC terms of reference and a list of RSWAC members
 - Minutes of RSWAC and Solid Waste Subcommittee meetings.

Appendix A

**Regional Solid Waste Advisory Committee
Terms of Reference**

**RDN – REGIONAL SOLID WASTE ADVISORY COMMITTEE (RSWAC)
SOLID WASTE MANAGEMENT PLAN
TERMS OF REFERENCE**

1. BACKGROUND AND NEED

The Regional District of Nanaimo is undertaking a review of the Solid Waste Management Plan. Public and agency consultation representative of the diversity of the community is integral to the review. In accordance with the Ministry of Environment’s *Guide to the Preparation of Regional Solid Waste Management Plans* a single public and technical advisory committee will act as a “sounding board” of community interests and will provide advice to the Regional Board through the Solid Waste Management Select Committee.

2. ROLES AND RESPONSIBILITIES

The role of the RSWAC is to:

- Represent a balance of community interests;
- Act as advisory committee to the Solid Waste Management Select Committee on the development of the Solid Waste Management Plan;
- Review guiding principles and provide feedback for the Plan;
- Review information provided by the RDN and its consultants and provide comments and suggestions as well as highlight information gaps to be considered for the Plan;
- Provide input on design and implementation of public surveys and consultation processes;
- Assist in reviewing current programs and identifying issues and opportunities (Stage2 & Stage 3 report);
- Assist in developing and evaluating a variety of options and strategies for the draft Plan (Stage2 report);
- Participate in public consultation, as required (for example, attendance at Open Houses);
- Review public consultation results and provide input on the final Plan;
- Participate in smaller ad-hoc committees dealing with specific issues or tasks, as required; and,
- Contribute to programs and policies that are in the best interests of all residents of the RDN, balancing both community and industry needs and technical requirements.

Recommendations of the RSWAC are directed to the Solid Waste Management Select Committee.

3. COMPOSITION AND CHAIR

Chair and Vice Chair to be appointed by the Chairperson of the Board.

Voting Members:

- One representative from the Select Committee (or alternate);
- Up to 15 members representing a diversity of community interests such as from the following groups:
 - Private sector waste management industry service providers
 - Private sector solid waste facility representatives

- Non-profit group with an interest in solid waste management (e.g. reuse organization)
- Large institutional solid waste generator
- Business representatives, including one focused on the 3Rs
- Members at large for the community (community association, youth, senior)
- Regional Landfill Advisory Committee/Regional Landfill area representative
- Urban/rural geographic mix

Non-Voting Technical Advisors:

- Up to 12 members representing agencies including:
 - Regional District Staff – 3 members
 - Municipal Staff – 4 members
 - First Nations – 3 members
 - Provincial Agencies – 1 member
 - Federal Agencies – 1 member

4. RULES OF PROCEDURE

The Committee will act in accordance with the RDN Board Procedure Bylaw.

5. ADMINISTRATION

Administrative matters related to the RSWAC will be conducted by RDN staff acting through the Chair.

6. TERM

RSWAC will conclude its work when the Plan has been approved by the RDN Board. Members will be asked to commit for up to three years.

2015 Solid Waste Management Plan Review Issue Identification

The table below outlines the issues captured from the results of the findings in the Stage One Existing System Report as well as input from the following sources:

- Regional Solid Waste Advisory Committee (RSWAC) meeting September 2013;
- A solid waste haulers and recyclers roundtable meeting held in February 2014;
- A solid waste planning workshop held for RDN Board members in May 2014;
- A Zero Waste community day workshop held in October 2014; and,
- Two meetings of the RSWAC held in October and December 2014.

CONTEXT & TOPIC AREA	ISSUES IDENTIFIED
<p>1. Reduce/Reuse: ‘Reduce & Reuse’ are at the top of the waste management hierarchy, however these behaviours receive less promotion that recycling and proper waste disposal.</p>	<p><i>-How can we encourage waste reduction?</i> <i>-How to encourage behaviours that move “up the hierarchy” from recycling to reduction and reuse</i> <i>-How to move towards Sustainable product design and manufacturing</i> <i>-Is the per capital waste generation rate increasing or decreasing?</i></p>
<p>2. Extended Product Responsibility (EPR): EPR shifts the end-of-life management costs of consumer goods from local government taxpayers to procedures and consumers. In BC, the Recycling Regulation (BC Reg. 449/2004) defines the products and packaging that are included in an EPR program. Management of products is managed by stewardship organizations who – in turn- organize collection services throughout the province.</p>	<p><i>-Lack of awareness and confusion with EPR/take back systems (what to take where)</i> <i>-Uncertainty regarding the implications of future EPR programs</i></p>
<p>3. Curbside Collection Services: There is a diverse range of residential services that include 3 stream collection: garbage, recycling and food waste.</p>	<p><i>-How to improve diversion and the use of existing curbside services (yard waste, textiles, and glass and incontinence products, kitty litter)</i> <i>-Food waste participation in rural areas?</i> <i>-Does the residential collection model need improvement?</i> <i>-Does additional recovery of recyclables from the garbage Multi Recovery Facilities (MRF’s) have a role?</i></p>

CONTEXT & TOPIC AREA	ISSUES IDENTIFIED
<p>4. Industrial, Commercial & Industrial (ICI): Disposal bans are the main policy mechanism employed by the RDN to encourage recycling by the ICI sector.</p>	<p><i>-Need increased diversion of ICI waste this is supported by the 2012 Waste Composition Study</i></p>
<p>5. Construction, Demolition and Renovation: Construction, demolition and renovation waste is composed of a wide variety of materials, including recyclable materials such as wood, cardboard, metal and drywall. There are several companies that provide recycling collection to this sector</p>	<p><i>-How to encourage more diversion of construction, demolition and renovation waste</i> <i>-WCB asbestos management requirements create a challenge to the recovery and recycling of gypsum and C&D waste</i> <i>-Acceptance of creosoted materials and the appropriate tipping fee</i> <i>-Conflicting strategies for management of wood waste</i> <i>-Diversion of asphalt shingles from landfill</i> <i>-Lack of data regarding C&D waste</i> <i>-Lack of clarity on Future C&D regulations under BC's Recycling Regulation</i> <i>-Uncertain outlook for the Wood Waste Market</i></p>
<p>6. Resource Recovery/Zero Waste Policies: Recovering valuable resources from our waste streams is garnering significant attention as commodity prices fluctuate.</p>	<p><i>-When and how to implement Resource Recovery</i> <i>-Which resource recovery technology is best suited to the RDN's waste stream and size</i> <i>-How to manage hard to recycle items</i> <i>-Lack of high quality depot services in the City of Nanaimo</i></p>
<p>7. Residual Waste Management: The RDN's air space is the most important asset. Options to increase capacity are optimization of diversion, operations and airspace. The current landfill life is until 2037. Issues that emerge need to be explored further in conjunction with a long range waste generation projections in the context of the future financial model.</p>	<p><i>-What are desirable options once the regional landfill is full?</i> <i>-What options aren't desirable?</i> <i>-Illegal Dumping</i> <i>-WSML Licensing scheme/ Flow control options</i> <i>-Managing future waste generation</i></p>
<p>8. How does Waste to Energy (WTE) fit into the RDN's "Zero Waste Strategy"? Under what circumstances should WTE be considered/not considered.</p>	<p><i>- If not located in RDN</i> <i>- If only servicing RDN</i> <i>- If servicing Vancouver Island only</i> <i>- Specific technologies?</i> <i>- Large volumes typically required to make WTE financially attractive (competitive with landfilling)</i> <i>-Zero Waste International Alliance definition of Zero Waste does not allow combustion of waste for energy purposes</i></p>

CONTEXT & TOPIC AREA	ISSUES IDENTIFIED
<p>9. Financing the Solid Waste System: A sustainable financial business model is essential for the provision of solid waste services.</p> <p>The majority of funding for the Solid Waste function is currently drawn from RDN tipping fees. Since 2014, expenses are exceeding revenues with the deficit being funded by increasing the Tax requisition. Current funding mechanism not able to adapt to change in market forces. The following three mechanisms for consideration: decrease in spending, adjust tipping fees, and taxation generated the following issues.</p>	<ul style="list-style-type: none"> -How to pay for waste reduction initiatives -current method of funding the solid waste function through tipping fees is unsustainable -How to finance the RDN's solid waste management infrastructure -How to fund Nanaimo Recycling Exchange & Non-profits -Private waste export of MSW & how it destabilizes the RDN waste management system -Stable funding for non-profits -Lack of full cost recovery associated with provision of EPR Collection Services -Recycling markets limited market for post-consumer glass, and film plastic

**SOLID WASTE MANAGEMENT PLAN REVIEW
WORK PLAN & PROPOSED TOPICS**

DATES	MEMORANDUMS & DRAFT PLAN DEVELOPMENT
<p>Feb 19</p> 	<p>MEMORANDUM 1 Projected Waste Generation</p> <p>Forecasting future waste quantities is fundamental for planning waste management programs and services. If we don't know how much waste we are going to need to manage we can't plan for the types of programs and services we will need to provide. Applying the Provincial model for waste generation suggests the following: Under a status quo scenario of 70% diversion over the next 10 years forecasts a per capita waste disposal of 291kg with a total amount of residuals of 50,715 metric tonnes annually by 2025.</p> <p>Under the Province's most optimistic forecast of 81% diversion over the next 10 years a per capita waste disposal of 185kg with a total amount of residuals of 32,119 metric tonnes annually by 2025 is achievable. <i>Discussion Point: Does the RSWAC committee want to set the new target at 80% for the new plan?</i></p>
<p>April 16</p>	<p>MEMORANDUM 2 Reduce, Reuse, Education & EPR</p> <p>The main challenges related to waste reduction and reuse are the dominant culture of consumption and the design and manufacture of consumer goods. The RDN's efforts to date primarily focus on educating residents and businesses and supporting Extended Producer Responsibility (EPR) programs that are offered at by community run and privately operated recycling depots. <i>Discussion Points: Does the RSWAC advocate for stronger EPR and support the continuation of existing EPR programs, increase education efforts and advocate for more EPR programs?</i></p>
	<p>MEMORANDUM 3 The 3rd R: Recycling - Collection Services and End Uses</p> <p>Strategies and practices related to collection and end uses of food waste, garbage and recyclables are well established and accepted in the region. The responsibility for funding residential and multi-family recycling programs shifted to industry stewards in May 2014. Organics management is provided by the private sector that has been instrumental for the RDN to implement its organics management strategy, which includes a ban on commercial food waste. <i>Discussion Point: Does the RSWAC support the continuation of existing programs as well as discussing ways to harmonize or expand collection options.</i></p>

<p>May 28</p>	<p>MEMORANDUM 4 Zero Waste Plan & Regulatory Issues The memorandum will address several regulatory and community issues that were identified through issue identification phase that included gaps in data for the commercial sector and waste import/export, expanding disposal bans, review of the Waste Stream management bylaw, community planning for waste management facilities and ongoing concerns about illegal dumping. Regional districts have the authority under the BC Environmental Management Act to regulate the solid waste industry to ensure diversion, prevent abandonment of materials, track movement of waste, and protect the public interest by managing waste flow to ensure financial sustainability. <i>Discussion Point: Is the RSWAC satisfied with the level of regulation of waste facilities and haulers and the RDN’s approach for coordinating illegal dumping?</i></p>
	<p>MEMORANDUM 5 Memo 5 - Resource Recovery The memo will focus on the recovery of energy and non-energy solid waste resources at the RDN. A number of resource recovery technologies and approaches are discussed and compared with information drawn from various feasibility studies conducted over the past years. The tri region study identified a number of financial projections for Waste to Energy scenarios ranging from enhancing the existing system to potential short term (up to 2020) and long term (beyond 2020) options. The RDN has to meet 70% diversion before waste to energy can be considered as a solid waste management option; therefore WTE will only be considered conceptually during this plan development. Waste to Energy counts as recovery if 60% energy is recovered. The Metro Vancouver Waste to energy proposal raised the profile of out of district waste being managed at an in-region WTE facility. <i>Discussion Point: the RSWAC committee is divided on the Waste to Energy debate. Is there a role for Waste to Energy in future Solid Waste Planning? Is there a place for an Out-of Region WTE or an RDN WTE facility?</i></p>
<p>June 18</p>	<p>MEMORANDUM 6 Residual Management Residuals management in the RDN consists of disposal of municipal solid waste at the Regional Landfill, owned and operated by the RDN, and disposal of construction and demolition waste at a variety of privately operated facilities throughout the RDN. The Regional Landfill’s most important asset is its airspace which makes it paramount to conserve the landfill for as long as possible. Options for increasing capacity are the optimization of diversion, operations and airspace. The current fill design provides landfill capacity until 2037. Discussion Points: Are there other fill design concepts given the projected decrease in volume that could increase landfill life? These concepts need to be explored further in conjunction with a revised landfill capacity study. In addition it will be necessary to review this in the context of the financial model as the current method of funding the solid waste function through tipping fees is unsustainable.</p>
	<p>MEMORANDUM 7 Financial Management A sustainable financial business model is essential for the provision of solid waste services. The majority of funding for the RDN function is currently drawn from tipping fees charged at the Regional Landfill and Church Road Transfer Station. Since 2013, expenses are exceeding revenues with the deficit being funded by reducing spending and increasing the tax requisition. <i>Discussion Point: to bring future finances in balance: the memorandum will review three mechanisms: (i) decrease spending, (ii) increase/decrease tipping fees and (iii) tax requisition. A modelling exercise maybe required based on the projected waste tonnage to test various assumptions and combinations.</i></p>

Appendix F – RDN Solid Waste Management Plan Community Consultation Summary

TO: Larry Gardner
Manager, Solid Waste Services

DATE: November 18, 2015

FROM: Sharon Horsburgh
Senior Solid Waste Planner,
Solid Waste Services

MEETING: RSWAC, November 25, 2015

FILE: 5360-01

SUBJECT: RDN Solid Waste Management Plan Community Consultation Summary

PURPOSE

To provide an update on the community consultation with respect to the SWMP.

BACKGROUND

The Regional District of Nanaimo (RDN) is undertaking a review of its Solid Waste Management Plan (SWMP), which has been amended three times since provincial approval of the original Plan in 1988. The RDN has fully implemented their last SWMP, which was finalized in 2004. The current plan review is intended to identify “what’s next” and chart the course for solid waste management for the coming years. The process to review and update the region’s SWMP is as follows:

- Stage 1 (completed) – Review and analysis of current solid waste management system, status of the 2005 Plan, and identification of issues and opportunities for improvement;
- Stage 2 (60% complete) – Identify and review options to address the region’s future waste management requirements, select preferred options and prepare a report presenting the findings;
- Stage 3 – Prepare a draft updated SWMP, carry out a public review of the draft plan, incorporate changes from the public review and finalize the plan.

Consultation is a mandatory component of the planning process and is critical to the creation of a plan that can be supported by the public. Consultation is carried out throughout the process and commonly begins with dissemination of information to more active dialogue with the community in Stages 2 and 3 as options are reviewed and selected.

The Ministry of Environment outlines the expected components of a community consultation process in their document *Guide to the Preparation of Regional Solid Waste Management Plans by Regional Districts*. In addition, the RDN has a public consultation / communication framework to ensure a consistent, comprehensive and cost-effective approach to public consultation and communication initiatives. This framework, along with the Ministry’s guide, was used to prepare the Consultation & Communications Plan, which was presented to RSWAC in December 2014. To ensure the RDN is meeting the Ministry guideline, Maura Walker & Associates has been retained to provide feedback on the adequacy of the RDN’s efforts in relation in the Ministry of Environment’s *Guide to the Preparation of Regional Solid Waste Management Plans by Regional Districts*. Please refer to Appendix 1.

OBJECTIVES OF THE CONSULTATION & COMMUNICATIONS PLAN

Implementation of the Consultation & Communications Plan is intended to achieve the following objectives:

- i. Ensure that the process to develop the plan is collaborative and reflects a broad range of perspectives;
- ii. Provide opportunities to educate the public about the Solid Waste Management Plan and future options for managing waste;
- iii. Provide opportunities for public input on a range of options and estimated costs;
- iv. Increase support for the resultant solid waste management planning and programs;
- v. Meet the consultation expectations of the Ministry of the Environment.

IMPLEMENTATION STATUS

This memorandum describes the Consultation & Communications activities that have been completed to date.

REGIONAL SOLID WASTE ADVISORY COMMITTEE

The RSWAC is a multi-functional advisory and monitoring committee, combining technical, public and political interests into one committee. In our experience a combined committee ensures open, transparent and meaningful communication between all participants. RSWAC provides advice to the Regional District Board in regards to the content of the plan and associated consultation activities.

The committee is chaired by a non-voting RDN Board member to provide a direct link between the advisory committee and the RDN Board. Current membership of the RSWAC includes:

Alec McPherson	Chair, RDN Director
Jim Kipp	RDN Director, Deputy Chair
Craig Evans	Member at Large
John Finnie	Member at Large
Michele Green	Member at Large
Gerald Johnson	Member at Large
Jim McTaggart-Cowan	Member at Large
Ellen Ross	Member at Large
Amanda Ticknor	Member at Large
Frank Van Eynde	Member at Large
Larissa Coser	Community Representative
Jan Hastings	Non Profit Representative
Derek Haarsma	Business Representative
Michael Tripp	Business Representative
Wally Wells	Business Representative
Ed Walsh	Waste Management Industry
Stewart Young Jr.	Business Representative
Chief & Council	Nanoose First Nation
Chief & Council	Snuneymuxw First Nation
Michael Recalma	Qualicum First Nation
John Marsh	Town of Qualicum Beach
Fred Spears	District of Lantzville

Charlotte Davis
Glenn Gibson
Al Leuschen
Karen Muttersbach

City of Nanaimo
Island Heath
Ministry of Environment
Environment Canada

To date, there have been 10 meetings of RSWAC in association with updating the SWMP.

SOLID WASTE MANAGEMENT SELECT COMMITTEE

The RDN Board established a Solid Waste Management Select Committee (SWMSC), made up of members of the RDN Board, to oversee the process to update the RSWMP. This committee allows for deeper political consideration of the issues and ideas raised during planning process than would normally be afforded in regular Board meetings.

STAKEHOLDER CONSULTATION & COMMUNICATIONS

To date, the following stakeholder groups have been engaged as part of the consultation process:

- Neighbouring Regional Districts:
 - The RDN has collaborated with Cowichan Valley Regional District and Capital Regional District to review options for New and Emerging Technologies.
 - The RDN participates on the Association of Vancouver Island and Coastal Communities (AVICC). AVICC established a special committee on Solid Waste Management in response to the need identified by members to initiate a process to work toward finding a long-term sustainable strategy for solid waste management on Vancouver Island and the coastal communities. The nine regional districts within the AVICC region are committed participants. The Chair of the RSWAC represents the RDN on the AVICC special committee.
 - In April 2014, a presentation regarding organics diversion was provided in conjunction with MOE Staff and Metro Vancouver Staff at the BC Land Summit to an audience of 50.
- Local business associations:
 - In October 2014 the RDN was invited to speak at the Waste Management Association of BC with regards to our SWMP.
- Waste haulers and processors:
 - On February 18, 2014 the RDN hosted a roundtable discussion with solid waste industry representatives and elected officials. Approximately 60 people were in attendance.
 - Staff responded to two Strata's that were interested in the Solid Waste Management Planning process in relation to organics collection for multi-family buildings. On November 14, 2014 staff presented strata members the various options for composting available to multi-family residents. There were roughly 60 people in attendance. In August 2015, RDN staff worked collaboratively with a large multi-family building to introduce a curbside collection program for recycling and food waste.
 - Interviews are ongoing with individual waste stream management license (WSML) as part of the WSML inspection schedule. These stakeholders are contacted in person and feedback is gathered by face to face interview. The topic of the SWMP development process is introduced and feedback on the implications for their disposal facilities is documented.

PUBLIC CONSULTATION & COMMUNICATIONS

From the start of the process to update the SWMP, there have been many tools employed to keep the general public informed about the planning process, as well as activities where the general public have been engaged to provide their opinion. The following table details the communication and consultation activities that have been undertaken so far.

Communication Activities	
Residential Newsletters: Zero Waste & Regional Perspectives Solid Waste Curbside newsletters from the RDN and the City of Nanaimo.	<ul style="list-style-type: none"> ▪ December 2013 – Zero Waste Newsletter ▪ March 2015 – Zero Waste Newsletter ▪ Fall 2013 – Regional Perspectives ▪ Summer 2015 – Regional Perspectives ▪ RDN - Summer 2013 ▪ RDN - Winter 2013 ▪ City of Nanaimo - Fall 2013 Newsletter
RDN website	<ul style="list-style-type: none"> ▪ The RDN website has a dedicated SWMP webpage that is updated regularly with information about the SWMP process. Information posted includes: <ul style="list-style-type: none"> ○ RSWAC agendas and minutes ○ Technical memoranda/discussion papers ○ Media releases ○ Links to active on-line surveys ○ Information about consultation events
Cable Television	<ul style="list-style-type: none"> ▪ March 5, 2015 RDN conducted an interview with Shaw Cable’s Ian Holmes. The main topics included: <ul style="list-style-type: none"> ○ Garbage/recycling issues facing RDN, ○ What a solid waste management plan will do, ○ Landfill or incineration, and ○ Future changes in curbside pick-up.
Consultation Activities	
Zero Waste Community Day	<ul style="list-style-type: none"> ▪ October 4, 2014 the RDN participated in the Zero Waste Community Day that was part of the Zero Waste Nanaimo Conference.
Surveys	<ul style="list-style-type: none"> ▪ On-line surveys were conducted in the winter and summer of 2015 to get early input from the public on various solid waste issues and options. The winter survey received 450 responses and the summer survey received 180 responses. ▪ Public outreach was conducted at regional facilities on 4 separate occasions and approximately 110 customers were presented with the survey.
Tracking Feedback	<ul style="list-style-type: none"> ▪ Approximately 20 phone calls have been received to date at the RDN offices regarding the plan. All input received from the public (phone, email, fax, letters) is tracked so that it can be considered by RSWAC and the Board when considering what to include in the updated plan.

<p>Presentations to Community Groups</p>	<ul style="list-style-type: none"> ▪ On request, RDN staff attended community group meetings to present on the SWMP, respond to questions and gather feedback. <ul style="list-style-type: none"> ○ November 4, 2014 - Horses of Hope – Dealing with Deceased animal carcasses in the context of Solid Waste Management Planning. ○ August 10, 2015 intergovernmental MFD meeting at Cameron Island Multi family residence. 25 strata residents received information regarding the introduction of a multi-family recycling and organics collection service. ○ September 4, 2015 AVICC - Vancouver Island Conference ○ On November 14, 2015, staff attended the Millstream Acres Strata Meeting. Roughly 60 people were in attendance.
<p>Community events</p>	<ul style="list-style-type: none"> ▪ Staffed information displays on the SWMP were in place at several community events and the number of people we interacted with: <ul style="list-style-type: none"> ○ July 5, 2015 - Qualicum Beach Family Day (35) ○ July 23 & 25, 2015 - Nanaimo Bathtub Days (55) ○ August 15, 2015 Errington Farmers Market (50) ○ August 21-23, 2105 – Vancouver Island Exhibition (300) ○ September 12, 2105 - Lantzville Minetown Day (25) ○ October 8, 2015 - Vancouver Island University Sustainability Fair (15)

MUNICIPAL CONSULTATION & COMMUNICATIONS

Municipal councils are a key stakeholder in the planning process and the Communications and Consultation Plan aims to keep the Councils informed of the Plan’s development. The following table details the municipal engagement activities that have been undertaken so far.

<p>Parksville Council Meeting</p>	<p>May 27, 2014 – Overview of Solid Waste Management Plan review process.</p>
<p>Nanaimo Council Meeting</p>	<p>August 18, 2014 - Overview of Solid Waste Management Plan review process.</p>
<p>Lantzville Council Meeting</p>	<p>September 8, 2014 - Overview of Solid Waste Management Plan review process.</p>

FIRST NATIONS CONSULTATION & COMMUNICATIONS

Local First Nations have been included in the consultation process to date they receive meeting invites, to RSWAC as well as the agendas, meeting minutes and technical information.

UPCOMING ACTIVITIES

A Strategic Communications Plan is being developed for Stage 3 consultation. To promote the public meetings, ads will be published in each of the Nanaimo Daily News, Harbour City Star, Gabriola Sounder, Nanaimo Bulletin, PQ News and Take 5. Ads will indicate dates, times and locations of the public meetings.

IMPACT ON DIVERSION

The Solid Waste Management Plan review is an opportunity to review existing waste diversion targets and for the Region to consider establishing new targets as well as to categorize and evaluate existing quantities.

REGULATORY AUTHORITY

Consultation is a mandatory component of the SWMP review process. The Ministry of Environment's document *Guide to the Preparation of Regional Solid Waste Management Plans by Regional Districts* requires that public consultation be conducted. Any new regulatory authorities must be requested by Regional Districts and included in the SWMP to be considered for approval by the Province.

SUMMARY/CONCLUSIONS

The RDN is undertaking a review of its SWMP. The current plan review is intended to chart the course for solid waste management for the next five years. The review and update of the SWMP is a three stage process.

Consultation is a mandatory component of the planning and is carried out throughout the process. The Consultation & Communications Plan is intended to achieve the following objectives: ensure that the process to develop the plan is collaborative and reflects a broad range of perspectives; provide opportunities to educate the public about the SWMP and future options for managing waste, provide opportunities for public input on a range of options and estimated costs, increase support for the resultant solid waste management planning and programs, meet the consultation expectations of the MOE.



Maura Walker & Associates
ENVIRONMENTAL CONSULTANTS

Sharon Horsburgh, Senior Solid Waste Planner
Regional District of Nanaimo
6300 Hammond Bay Road
Nanaimo, BC V9T 6N2

November 13, 2015

Dear Sharon,

Re: RDN Solid Waste Management Plan Stage 1 and 2 Consultation Efforts

As per your request, I have reviewed the memorandum entitled *RDN Solid Waste Management Plan Community Consultation Summary* for the purposes of providing feedback on the RDN's consultation efforts to date. This letter provides my opinion on the adequacy of the efforts in relation to the Ministry of Environment's *Guide to the Preparation of Regional Solid Waste Management Plans by Regional Districts*, as well as the proposed modifications to these guidelines as outlined in the Ministry's Intention Paper (September 2015).

The following table lists the Ministry's proposed consultation principles, which build on the direction of the existing guidelines, and lists how the RDN's consultation process has (or has not) incorporated these principles in its SWMP consultation efforts to date.

Ministry's Proposed Consultation Principles	Efforts Undertaken by the RDN
Stakeholder involvement begins at the design stage of the consultation process	<ul style="list-style-type: none"> • Draft consultation plan provided to RSWAC at December 11, 2014 meeting for input • General public engaged early in the planning process through on-line surveys • Engaging with the community through a dialogue on how to achieve Zero Waste at the Zero Waste Community Day
The consultation process engages a cross-section of the stakeholder group that may include waste	<ul style="list-style-type: none"> • RSWAC is a combined public and technical committee with a broad range of stakeholder

<p>and recycling service providers, product stewardship agencies, local environmental groups and recycling organizations, residents within the plan's region, engineering and/or planning departments of the regional district's member municipalities, First Nations within or adjacent to the plan area, local business groups and ratepayers organizations, consumer groups, unions, large commercial and institutional solid waste generators, and local school districts</p>	<p>interests represented</p> <ul style="list-style-type: none"> • Direct contact with affected stakeholder groups conducted as a need to do so is identified, or as requested; e.g. Meetings with local solid waste industry (February and October 2014) and meetings with strata councils
<p>Stakeholders are provided with effective and timely notice of consultation opportunities</p>	<ul style="list-style-type: none"> • RDN and City of Nanaimo newsletters are used as vehicles to inform residents about the planning process and available opportunities for input • The dates for RSWAC meetings are established and shared with the committee members well in advance of the actual meeting dates
<p>Stakeholders are able to determine the implications to their interest by reading the wording in the document that is the subject of the consultation</p>	<ul style="list-style-type: none"> • Detailed RSWAC meeting minutes are provided to the committee in draft form and ratified at the subsequent meeting
<p>Stakeholders are provided with sufficient time to respond to draft documents</p>	<ul style="list-style-type: none"> • RSWAC agenda packages, including technical reports, are generally sent to committee members electronically one week in advance of meetings to provide adequate review time
<p>Proceedings and results of activities that are part of the consultation process are properly documented and available for public review so that stakeholders are able to see how the plan will or will not address their comments or issues</p>	<ul style="list-style-type: none"> • All of RSWAC agenda packages are posted on the RDN's SWMP website • All ratified RSWAC minutes are posted on the RDN's SWMP website • All related background reports and technical memoranda are posted on the RDN's SWMP website • Tracking feedback received through phone calls, emails and other forms of communication (Note: the mechanism for sharing this input with RSWAC is undefined in the memorandum)

It is clear from the above table, that the RDN is undertaking a consultation program that is in line with the Ministry's proposed guidelines. The primary venue for consultation during Stages 1 and 2 has been RSWAC, as intended by the Ministry's Guidelines. The inclusion of general public engagement activities such as the on-line surveys and the newsletters goes above and beyond the Ministry's expectations for Stages 1 and 2, and is to be commended.

As you progress into Stage 3 of the planning process, it is expected that the draft of the RDN's updated SWMP will be subject to an appropriate level of consultation, with both affected stakeholders and the general public. The extent of consultation activities should correlate to the significance and impact of proposed actions identified in the draft plan.

As the last consultation principle in the table notes, it will be important to effectively record the input received during this final Stage, as well as show how this input was considered in the preparation of the final version of the SWMP is evident.

To satisfy the expectations of the Ministry, I believe the core objectives of your Stage 3 consultation process should be:

- To be inclusive of all interests;
- To be open and transparent; and
- To provide an opportunity for all community voices to be heard.

The RDN is well on its way to meeting these objectives.

Yours truly,



Maura Walker

Appendix G – RDN Stage 2 Consultation Summary

TO: Regional Solid Waste Advisory
Committee

MEETING: May 25, 2017

FROM: Sonam Bajwa
Special Projects Assistant

FILE: [Click here to enter text.](#)

SUBJECT: Stage 2 Solid Waste Management Plan Consultation and Communications Summary 2017

RECOMMENDATION

1. That the Regional Solid Waste Advisory Committee receives this report for information.

SUMMARY

The Regional District of Nanaimo (RDN) is undertaking a review of its Solid Waste Management Plan (SWMP). The current plan review is intended to chart the course for solid waste management for the next ten years. A review is carried out in a three stage process as follows:

- Stage 1: Review of the Current System
- Stage 2: Consideration and Selection of the Preferred Future Options
- Stage 3: Adoption of the Preferred Options and Development of the Implementation Schedule

Public consultation is a mandatory element of the SWMP development. On November 25, 2015, the report *RDN Solid Waste Management Plan Community Consultation Summary* was released which summarized consultation activities from initiation of the planning review in the fall of 2013 to the fall of 2015. This report is a continuation of the November 2015 report and updates consultation activities up to the end of Stage 2.

On December 1, 2016, the Regional Solid Waste Advisory Committee (RSWAC) endorsed the Draft Stage 2 SWMP to be released for public consultation. Subsequently, the Draft Stage 2 SWMP report was sent to a wide range of stakeholders in the region. The package included an offer for RDN staff to present or discuss the report along with a request for feedback and/or comment by the end of February.

A total of 77 different groups were contacted, including municipal councils, First Nations, business, industry, hospitality, institutions, regional districts, and community organizations. A list of those contacted for Stage 2 consultation is presented in Attachment 1 and questions and comments received during the consultation period are presented in Attachment 2. The overall response can be characterized as follows:

- Support for effort to increase commercial and multifamily diversion and increased education and enforcement.
- Support for 90% diversion goal.
- Do not support the RDN investing in a material recovery facility.
- Open to seeking additional regulatory tools, pending further detail and discussion.

BACKGROUND

The SWMP has been amended three times since provincial approval of the original Plan in 1988. The RDN fully implemented their last SWMP, which was prepared in 2004. The status of the current SWMP review is as follows:

- Stage 1 (completed) – Review and analysis of current solid waste management system, status of the 2004 Plan, and identification of issues and opportunities for improvement;
- Stage 2 (nearing completion) – Identify and review options to address the region’s future waste management requirements, select preferred options and prepared report presenting the findings;
- Stage 3 (summer/fall 2017) - Prepare a draft updated SWMP with an implementation timeline and costing, carry out a public review of the draft plan, incorporate changes from the public review and finalize the plan.

Consultation is a mandatory component of the solid waste management planning process and is critical to the creation of a plan that is supported by the public. The Ministry of the Environment (MoE) outlines the expected components of a community consultation process in their document *Guide to the Preparation of Regional Solid Waste Management Plans by Regional Districts*. In addition, the RDN has a public consultation/communication framework to ensure a consistent, comprehensive and cost-effective approach to public consultation and communication initiatives.

This framework, along with the Ministry’s guide, was used to prepare the Consultation & Communications Plan, which was presented and supported by the RSWAC and the Solid Waste Management Select Committee. An external consultant with expertise in solid waste management planning also reviewed the plan and confirmed that it is consistent with provincial requirements. A copy of the plan was also sent to the Ministry of Environment.

The Consultation & Communications Plan is intended to achieve the following objectives: ensure that the process to develop the SWMP is collaborative and reflects a broad range of perspectives; provide opportunities to educate the public about the SWMP and future options for managing waste, provide opportunities for public input on a range of options and estimated costs, increase support for the resulting solid waste management planning and programs and meet the consultation expectations of the Ministry of the Environment.

Regional Solid Waste Advisory Committee

The Regional Solid Waste Advisory Committee (RSWAC) plays a significant role in representing the community’s interests with the expectation that their perspectives will largely reflect those of the broader community. The RSWAC is made up of a cross section of representatives from the community and as intended to address social, business, technical and political interests.

RSWAC provides advice to the RDN Board via the Solid Waste Management Select Committee, which is made up of a subset of the Board.

The RSWAC is chaired by a non-voting RDN Board member to provide a direct link between the advisory committee and the Select Committee and Board. In 2016 the RSWAC met 9 times to discuss the SWMP update. Current membership of the RSWAC is provided in Attachment 3.

Consultation & Communications

A list of 77 groups contacted for Stage 2 consultation is presented in Attachment 1 and comments received during the consultation period are presented in Attachment 2.

Public Communications:

A number of communication tools have been employed during the SWMP update process to keep the community informed and hear their opinions, including:

- Residential Newsletters:
 - A brief introduction to the Stage 2 SWMP Highlights was included on the front page of the spring 2017 Zero Waste Newsletter mailed out to all residential homes in the RDN.
- RDN Website
 - The RDN website has a dedicated SWMP webpage that is updated regularly with information about the SWMP process. Information posted includes:
 - RSWAC agendas and minutes
 - Technical memoranda/discussion papers
- Community Events
 - Staffed information displays on the SWMP were in place at several community events:
 - Communities Protecting Our Coast - *Plastic Ocean* Film community viewing. - January 6, 2017 & January 22, 2017.
 - Water Day – March 12, 2017
 - Earth Day – April 23, 2017

Local and Regional Government Consultation:

- Municipal councils are a key stakeholder in the planning process and the Communications and Consultation Plan aims to keep the Councils informed of the Plan’s development. The Draft Stage 2 Solid Waste Management Plan highlights were presented as follows:

City of Nanaimo Council Meeting	January 23, 2017 – 7:00pm
District of Lantzville Council Meeting	January 23, 2017 – 7:00pm
RDN Special Board Meeting	January 24, 2017 – 4:30pm
City of Parksville Council Meeting	February 6, 2017 - 6:00pm
Town of Qualicum Beach Special Council Meeting	February 22, 2017 – 10:00am

The RDN received many questions from city councils, some regarding the licensing of waste haulers as agents and other options considered that are not going forward. Feedback was amenable to exploring waste haulers as agents. There was also support for mandatory source separation increased education and enforcement.

- The RDN met with Cowichan Valley Regional District (CVRD) to discuss the options presented in Stage 2 draft of the SWMP and reached out the Comox Valley Regional District and Alberni Clayoquot Regional District as well. The CVRD was receptive to the SWMP and indicated general support.

Stakeholder Consultation:

- Local business associations:
 - The RDN sent consultation invites to local business associations in the region including downtown improvement, construction, strata owners and hotel associations.
 - The RDN presented the SWMP to the Nanaimo Chamber of Commerce on Feb 22, 2017. Comments and questions received support efforts to increase commercial and multifamily diversion.
- Vancouver Island Strata Owners Association:
 - The RDN met with the Vancouver Island Strata Owners Association on April 2, 2017.
 - Comments and questions received concerned the timeline for source separation regulation and how that might affect stratas. There was support for the SWMP overall, specifically support for an increase in education.
- Waste Industry:
 - On February 28, 2017 the RDN hosted a consultation with solid waste industry representatives. Approximately 30 people were in attendance.
 - There was a wide range of opinions from industry. Some were receptive to the fee differential provided the RDN would give more details on what it would look like. Others were firmly against the RDN investing in a Material Recovery Facility (MRF). Many were uncertain of what the SWMP would mean for the future of their business.
 - The RDN received a letter from Vancouver Island Recycling and Waste Industry Coalition highlight areas of the SWMP they support and areas they do not, included in attachment 4. Two key policy messages are:
 - 1) Local governments should not be in competition with the private sector. The role of local governments should be to adopt a target setting, education and enforcement role.
 - 2) Open and fair competition in the sector will create value for residents while keeping costs low. Industry investment in infrastructure can only happen when government sends a clear signal that it will not build competing infrastructure or restrict free trade.
- Other Stakeholders
 - The RDN reached out to a number of other stakeholders such as hotels and inns, community groups, BC Ferries, Vancouver Island University, Vancouver Island Health Authority (VIHA) and School District 68 and 69.
 - The RDN presented to 11 VIHA Environmental Officers on January 25th, 2017. Overall comments and questions received support efforts to increase diversion from the commercial sector.
 - February 15th, 2017 North Cedar Improvement District – Receptive to the plan but suggest that there needs to be a focus on making recycling more convenient for all demographics.

First Nations Engagement:

Local First Nations have been included in the consultation process. To date they receive meeting invites to RSWAC as well as the agendas, meeting minutes and technical information.

RDN Staff hand delivered consultation invitations to Snaw-Naw-As First Nation, Qualicum First Nations and Snuneymuxw First Nation in hopes of discussing any possible implications the Draft Stage 2 SWMP report may have. No replies were received.

FINANCIAL IMPLICATIONS

There are no Regional District of Nanaimo budget implications associated with adopting this report.

STRATEGIC PLAN IMPLICATIONS

Considering the environmental impacts of solid waste aligns with the RDN Strategic Priority of protecting and enhancing our environment in all decisions under “Focus on the Environment”. The SWMP also aligns with investing in regional services that look at both costs and benefits as part of “Service and Organizational Excellence”. The consultation process presented in this report is consistent with the Ministry of Environment’s requirements for community consultation.

Sonam Bajwa
Sbajwa@rdn.bc.ca
March 16, 2017

Reviewed by:

- L. Gardner, Manager
- R. Alexander, General Manager
- P. Carlyle, Chief Administrative Officer

Attachments

1. List of Stakeholders Contacted for Stage 2 Consultations.
2. Feedback from Stage 2 Consultation
3. Current RSWAC Membership
4. Letter from VIRWC

Attachment 1 – List of Stakeholders Contacted for Stage 2 Consultations.

Stakeholder Type	Organization Name
Business Association	Downtown Nanaimo Business Improvement Association
	Better Business Bureau
	Qualicum Beach Downtown Business Association
	Downtown Parksville Business Association
	Parksville Chamber of Commerce
	Greater Nanaimo Chamber of Commerce
Environmental Organization	Qualicum Chamber of Commerce
	Zero Waste Nanaimo
First Nations	Snaw-Naw-As First Nation
	Snuneymuxw First Nation
	Qualicum First Nation
Government Association	Association of Vancouver Island and Coastal Communities
Hospitality Industry	BC Ferries
	Beach Acres Resort
	Best Western Dorchester Hotel
	Coast Bastion Inn
	Days Inn Nanaimo Harborview
	Howard Johnson Harbour side Hotel
	Inn on Long Lake
	Ocean Trails Resort
	Qualicum Bay Resort
	Qualicum Beach Inn
	Quality Resort Bayside
	Sand Pebbles Inn
	Seaview Beach Resort
	Shady Shores Beach Resort/Log House
	Tigh-Na-Mara Seaside Spa Resort & Conference Centre
Wheatsheaf Inn	
Industry Association	Vancouver Island Strata Owners Association
	Canadian Home Builders Association - Central Vancouver Island
	Vancouver Island Construction Association
	British Columbia Restaurant and Food Service Association
	BC Hotel Association
Municipal Partner	City of Parksville
	District of Lantzville
	City of Nanaimo
	Town of Qualicum Beach
	North Cedar Improvement District
Neighbouring Regional District	Cowichan Valley Regional District
	Alberni-Clayoquot Regional District
	Comox Valley Regional District
School/Institution	Vancouver Island University
	Vancouver Island Health Authority
	NRGH Home Dialysis Program & Nanaimo Kidney Care Clinic
	School District 68
	School District 69

Service Organization	Nanaimo North Rotary
	Rotary Club of Nanaimo Daybreak
	Rotary Club of Lantzville
Waste Industry	Got Junk
	Haarsma
	DBL disposal Services
	Milner group
	Alpine disposal
	Progressive Waste Inc.
	Island Removal
	Emterra
	The Most Affordable Junk Removal
	Contain A Way Services
	Sun Coast Waste Services
	Nanaimo Exteriors
	Regional Recycling
	Carl's Metal Salvage
	Gabriola Island Recycling Organization
	Parksville Bottle Depot
	Nanaimo Organic Waste
	Earthbank Resources Systems
	Cascades Recovery Inc.
	Coast Environmental Services
	Nanaimo Recycling Exchange
Waste Management	
Super Save Group	
DJC Services	
Waste Management Association	Air and Waste Management Association, Vancouver island Chapter
	Waste Management Association of BC
	Vancouver Island Recycling and Waste Industry Coalition
	Coast Waste Management Association

Attachment 2 – Questions and comments received during Stage 2 Consultation.

Advocacy	Ontario has a requirement to reduce plastic packaging every year. Could we implement such a requirement here?	Town of Qualicum Beach Special Council Meeting February 22, 2017
Advocacy	Programs are needed to get manufacturers to take back and recycle their products (particularly appliances and electronics). Can RDN work with stakeholders to improve programs?	Town of Qualicum Beach Special Council Meeting February 22, 2017
Advocacy	Cost of recycling old drywall with asbestos is on the homeowner rather than the manufacturer.	Town of Qualicum Beach Special Council Meeting February 22, 2017
Advocacy	Confusion over the variety of packaging on the market. Will there come a point when all packaging can be recycled?	VISOA April 2, 2017
C&D	Recycling of Construction and Demolition waste is inconsistent, some do a good job, and some send materials to landfill. What can we do?	City of Nanaimo Council Meeting January 23, 2017
C&D	Presentation pie chart showed 2% demolition waste, believe this is higher. How can we reduce demolition waste disposal? What have other RDs done to reduce Demolition waste? Example of Richmond bylaw?	Town of Qualicum Beach Special Council Meeting February 22, 2017
Commercial	Comment regarding “fancy” RD facilities vs “cheap” private facilities.	Town of Qualicum Beach Special Council Meeting February 22, 2017
Commercial	There is some confusion about whether or not recycling is provided for businesses by the RDN.	Town of Qualicum Beach Special Council Meeting February 22, 2017
Curbside Services	Would the RDN endorse/support a yard waste collection program?	District of Lantzville Council Meeting January 23, 2017
Curbside Services	Interest in options to collect glass curbside, support for some service.	North Cedar Improvement District February 15, 2017
Curbside Services	Regulations are ineffective without enforcement. Enforcement needs to be fair.	North Cedar Improvement District February 15, 2017
Curbside Services	A participant thinks there is strong resident support for yard and garden pickup.	RDN Special Board Meeting January 24, 2017
Curbside Services	Glass recycling is less convenient than plastic recycling, which incentivizes plastic use. Would like to see consideration of glass recycling at curbside.	Town of Qualicum Beach Special Council Meeting February 22, 2017

Curbside Services	Can RDN undertake curbside textiles pickup?	Town of Qualicum Beach Special Council Meeting February 22, 2017
Curbside Services	What actually happens to the plastic that gets picked up at curbside? Is it reused/recycled?	Town of Qualicum Beach Special Council Meeting February 22, 2017
Depots	NRE is a great service, but it is unsightly. It needs to be cleaned up.	District of Lantzville Council Meeting January 23, 2017
Depots	Concern that the RDN’s plan to increase diversion will lead the RDN to compete with the Depot model.	Email from Depot January 26, 2017
Depots	Noted that NRE receives an RDN subsidy	District of Lantzville Council Meeting January 23, 2017
Depots	There is a gap in accessibility to recycling facilities for people who do not have a vehicle, seniors, and people with disabilities. This results in recyclable materials ending up in the waste.	North Cedar Improvement District February 15, 2017
Depots	Having to take things to recycling facilities is not convenient and results in materials ending up in the waste.	North Cedar Improvement District February 15, 2017
Education	Education is a missing gap in multi-family buildings – they do not receive the same type of information that single family homes do.	VISOA April 2, 2017
Enforcement	Support spot checks as a starting point in “fairly applying monitoring efforts” across all users.	Town of Qualicum Beach Special Council Meeting February 22, 2017
Funding	When residents pay their taxes, does the landfill have a line? Do residents know that their taxes are coming to the landfill?	Waste Haulers Meeting February 28, 2017
Funding	What happens when you lose the revenue from waste because of high diversion rates? Who covers the costs of the RDN programs and the landfill?	Waste Haulers Meeting February 28, 2017
Illegal Dumping	Biggest problem is illegal dumping of large items.	RDN Special Board Meeting January 24, 2017
MRF	Requested that the MMRF option be costed and compared to the model proposed in Stage 2 draft report, and that information be publically available.	Town of Qualicum Beach Special Council Meeting February 22, 2017
MRF	These options give no assurance for industry and downloads burden and costs. RDN should let industry have a free market and have a greater role with more responsibility. You talk about how is government going to shrink, this doesn’t	Waste Haulers Meeting February 28, 2017

	seem like it. How do we know these options won't lead to industry insulating government? The RDN should be driving communication and education. A MRF should be an industry investment not government.	
Organics Diversion	Question about burning bans (backyard burning?)	District of Lantzville Council Meeting January 23, 2017
Other Jurisdictions	What is the status of the MetroVan waste to energy proposal?	City of Parksville Council Meeting February 6, 2017
Proposed options	Original intent of "no charge" days was to soften the blow of starting to charge. They were a big headache; do not support reintroducing "free days".	RDN Special Board Meeting January 24, 2017
RDN programs	Will taxpayers see a reduction in cost as a result of these proposals?	District of Lantzville Council Meeting January 23, 2017
RDN programs	RDN should be congratulated for recycling program.	District of Lantzville Council Meeting January 23, 2017
Source Separation	Will you implement a multi-family focus?	District of Lantzville Council Meeting January 23, 2017
Source Separation	How will we achieve 90% goal without source separation?	City of Nanaimo Council Meeting January 23, 2017
Source Separation	How would new regulatory authority help us achieve source separation (commercial and multifamily)?	City of Nanaimo Council Meeting January 23, 2017
Source Separation	Multifamily programs will continue to increase in importance with an aging population.	North Cedar Improvement District February 15, 2017
Source Separation	Some commercial users do not source separate, how can we encourage or require participation?	Town of Qualicum Beach Special Council Meeting February 22, 2017
Source Separation	Can the RDN implement any incentives to encourage source separations by local governments (and commercial business)?	Town of Qualicum Beach Special Council Meeting February 22, 2017
Source Separation	What happens to hospital waste? Would like to see more separation and recycling at hospitals.	Town of Qualicum Beach Special Council Meeting February 22, 2017
Source Separation	What is in the material at the landfill that can still be diverted?	Waste Haulers Meeting February 28, 2017

Source Separation	Is there material that is coming to landfill that can actual be recycled? Is there an end market for this material?	Waste Haulers Meeting February 28, 2017
Source Separation	If organics is such a big issue, the RDN should be educating residents.	Waste Haulers Meeting February 28, 2017
Source Separation	Aggressive policing leads to contamination in the restaurant industry, which makes it difficult to deal with materials.	Waste Haulers Meeting February 28, 2017
Source Separation	Education and enforcement will be an important part of making source separation work in the RDN.	VIHA Presentation January 25, 2017
Source Separation	When would this regulation be implemented, how much notice would multi-family buildings be given of the changes?	VISOA April 2, 2017
Source Separation	Would there be incentives available for stratas to invest in backyard/onsite composting.	VISOA April 2, 2017
Targets	Support for goal of increasing diversion to 90%	City of Parksville Council Meeting February 6, 2017
Targets	Consider other appropriate metrics besides % diversion (cost to taxpayer?)	RDN Special Board Meeting January 24, 2017
Targets	Questions about slide with breakdown of increasing diversion from 68% to 90%. How does 6% + 6% + 10 % work	RDN Special Board Meeting January 24, 2017
Targets	The 90% goal creates a higher cost burden on end users, resulting in illegal dumping.	Town of Qualicum Beach Special Council Meeting February 22, 2017
Targets	How does the RDN plan to monitor progress towards the 90% goal?	Town of Qualicum Beach Special Council Meeting February 22, 2017
Targets	90% is a very high target, it will be expensive and complex, and source separation puts the burden of effort on residents. Some cities collect everything, and then separate at central facilities. This reduces the burden on the individual, and may save money. Has RDN considered this approach?	Town of Qualicum Beach Special Council Meeting February 22, 2017
Targets	Applaud 90% diversion goal, and education component.	Town of Qualicum Beach Special Council Meeting February 22, 2017
Waste Haulers	Agree that private sector can be more innovative.	City of Nanaimo Council Meeting January 23, 2017

Waste Haulers	What does waste haulers as licensees mean?	City of Nanaimo Council Meeting January 23, 2017
Waste Haulers	Can waste disposal firms (haulers) dispose of waste anywhere they want to?	City of Parksville Council Meeting February 6, 2017
Waste Haulers	What does “enlisting waste haulers as licensees” mean?	City of Parksville Council Meeting February 6, 2017
Waste Haulers	What do haulers think of “licensed haulers”?	RDN Special Board Meeting January 24, 2017
Waste Haulers	How many haulers are there? Don’t like passing on costs to small business, mandating separation adds cost to small business.	RDN Special Board Meeting January 24, 2017
Waste Haulers	Based on the individual’s personal experience/observation in Ontario, caution must be used to ensure contracts with private haulers require source separation and recycling.	Town of Qualicum Beach Special Council Meeting February 22, 2017
Waste Haulers	The waste industry is changing as the rest of the world has caught up to North America. We can’t afford to sort recycling. We want to do everything that we can and now you are asking for money from our recycling.	Waste Haulers Meeting February 28, 2017
Waste Haulers	Residents need to pay the bill. Customers are paying for separate streams, but it doesn’t reduce our costs.	Waste Haulers Meeting February 28, 2017
Waste Haulers	Having customers separate their material leads to more greenhouse gasses as more trucks are on the road.	Waste Haulers Meeting February 28, 2017
Waste Haulers	Low hanging fruit, easily divertible material is in commercial and multifamily loads.	Waste Haulers Meeting February 28, 2017
Waste Haulers	As an industry we need a better understanding of what the haulers as agents and fee differential will look like down the line. Document needs to be more specific relating to haulers as agents and flow control.	Waste Haulers Meeting February 28, 2017
Waste Haulers	Hard to commit to investing in the area when there are so many open ended questions in the plan.	Waste Haulers Meeting February 28, 2017
Waste Haulers	Is there any other example where this has been done? (fee differential)	Waste Haulers Meeting February 28, 2017

Waste Haulers	A participant thinks the fee differential is a good idea, and it might lead to tip fee reduction in the long run.	Waste Haulers Meeting February 28, 2017
Waste Haulers	The fee differential is good for depots and haulers. Haulers will pay less overall, and it will be even cheaper if they have no recyclables. If it's expensive for self-haul customers to take material to the landfill they come to depots and other waste facilities in the region.	Waste Haulers Meeting February 28, 2017
Waste Haulers	Will there be annual licensing fee?	Waste Haulers Meeting February 28, 2017
Waste Haulers	What is the difference between licensing agents and flow control?	Waste Haulers Meeting February 28, 2017
Waste Haulers	Overall this is not a bad plan but the fee differential sounds like flow control. It's a great concept, but we need more details before we can support it. Need to know our investments are safe.	Waste Haulers Meeting February 28, 2017
Waste Haulers	Diversion leads to less money coming to the landfill in the long term. These options guarantee fees coming to the landfill, is that why you are doing this?	Waste Haulers Meeting February 28, 2017
Waste Haulers	How long will landfill last? A customer should be able to take material elsewhere? Your customer service is not good.	Waste Haulers Meeting February 28, 2017
Waste Haulers	How will the RDN get the \$30 a tonne for waste accumulation at site if it goes to a different landfill?	Waste Haulers Meeting February 28, 2017
Waste Haulers	As industry, it seems that you think we are not doing a good job at composting and recycling when we are. Why are you going in this direction with changing the fees?	Waste Haulers Meeting February 28, 2017
Waste Haulers	You should have low tip fees and strongly enforced bans, and then you focus on education. That's what has worked in the past and that is what you should keep doing.	Waste Haulers Meeting February 28, 2017
Waste Haulers	Bans and tip fees will only work if you have everyone coming to your landfill.	Waste Haulers Meeting February 28, 2017
Waste Haulers	Do residents pay the same as businesses for user fees?	Waste Haulers Meeting February 28, 2017
Waste Haulers	When the Metro Van bylaw was defeated, they instead gave haulers cheaper tip fees, isn't that easier and the same?	Waste Haulers Meeting February 28, 2017

Waste Haulers	There needs to be a lower tip fee and more bans at the landfill. This will drive the desired behavior without additional regulation.	Waste Haulers Meeting February 28, 2017
Waste Haulers	Some plastics and drywall have no recycling streams available. They must go to landfill.	Waste Haulers Meeting February 28, 2017
Waste Haulers	How will we apply the rules evenly across the Regional District, so everyone contributes fairly?	Town of Qualicum Beach Special Council Meeting February 22, 2017
Waste Haulers	Can the RDN provide a list of preferred haulers in the region?	VISOA April 2, 2017
Waste Haulers	Would haulers have the ability to enforce/fine strata buildings for non-compliance	VISOA April 2, 2017
WSML	Is the audit provision why you are changing the WSML reporting to monthly not annually?	Waste Haulers Meeting February 28, 2017
WSML	As a depot, we don't have tonnage details from the stewardship groups on a monthly basis.	Waste Haulers Meeting February 28, 2017
Zero Waste	We have become a "throwaway society" products are no longer refurbished.	North Cedar Improvement District February 15, 2017
Zero Waste	What does the reference to "subsidies" in the Zero Waste Hierarchy mean?	City of Parksville Council Meeting February 6, 2017
Zero Waste	There are more than 3 R's we need to pay attention to them as well.	RDN Special Board Meeting January 24, 2017
Zero Waste	What affect would a plastic Bag Ban have on waste volumes?	Town of Qualicum Beach Special Council Meeting February 22, 2017
Zero Waste	Will reducing plastics use create other problems, such as increase in glass disposal at landfills?	Town of Qualicum Beach Special Council Meeting February 22, 2017
Zero Waste	Laminated packaging (foil/plastic/other) is becoming more prevalent and is difficult to recycle. What is being done about this?	Town of Qualicum Beach Special Council Meeting February 22, 2017
Zero Waste	Many plastics have no market so it costs money to get rid of it. No matter what the cost of landfilling is, there are some things that are not recyclable.	Waste Haulers Meeting February 28, 2017
Zero Waste	Support the targets and preferred options layed out in the plan	VIHA Presentation January 25, 2017

Attachment 3: Current RSWAC Membership

Board Representative - Chair	Alec McPherson
Board Representative – Vice Chair	Bill McKay
Community Representatives	Matthew Louie
	Wally Wells
	Dr. Jim McTaggart – Cowan
	John Finnie
	Craig Evans
	Ellen Ross
	Gerald Johnson
	Michele Green
	Amanda Ticknor
Industry Representatives	Michael Tripp
	Dean Jones
	Stewart Young Jr.
	Derek Haarsma
Not - for - profit Representatives	Jan Hastings
	Ben Geselbracht
Non-Voting Technical Advisors	
First Nation Representatives	Michael Recalma – Qualicum First Nation
	Nanoose First Nation
	Snuneymuxw First Nation
City of Nanaimo	Geoff Goodall
City of Parksville	Al Metcalf
Town of Qualicum Beach	John Marsh
District of Lantzville	Fred Spears
Ministry of Environment	Al Leaschen
Environment Canada	Karen Muttersbach
Island Health	Glenn Gibson



Maura Walker & Associates
ENVIRONMENTAL CONSULTANTS

June 2, 2017

Meghan Larson, Solid Waste Planner
Regional & Community Utilities & Solid Waste
Regional District of Nanaimo
6300 Hammond Bay Road
Nanaimo, BC
V9T 6N2

Dear Meghan,

Re: Review of Stage 2 Solid Waste Management Plan Consultation Efforts

Thank you for the opportunity to review and comment on the consultation efforts undertaken to date as part of the process to update the RDN's Solid Waste Management Plan (Plan).

The planning process has completed 2 major stages:

1. An assessment of the existing solid waste management system and review of the implementation status of the current solid waste management plan, and
2. A review of options for the future, including identification of the preferred options.

According to the Ministry of Environment's Guide to Solid Waste Management Planning, the planning process should also include *"a process for comprehensive review and consultation with the public respecting all aspects of the development, amendment and final content of a waste management plan."*

The RDN has certainly responded to this direction and has engaged with the community and stakeholders in a comprehensive manner since the process to update the plan began.

In summary, the RDN continues to undertake an exceptional level of consultation by providing the general public and affected stakeholders with a range of opportunities to learn about the options under consideration. A memo prepared by RDN staff in October 2015 and another in June 2017 detail the consultation activities completed to date, which include:

- A multi-stakeholder advisory committee
- Newsletters to all households
- Meetings with affected stakeholder groups
- Presentations to community groups
- Presentations to municipal councils

- Engagement with First Nations.

I understand that additional consultation activities will be happening in the future associated with the draft version of the updated Plan. The above listed activities and those planned should easily meet the Ministry's expectation that the regional district "provide ample opportunity for the public to provide input into the proposed options, and to identify their support (or not) for each of these" (excerpt from the Guide).

In preparation for the final phase of consultation and submission of the updated Plan and Consultation Report, I'd like to draw your attention to 3 items that are part of the Ministry's plan approval checklist that may need additional attention from the RDN:

1. **Consultation Report should show how public consultation was used to influence the plan:**
Although advisory committee minutes that reflect the discussions and decisions of this committee are posted on the web, the current consultation reports lack a clear line between input received through consultation efforts and how this input influenced the selection of recommendations for inclusion in the draft plan. The final consultation report should incorporate a section that summarizes the relevant feedback and how this feedback was used (to affirm, modify or eliminate options).
2. **Clearly identify implementation provisions in sufficient detail to enable those affected by the provisions to determine their impact:** The current version of the draft plan is vague on what "waste source regulation" and "haulers as agents" are and how they would work. Since these recommendations could have significant impact on external stakeholders, it's recommended that additional details be added to these sections. Graphic images used during stakeholder consultation could be added to the draft Plan to enhance how these recommendations could work. Additional details on how a private sector mixed waste MRF will be pursued could also be added to the draft Plan.
3. **Include a process for adequate public review (and minister's approval) of the implementing bylaws, licences and other authorizing provisions:** The current version of the draft Plan lacks detail on the process to implement some of the more ambitious elements of the Plan, including those new regulatory authorities noted above. It's recommended that the draft Plan include details on the RDN's intended implementation steps, including stakeholder consultation.

I congratulate the RDN on their impressive consultation efforts to date. On-going engagement with the public and stakeholders at this level will ensure an updated Solid Waste Management Plan that is both comprehensive and supportable.

Sincerely,



Maura Walker
President

Appendix H – RDN Stage 3 Public Consultation



Maura Walker & Associates
ENVIRONMENTAL CONSULTANTS

May 1, 2018

Sonam Bajwa, Zero Waste Planner
Solid Waste Services
Regional District of Nanaimo
6300 Hammond Bay Road
Nanaimo, BC
V9T 6N2

Dear Sonam,

Re: Review of Stage 3 Solid Waste Management Plan Consultation Efforts

Thank you for the opportunity to review and comment on the Stage 3 consultation efforts associated with the process to update the Regional District of Nanaimo's (RDN's) Solid Waste Management Plan (Plan).

MWA reviewed and provided comment on the consultation efforts undertaken during the previous stages of the Plan, and concluded that the RDN had implemented exceptional level of consultation during Stage 1 and 2 by providing the general public and affected stakeholders with a range of opportunities to provide input into the Plan.

The RDN is now completing the final stage of the planning process and has undertaken an extensive consultation process on the draft Plan. We have reviewed the RDN's consultation report and the presentation provided to the Regional Solid Waste Advisory Committee. Once again, we are impressed by the breadth of engagement activities and promotion of opportunities for input, which included:

- 10 open houses in Electoral Area A, B, C, D, E, F, G, H, City of Nanaimo, District of Lantzville, City of Parksville, and Qualicum Beach. These open houses were promoted through post card invites that went to over 60,000 homes, businesses, farms and strata complexes, newspaper ads, a press release and social media.
- Online tools, including the RDN online engagement tool *Get Involved* (www.getinvolved.rdn.ca) that housed all information related to the SWMP including all background documents such as reports, stage summaries, plan video and the public information boards that were displayed during the open houses. The *Get Involved* webpage also included a portal to ask questions and provide feedback about the plan.

- Two newsletters were delivered to over 24,000 homes that discussed the Plan and how residents could be learn more and provide their feedback.
- Two surveys: One online made up of 21 questions which discusses programs and costs, and another in-person mini-survey done with customers at the RDN's landfill and transfer station.
- Factsheets were developed for single family residents, multi-family residents, the waste industry and industrial, commercial and institutional (ICI) sector to highlight the programs in the plan that would affect each group. Factsheets were available online, were circulated with consultation invites, handed out at presentations and to landfill and transfer station survey respondents, and made available at the administration office.
- Travelling display at Municipal offices, recreation centers and libraries.
- Participation in two Shaw TV series (*Change the World* and *Up Front*).
- Promotional tools: sponsored Facebook, Twitter and Instagram ads, webpage and newspaper ads on Gabriola sounder, Nanaimo News Now, Parksville Qualicum Beach News, Vancouver Island Daily and Nanaimo Bulletin, ads on RDN transit busses, radio ads, and notices on the RDN Curbside app.
- Invites to meet were sent to 130 stakeholder organizations. Invites included the executive summary and factsheets.
- Couriered consultation invitations to Snaw-Naw-As First Nation, Qualicum First Nations and Snuneymuxw First Nation which included an offer to present, factsheets and the solid waste management plan summary.
- A meeting was held with representatives of the Waste Management industry to review proposed options.
- Presentations were made to every Municipal Council.

The result of all of these efforts is that the RDN provided approximately half a million opportunities to learn about the planning process and directly engaged with 4,000 residents. This is a very high level of direct engagement.

The RDN is to be commended on the consultation program that they executed from the initiation of this planning process. Significant effort was taken to identify, reach out and engage with any potentially affected stakeholder. The general public had access to information throughout the planning process and ample opportunities were provided for the public to provide input. These opportunities were well promoted.

Of particular note is the RDN's engagement with the solid waste industry. In recognition of the potential impact that the regulatory options could have on the local solid waste industry, the RDN maintained an on-going dialogue with the local haulers and processors throughout the planning process. Meetings were held with local solid waste industry groups, and presentations were made at industry conferences to ensure that industry was aware of the options under consideration and that their questions, concerns and feedback were received by the RDN and incorporated into the planning process. It is our understanding that the RDN will continue to dialogue with the solid waste industry as they implement the Plan and refine their regulatory approach.

It has been a pleasure to monitor and provide feedback on this well-executed consultation plan. The RDN's consultation efforts should ensure that the Plan reflects the broad needs and interests of the community and consequently enhances community support for its implementation.

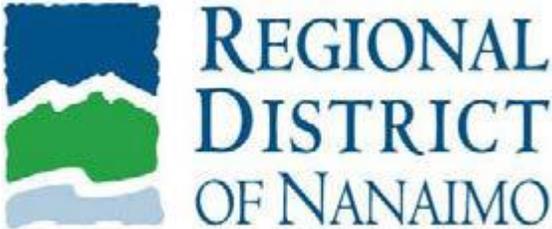
Sincerely,

A handwritten signature in black ink, appearing to read "Maura Walker".

Maura Walker
President
MWA Environmental Consultants Ltd.

Stage 3 Solid Waste Management Plan Consultation Report

Compiled by: Sonam Bajwa, Solid Waste Planner



1. Introduction

This Public Consultation Summary Report describes the consultation that has been undertaken by the Regional District of Nanaimo (RDN) for Stage 3 of the Solid Waste Management Plan (Plan). The goal of the consultation was to broadly inform the community, and seek community feedback on the draft Plan in accordance with the consultation requirement set out in Section 27 of the Environmental Management Act.

The initial (November 18, 2015) and final (May 25, 2017) Stage 2 Consultation Reports were shared with Maura Walker & Associates (MWA) to obtain advice on subsequent consultation efforts, as well as a third party expert opinion to gauge the adequacy of the consultation efforts relative to the Ministry of Environment's Guide to Solid Waste Management Planning (Maura Walker's curriculum vitae is provided in Appendix 1).

MWA highlighted two items that were used to improve the plan and these were:

1. Clearly identify implementation provisions in sufficient detail to enable those affected by the provisions to determine their impact
2. Include a process for adequate public review (and minister's approval) of the implementing bylaws, licences and other authorizing provisions:

MWA also recommended that the consultation report should show how public consultation was used to influence the plan.

Furthermore, for the Stage 2 Consultation review, MWA concluded that *"the RDN continues to undertake an exceptional level of consultation by providing the general public and affected stakeholders with a range of opportunities to learn about the options under consideration."*

Both the interim and final Stage 2 Consultation Reports, and subsequent letters received from Maura Walker can be found in Appendix F and G of the supplemental Plan Appendices.

Stage 3 has incorporated MWAs recommendations, both for the Plan and consultation report.

Between September 2017 and April 2018, a broad range of media was used to notify and engage the community including print, television, radio, social media, advertising, surveys and meetings. An exact number of contact events is impossible to determine, but it is estimated to be in the order of 500,000, of which 4,000 were in-person conversations. Results of the consultation are as follows:

- There is broad support for the RDN waste diversion goal of 90% by 2027.
- Overall, the general public largely supported the programs outlined in the Plan supported. The waste industry has voiced some concern with Waste Hauler Licensing.
- The only substantive change to the programs presented in the Plan was to name the Nanaimo Recycling Exchange (NRE) as the recipient for funding for Zero Waste Recycling as directed by the Board.

- Of the residents engaged in a survey, approximately 80% indicated they are amenable to the costs projected in the Plan.

1.1. Background and Consultation Objectives

Since the original Plan was approved in 1988, the Plan has been amended three times, most recently in 2004. The RDN has fully implemented all of the recommendations from the last Plan, and the status of the current Plan review is detailed below:

- **Stage 1 – COMPLETED**
Review and analysis of current solid waste management system, status of the 2004 Plan, and identification of issues and opportunities for improvement;
- **Stage 2 – COMPLETED**
Identify and review options to address the region's future waste management requirements, select preferred options and prepared report presenting the findings; and
- **Stage 3 – SPRING 2018**
Prepare a draft updated Plan with an implementation timeline and costing, carry out a public review of the draft Plan, incorporate changes from the public review and finalize the Plan.

The objectives of public consultation associated with the current planning process are as follows:

- Ensure that the process to develop the Plan is collaborative and reflects a broad range of perspectives;
- Provide opportunities to educate the public about the Plan and future options for managing waste;
- Provide opportunities for public input on a range of options and estimated costs;
- Increase support for the resultant solid waste management planning and programs; and
- Meet the consultation expectations of the Ministry of the Environment.

2. Advisory Committee

The Regional Solid Waste Advisory Committee (RSWAC), made up of a cross section of representatives from the community to address social, business, technical and political interests, plays a significant role in representing the community's interests with the expectation that their perspectives will largely reflect those of the broader community.

RSWAC provides advice to the RDN Board via the Solid Waste Management Select Committee (SWMSC), which is made up of a subset of the Board. The RSWAC is chaired by a non-voting RDN Board member to provide a direct link between the RSWAC and the SWMSC and Board. Current membership of the RSWAC is provided in Appendix 2 of this report. Terms of reference,

a list of meetings, agendas and minutes can be found in Appendix I of the supplemental Plan Appendices.

3. Public Consultation Design

At the initiation of Stage 2, Maura Walker was engaged to work with the RSWAC in developing the Consultation and Communications Plan that would guide the consultation efforts for the remainder of the planning process. The Consultation and Communications Plan was shared with the Ministry of Environment (MoE) for feedback on February 13, 2015 and a final updated copy was submitted on March 3, 2015 after adoption by the RSWAC on February 19, 2015. These letters, and the Consultation and Communication Plan can be found in Appendix 3 and Appendix 4, respectively.

4. Promotion, Advertising and Participation

The following sections summarizes the public consultation employed during Stage 3 of the plan and the strategies, communication tools and advertising used to promote learning and feedback opportunities to residents.

4.1. Communications tools and strategies

Get Involved Website

- Launched Plan on an online platform for all RDN projects that allows residents to provide feedback or ask the solid waste team questions directly. The page also retains all information related to the Plan, including:
 - Technical Memoranda/discussion papers
 - Factsheets and Plan executive summary
 - Public information boards
 - Questions and comments received through the Get Involved website are available on the Plan Get Involved home page (Appendix 5)

Executive Summary and Factsheets

- An executive summary (Appendix 6) and factsheets (Appendix 7) were developed for single family residents, multi-family residents, the waste industry and industrial, commercial and institutional (ICI) sector to highlight the programs in the Plan as it pertains to each group. Factsheets have been made available online at “Get Involved”, circulated with consultation invites, handed out at presentations, distributed to landfill and transfer station survey respondents, made available at the administration office and with the travelling display.

Video

- A video summary of preferred option was shared at all open houses, stakeholder meetings, on the Get Involved Page and social media.

Social Media

- Sponsored content on Facebook, Twitter and Instagram.
- Questions and comments received from residents focused on support for recycling facilities and general questions about the solid waste services.
- There were a total of 16 posts on Facebook and 10 Tweets, which cumulatively were viewed over 20,000 times, and engaged with (e.g. shared, liked, commented on, clicked on link) 925 times.
- Examples of social media posts are included in Appendix 8.

Two Surveys

- 2 surveys were created, one online and one for customers at the Regional Landfill and Transfer Station.
- Customers at the Regional Landfill and Church Road Transfer Station were asked the following questions:
 - Have you heard about the RDN updating their Solid Waste Management Plan?
 - The RDN diverts 68% of its waste, meaning that each person sends around 347 kg of waste to the landfill every year. The BC average is 520 kg. Our Target diversion rate is 90% by 2027, which is around 109 kg of waste per person to the landfill every year. Do you support this goal?
 - If not, why not?
 - If yes: The Plan projects an increase in taxes of around \$10 per year per person. Do you support this cost?
 - If no: Is there a lower cost that would be acceptable?
 - Which region do you live in?
 - Do you work in the waste industry?
- An in-depth break down of the responses received for the in person survey can be found in Appendix 9.
- Online survey at <https://www.getinvolved.rdn.ca/swmp>. The survey is made up of 21 questions which discusses proposed programs in the Plan update and associated costs.
- The online survey was advertised online through sponsored Facebook, Twitter and Instagram ads, webpage ads on Gabriola sounder, Nanaimo News Now, Parksville Qualicum Beach News and Nanaimo Bulletin. A total advertisement distribution of 47,995 was provided through Parksville Qualicum Beach News and Nanaimo Bulletin.
- Other advertising included 50 ads on RDN transit busses, radio ads, our RDN Curbside app and newspaper ads with Nanaimo Bulletin, Vancouver Island daily, and Parksville

Qualicum Beach News – In partnership with City of Parksville and Town of Qualicum beach. Ridership during the bus ads was over 238,000.

- A total of 726 residents completed the surveys.
 - 32% (234) were aware of the Plan being updated.
 - 97% (700) were supportive of the 90% waste diversion goal.
 - Of those who were supportive of the 90% waste diversion goal, 77% (562) were supportive of the increased cost of around \$10 per year per person.
- Appendix 10 includes advertising examples.
- Appendix 11 and 12 provide a more in-depth break down of responses received from the online survey.

Travelling Display (January 12 – February 23)

- An infographic timeline banner was displayed in ten locations including municipal offices, recreation centres, and libraries throughout the region. The display included factsheets and the Get Involved bookmarks.
- A picture of the travelling display is included in Appendix 13.

Mailouts:

- A brief introduction to the Stage 3 Plan Highlights was included on the front page of the winter 2017 Zero Waste Newsletter mailed out to all residential homes in the RDN. The newsletter is included in Appendix 14.
- Open houses were promoted through post card invites that went to over 60,000 homes, businesses, farms and strata complexes.

Community Events

- Staffed information displays on the Plan were in place at the RDN 50th Anniversary and official opening of Coombs to Parksville Rail Trail.

Conference

- On November 8, 2017, Larry Gardner, Solid Waste Services Manager, presented an overview of the Plan at the Solid Waste Management Association of North American Annual General Meeting (Pacific Chapter) held in Vancouver. The presentation focused on source separation and waste hauler licensing.

Public/Mainstream Media

Larry Gardner, Solid Waste Services Manager, participated in a Shaw TV series called Change the World with host Guy Dauncey, where they discussed the Plan, how to achieve Zero Waste and the recycling of difficult items (https://www.youtube.com/watch?v=xqNZF_4phU0).

- Larry Gardner, Solid Waste Services Manager, participated in a Shaw TV series called Up Front with host Annette Lucas where they discussed the future plans of solid waste in the Regional District of Nanaimo (<https://www.youtube.com/watch?v=opABt9NkEM0>).

4.2. Public Communication

Open Houses

- Held 10 open houses in Electoral Area A, B, C, D, E, F, G, H, City of Nanaimo, District of Lantzville, City of Parksville, and Qualicum Beach.
- One-hundred-six residents and five directors attended the open houses. These open houses were promoted through newspaper ads, a press release, social media and post card invites that went to over 60,000 homes, businesses, farms and strata complexes.
- Proposed programs and their associated costs were presented by RDN staff using PowerPoint. Attendees were prompted numerous times for questions and comments throughout the presentation and were provided feedback forms as well. Responses received through the feedback forms are included in Appendix 15.
- Eighteen display boards were put up around at each meeting, which covered background information such as the zero waste strategy, waste composition and guiding principles; existing zero waste programs such as illegal dumping and zero waste education; and new zero waste programs proposed in the Plan such as waste hauler licensing and mandatory waste source separation. Costs associated with each program were also displayed. PDFs of the display boards are included in Appendix 16.
- The general sentiments were positive and supportive of proposed options and costs. There were a number of questions received regarding specific services such as glass and yard waste pick up and having a “free store” at RDN facilities. Once costs, diversion and implications of these programs were discussed, most participants understood why and were in agreement that such programs not be included in the Plan.
- Comments and questions received during the consultation and the RDN’s response can be found in Appendix 17.

Direct Communication

- Nine comments have come directly to staff, either through email or over the phone.
- These comments and their responses can be found in Appendix 18.

4.3. Stakeholder Consultation

- One-hundred-thirty stakeholder groups were contacted including resident associations, Business associations, hospitality industry, industry associations, school districts, large institutions and service organizations including downtown improvement associations,

strata owners, Vancouver Island University and Vancouver Island Health Authority. Staff offered to meet with each group to review the Stage 3 Plan and each invite included the executive summary and the factsheets. The stakeholders are listed in Appendix 19.

- RDN presented the Plan to School district 68 and 69, Nanoose Probus Club, staff at the District of Lantzville, and Horne Lake Strata Association. There were approximately 100 people in attendance at these meetings.
 - Overall, the stakeholder groups were enthusiastic on the new programs and the 90% diversion target.
 - There was interest in how the mandatory source separation program will be implemented, and how it will affect different stakeholders (e.g. infrastructure needed for the school districts).
 - The RDN explained that a bylaw would enact both waste source separation and waste hauler licensing as stated in the Plan.
 - In terms of infrastructure, each organization can determine what works best for them, the bylaw is proposed to state the need for multiple bins (i.e. refuse, organics, recycling) or possibly sorted by the waste collection provider (e.g. multi-material recycling facility). The details of the requirements will be determined at the bylaw development stage in consultation with the community. The idea is that if people are paying for a service, they are more likely to use, similar to what we have experienced with the 3-stream residential curbside collection service. It is only envisioned that the RDN will require the provision of a 3-stream (or post collection sorting service), but not enforcing the generator to actually sort the waste materials.
 - Members from the stakeholder groups asked questions about the general solid waste services programs, and how the new programs will fit in to the existing programs.
 - Stakeholder groups were interested in the costs associated with the new programs and how that would affect their group and general taxpayers.
 - Comments and questions received during the consultation and the RDN's response can be found in Appendix 17.

Waste Industry Consultation

- Twenty-nine organizations were invited to attend a waste industry meeting on November 29, 2017. Approximately 30 people were in attendance.
 - Overall, the industry supports the 90% target and new programs in the Plan, including source separation.
 - A number of questions (paraphrased for clarity) and comments received revolved around the details of the program such as:

Q. How would it be determined who needs a license?

A. Anyone that collects waste for profit within the RDN would need a license.

Q. Would our business be at risk if the RDN did not issue us a License?

A. The Licensing is not intended to be exclusive. It would operate similar to a BC driver's license in that anyone that meets the conditions for licensing would be granted a license and there is no "decision" process. Conditions of license would likely be having valid insurance, reporting of waste sent for disposal, RDN's right to compel auditing of records of waste sent for disposal, a reduced landfill tipping fee and remission of a disposal levy for waste sent for disposal to a facility within or outside of the RDN. Anyone meeting the conditions of license would be granted a license.

Q. What would the fees be?

A. Exact fees will be determined at the time of bylaw development. However, the intent is to encourage efforts around diversion in place of seeking out low cost disposal. For illustration purposes the following values present the concept:

- Base landfill tipping fee: \$125
- Licensed Hauler preferred rate tipping fee: \$75
 - Disposal Levy assessed on waste disposed: \$25
 - Net disposal cost to Licensed Hauler: \$100

Q. Why give the waste industry a discounted rate?

A. The intent is to give industry a price advantage so that waste flows through the waste industry before coming to RDN disposal facilities. Approximately one third of waste received at RDN facilities comes directly from small generators. Providing industry a price advantage, this waste is more likely to flow to the waste industry rather than directly to disposal facilities. By also applying a "disposal levy" only on waste that is sent for disposal, and not recycled material, incents the industry to put more effort into diversion. The intention is to use this economic model to encourage the waste industry to grow and innovate around waste

diversion. In turn, this is expected to result in more and better services to waste generators in the region.

Q. How often would the license need to be renewed and would there be a licensing fee?

A. Details would be worked out at the time of bylaw development but it would most likely be an annual renewal process with remittance of a licensing fee. Given that the model proposes a significant disposal cost savings to Licensed Haulers, the annual fee would need to be set at a value that is not so high to discourage participants but also not so low as to be ineffective in encouraging the flow of waste to the industry to fully realize the waste diversion potential.

Q. When would Waste Hauler Licensing be introduced?

A. The RDN is currently consulting on the draft SWMP and it is anticipated that the consultation will be complete in the first quarter of 2018. Subsequently, Regional Board will consider approval of the final plan. If the concept of Waste Hauler Licensing is adopted in the Board approved plan, the next step is to receive Minister of Environment approval of the SWMP. If the Minister approves Waste Hauler Licencing in concept, the RDN will proceed with the development of a draft Bylaw in consultation with the waste industry and community stakeholders. The Bylaw is where the actual details of the program will be established. Such a Bylaw requires both Regional Board and Minister of Environment approval before it goes into effect. The SWMP currently projects 2019 as the year of implementation for the Waste Hauler Licensing Bylaw, in conjunction with the Mandatory Waste Source Separation Bylaw.

Q. What is the appeal process is a license is not issued or renewed?

A. The SWMP sets out a dispute resolution process. Essentially disputes under the Plan are referred to the Regional Board. If disputes are not resolved at this level the aggrieved party can pursue judicial review.

Q. We are concerned about the increased administrative cost placed on the waste industry as a result of a licencing requirement. What are your comments on this?

A. Waste Hauler Licensing proposes a significant economic benefit to Licensed Haulers with both: 1) Business opportunity in attracting customers that currently haul waste directly to RDN facilities; and, 2) lower disposal costs than what currently exist. This economic benefit will far outweigh any administrative burden that is a consequence of licensing.

- To summarize, the waste industry's level of support for waste hauler licensing is varied amongst industry representatives. Some representatives have voiced support and overall there is support for differential fees, reduced disposal fees for waste haulers. The majority of industry representatives have stated an objection to increased regulation and administrative burden (i.e. licensing reporting, audits). The industry representatives:
 - Voiced support for a level playing field.
 - They favour mandatory source separation, which would mean all residence and businesses would have to participate in source separation. This would prevent a competing hauler offering only waste collection at a cheaper cost than a 3-stream service, creating a level playing field and encouraging greater diversion.
 - Recommended increased education for residents.
 - One of the proposed programs in the Plan is expanded Zero Waste Education. This would be in addition to everything that is currently done, such as newsletters and summer outreach.
 - Concern was expressed over the disposal levy as recycling markets are changing as many worried that more material may be destined for landfill. There was also some concern that anyone can qualify to be a licensed hauler and benefit from lower tip fee that would be applied to licensed haulers.
 - It is expected that the licensing will be available to anyone that hauls waste in the RDN, as this will help promote waste diversion and source separation. This will be addressed in the bylaw and is not the Plan.
 - Additional comments and questions received during the consultation and the RDN's response can be found in Appendix 17.
- The RDN received one letter and one email from Vancouver Island Recycling and Waste Industry Coalition, included in Appendix 20 and 21 on June 9, 2017 and January 16, 2018. The letter requests that all regional districts ban wood waste from disposal and the email requests:
 - The RDN to recognize the request for consultation with all affected recycling businesses (e.g. non-profits, Salvation Army, Re-store, Value Village, private depots) and develop a comprehensive "value for money" zero waste depot plan

that serves the entire region, as part of the RDN’s Solid Waste Management Plan.

- The RDN and the City to reconsider joint funding a new facility and instead relocate the NRE to an existing RDN facility or facilities at either Cedar Landfill or Church Road Transfer Station.

First Nations Engagement

- RDN staff couriered consultation invitations, along with a printed copy of the Plan and associated communications material to Snaw-Naw-As First Nation, Qualicum First Nations and Snuneymuxw First Nation to discuss the Plan. No replies were received.
- First Nations received all meeting invites to RSWAC as well as the agendas, meeting minutes and technical information.

4.4. Local and Regional Government Consultation:

- Municipal councils are a key stakeholder in the planning process and the Communications and Consultation Plan aims to keep the Councils informed of the Plan’s development. The Draft Stage 3 Plan highlights were presented as follows:

District of Lantzville Council Meeting	February 26, 2018 – 7:00pm
City of Parksville Council Meeting	March 5, 2018 – 7:00pm
Town of Qualicum Beach Council Meeting	March 19, 2019 – 7:00pm
City of Nanaimo Council of the Whole Meeting	March 26, 2018 – 4:30pm

- There were 26 council members in attendance, with approximately 100 people in attendance across the four meetings.
 - Overall, the council members were supportive of the Plan and the increased diversion targets.
 - Some council members inquired on how the new programs would be funded, and if there was a lean to either tax rates or tipping fees.
 - Some council members asked for more information on the new programs, especially the mandatory waste source separation and the waste haulers licensing.
 - Comments and questions received during the consultation and the RDNs response can be found in Appendix 17.
- The RDN reached out to Comox Valley Regional District, Cowichan Valley Regional District and Alberni Clayoquot Regional District to discuss the Stage 3 Plan. The RDN presented to the Comox Valley Regional District with the following outcome
 - Overall, they were supportive of the 90% diversion rate.

- Strongly support a waste to energy facility and questioned why it was not included in the Plan.
 - The RSWAC recommended adoption of the Zero Waste International Alliance’s Zero Waste Hierarchy, which promotes highest and best use of waste materials. There was a strong sentiment to focus on source separation to ensure the highest quality recyclables are directed back into useful products. This philosophical approach was supported by the community through the consultation that was carried out.
- Comments and questions received during the consultation and the RDNs response can be found in Appendix 17.
- A letter of support from the Comox Valley Regional District can be found in Appendix 22.

5 Feedback during Public Consultation Process

As the RDN is requesting additional authorities in the Plan, there was a strong need for a fulsome consultation prior to reaching Stage 3. As such, when the RSWAC endorsed the Draft Stage 2 Plan, it was shared with a wide range of stakeholders. A total of 77 different groups were contacted for consultation, including municipal councils, First Nations, business, industry, hospitality, large institutions, regional districts, and community organizations.

The overall response can be characterized as follows:

- Support for effort to increase commercial and multifamily diversion and increased education and enforcement.
- Support for 90% diversion goal.
- Do not support the RDN investing in a material recovery facility.

A detailed final Stage 2 Consultation Summary Report and initial Stage 2 Consultation Report can be found in Appendix F and G of the supplemental Plan Appendices.

Steps in Planning Process	Interim Consultation Report	Consultation Summary
Stage 2	RDN Solid Waste Management Plan Community Consultation Summary	An overview of the Plan review process was presented to stakeholders. This report was reviewed by Maura Walker and Associates to ensure that MoE guidelines were met.
Stage 2	Consultation and Communication Board Report Update	Selected preferred options and diversion goal were presented to stakeholders. All feedback was recorded and used to edit the Plan. This

		report was reviewed by MWA to ensure that MoE guidelines were met.
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6 Preferred Strategies

A matrix of Plan options discussed by the RSWAC, which include the type of service, scope and implications are included in Appendix D of the supplemental Plan Appendices.

Strategies that were explored and not included in the Plan were primarily due to the associated cost, low diversion potential and/or competition with others providing similar services. The preferred options included in Stage 2 are the strategies that most align with the RDN’s Guiding Principles, promote the behaviour of zero waste, provide the greatest diversion potential, and can be undertaken at a reasonable costs. All proposed options presented in Stage 2 were supported during Stage 3 public consultation.

Quantifying support for specific strategies can be difficult outside the results of the survey. The survey showed a range of 87% - 94% in support of preferred strategies in the Plan. At meetings and presentations, what we heard and what we didn’t hear, was similar across all interactions with affected stakeholders. Strategies related to education, specifically, expanded Zero Waste Education, Expanded ICI Waste Management and Expanded CD Waste Management, were so widely accepted that much of the conversation stakeholders focused on the other initiatives. As these strategies seemed to be fundamentally accepted, essentially no comments were recorded in feedback across all stakeholders.

Preferred strategies included in the Plan		
Strategy option	Level of Public support	Strategy Decision
Mandatory Waste Source Separation	-Waste industry is supportive of this initiative. -Other stakeholder groups were supportive as well. Dialogue with institutions indicated they have adopted three stream waste collections services and would not be impacted by such requirements. Survey: 93% moderately to fully support.	The Plan seeks additional authorities to allow the RDN to impose mandatory waste source separation for multifamily and ICI.
Waste Hauler Licensing	All stakeholders support waste hauler licensing and understood how combining mandatory waste source separation with waste hauler licensing, will give the	The Plan seeks additional authorities to allow the RDN to license waste haulers.

	<p>region the greatest opportunity for waste diversion. The majority of waste industry representatives do not support greater regulation.</p> <p>Survey: 87% moderately to fully support.</p>	
Expanded Zero Waste Education	<p>Industry, residents and other stakeholder groups were very supportive of expanding education related to zero waste, particularly targeting adult audiences.</p> <p>Survey: 94% moderately to fully support.</p>	Include expanded Zero Waste Education in the Plan.
Expanded ICI Waste Management	<p>Industry, residents and other stakeholder groups support increasing enforcement of existing bans, providing education and relaunching Commercial Organics Diversion Strategy and Multi-Family Diversion Strategy.</p> <p>Survey: 93% moderately to fully support.</p>	Include expanded ICI Waste Management in the Plan.
Expanded CD Waste Management	<p>Industry, residents and other stakeholder groups support increasing education and communication around CD waste in the region and using incentives to prevent the waste from leaving the region.</p> <p>Survey: 93% moderately to fully support.</p>	Include Expanded CD Waste Management in the Plan.
Household Hazardous Waste	<p>Industry, residents and other stakeholders recognize that HHW excluded from existing stewardship programs will not lead to a large increase in diversion, but support preventing the material going to Landfill.</p> <p>Survey: 94% moderately to fully support.</p>	RDN to include HHW collection in the Plan.
Zero Waste Recycling	<p>Residents and other stakeholder groups support providing funding for a not-for-profit to act as a research and recycling hub for items that are not commercially marketable. After receiving direction from the Board, Nanaimo Recycling Exchange was named as the recipient of the funding.</p>	RDN to include Zero Waste Recycling and name Nanaimo Recycling Exchange as the recipient of the funding.

	Survey: 93% moderately to fully support.	
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Strategies not included in the Plan		
Strategy option	Level of support	Strategy Decision
Complimentary Disposal Services at RDN solid Waste Facilities	Discussed as an options to help deal with illegal dumping. Not supported by RSWAC due to costs and the recognition that “free dumping day’s” leads to hoarding of material and doesn’t stop illegal dumping, as can be seen in other jurisdictions in British Columbia.	Not included in Plan.
EPR Material at RDN Solid Waste Facilities	Not supported by RSWAC due to cost and not wanting to compete with local for-profit and not-for-profit businesses that already accept this material.	Not Included in Plan.
Household Glass Collection	Not supported by RSWAC due to cost, low diversion potential as seen in other jurisdictions on Vancouver Island and glass collection is being offered by local for-profit and not-for-profit businesses.	Not Included in Plan.
RDN funded multi-material recycling facility	Not support by the RSWAC because it may prevent private investment in the region and the low waste generation in the region would not be enough to support a facility.	Not Included in Plan as a preferred strategy, however, the RDN may reconsider it should a private facility not materialize.
Share Shed Programs at RDN Solid Waste Facilities	Not supported by RSWAC due to cost and not wanting to compete with local for-profit and not-for-profit businesses that already accept this material for donation.	RDN did not include a share shed program at RDN facilities.
Yard Waste Collection	Not supported by RSWAC because of costs, low diversion potential and not wanting to compete with local for-profit and not-for-profit businesses that already accept this material. As curbside collection is currently manual, the size of the green bin also does not lend itself to accommodate yard waste.	Yard Waste collection will not be included in the curbside collection program but may be reconsidered in the future.

7 Plan Revisions

As per direction from the RDN Board, NRE was named the recipient of the \$300,000 annually, for 5 years, to act as a research and recycling hub. This decision was made following considerable community lobbying favouring direct support for NRE pursuing zero waste initiatives.

The consultation made it evident that stakeholders strongly support the proposed programs and costs presented in the Plan, as a result, no other substantive changes have been made to the draft plan. Non-material changes were completed to increase readability of the plan, create consistency in terms used and to clarify details of proposed programs.

The following table summarizes the changes made to the Plan.

Page Number	Revision Type	Revision Details
Overview of document	Formatting	682 formatting revisions
	Insertions (I)	648 insertion revisions Consist of: <ul style="list-style-type: none"> • Usage of acronym vs. full term • Syntax changes
	Deletions (D)	551 deletion revisions Consist of: <ul style="list-style-type: none"> • Usage of acronym vs. full term • Syntax changes
	Moves (M)	42 move revisions Consist of: <ul style="list-style-type: none"> • Minor moves within paragraph / section
Cover	D	Stage 2 Report: Evaluation of Options Report April 2017
Cover	I	Revised April 2018
i-iiix	D	Removed summary, using PDF version as active file
i	D	Removed “Statement First Nations are under the jurisdiction”
vii	DI	Changed “non-profit” to Nanaimo Recycling Exchange; removed description of the bidding process
xiv-xvi	I	Added Glossary of Terms and Acronyms
1	DI	Changed dates, from 2017 to 2018

Page Number	Revision Type	Revision Details
2	DI	Changed “Pollution Prevention Hierarchy” to “Zero Waste Hierarchy”; for continuity with Zero Waste Programs and adoption of Zero Waste goal.
3	I	Added background to Plan, including revisions and associated programs.
5	I	Added updated map of Electoral Areas and municipalities in the RDN
5	DI	Clarified the number of Snuneymuxw First Nation’s reserves
6	DI	Updated census data
7	I	Added detail on how waste generation is measured
8	DI	Correction to the RDN Waste Disposal sector chart
11	I	Added the role of Nanaimo Recycling Exchange in waste management table
13-14	I	Added information on education and outreach programs / roles
16	D	Removed list of individual collectors of yard waste
23	I	Added more information about the RDN waiving tipping fees for non-profits.
24	I	Added examples of waste leaving our region
33	I/D	Added more information about how to increase diversion in the ICI sector
35	I/D	Added more information around additional authorities requested by the RDN
37	I/D	Added more information around Waste Hauler licensing with further description.
39	I	Added section: Regulatory Development and Implementation Process
40	I	Added section: Hypothetical Outcomes of New solid Waste Regulation
49	I	Added section: Curbside Collection Contract
49-50	I	Added detail to the Development of New Bylaws, Mandatory Waste Source Separation Bylaw and Waste Hauler Licensing Bylaw

Page Number	Revision Type	Revision Details
59	M	Schedule C moved to Plan Appendix as recommended by “A Guide to Solid Waste Management Planning”
90	M	Schedule F moved to Plan Appendix as recommended by “A Guide to Solid Waste Management Planning”

8 Plan Implementation

After the Plan is approved by the minister, a Plan Monitoring Advisory Committee (PMAC) will monitor the implementation of the Plan. A description of the PMAC tasks and composition are included in the terms of reference which can be found in Schedule D of the Plan.

9 Appendices

- Appendix 1 – Maura Walker’s curriculum Vitae
- Appendix 2 – Current membership of the RSWAC
- Appendix 3 - Consultation and Communication Plan Letters to the MoE
- Appendix 4 – Consultation and Communication
- Appendix 5 – Get involved questions and comments received
- Appendix 6 – Executive summary
- Appendix 7 – Factsheets
- Appendix 8 – Examples of social media posts
- Appendix 9 – In person survey response break down
- Appendix 10 – Advertising examples
- Appendix 11 – Online survey summary
- Appendix 12 – Online survey comments
- Appendix 13 – Travelling display
- Appendix 14 – Newsletter excerpt
- Appendix 15 – Responses from feedback forms
- Appendix 16 – Open house display boards
- Appendix 17 – Comments received during consultation
- Appendix 18 – Direct comments and feedback
- Appendix 19 – Stakeholder groups contacted
- Appendix 20 – June 9, 2017 letter from VIRWIC
- Appendix 21 – January 16, 2018 letter from VIRWIC
- Appendix 22 – Letter of support from Comox Valley Regional District

Appendix 1

Maura Walker's curriculum vitae

Maura Walker

President and Senior Environmental Planner
MWA Environmental Consultants Ltd.



Summary

Ms. Maura Walker is the president of MWA Environmental Consultants Ltd (DBA Maura Walker and Associates). She is an environmental planner and solid waste management specialist with over twenty-five years of experience. Much of this has involved hands on experience with planning, design and implementation of waste diversion and disposal systems for clients around the world.

Ms. Walker is an experienced project manager and co-ordinator with extensive knowledge of environmental, social and sustainability issues. Her expertise includes stakeholder and community consultation.

Experience

2010 – Present **President**
Maura Walker and Associates Environmental Consultants, Duncan, BC

Ms. Walker launched *Maura Walker and Associates* in January 2010. Some of her recent and current projects include:

Solid Waste Management Plans and Plan Updates

- Regional District of Fraser-Fort George, BC
- Thompson-Nicola Regional District, BC (in partnership with Sperling-Hansen Associates)
- Squamish Lillooet Regional District, BC
- Powell River Regional District, BC
- Central Coast Regional District, BC
- Regional District of Nanaimo, BC
- Stages 1 and 2 Integrated Solid Waste and Resource Management Plan for the Capital Regional District, BC
- Bulkley-Nechako Regional District, BC
- Long-term Waste Management Strategy for the Town of Drayton Valley, Alberta

Profile

2010 – Present

President, MWA Environmental Consultants Ltd (DBA Maura Walker and Associates)
Duncan, British Columbia, Canada

2000 – 2009

Environmental Planning Team Leader and Senior Environmental Planner, AECOM (formerly Gartner Lee Limited), Burnaby, British Columbia, Canada

1994 – 2000

Special Projects Coordinator, Environmental Planning/Solid Waste Management
Regional District of Nanaimo
Nanaimo, British Columbia, Canada

1990 – 1992

Recycling Coordinator, City of Vancouver, British Columbia, Canada

1988 – 1990

Consultant, Resource Integration Systems Ltd. – Toronto, Ontario, Canada

Education

2008

Certificate in Public Consultation
International Association of Public Participation

1997 – 1999

Certificate in Local Government Administration, Capilano College, North Vancouver, BC, Canada

1985 – 1990

Bachelor of Environmental Studies, Environment and Resources Studies – Honours Co-op, University of Waterloo, Waterloo, Ontario, Canada

1987

Exchange Student, Third Year Environmental Science – Griffith University, Brisbane, Australia

- Waste Management Master Plan for Red Deer, Alberta
- Technical Review and Direction of the City of Whitehorse Solid Waste Action Plan for the City of Whitehorse, YK
- Comox Valley and Strathcona Regional Districts, BC
- Regional District of Okanagan-Similkameen, BC
- Alberni-Clayoquot Regional District, BC

Organic Waste Management

- Organic Waste Diversion Strategy for Columbia Shuswap Regional District
- Organic Waste Diversion Strategy for Regional District of North Okanagan
- Waste Diversion Strategy for Regional District of Central Kootenay
- Curbside Kitchen Scraps Collection for the University Endowment Lands, Province of BC
- Organic Waste Diversion Strategies for the West Coast and for the Alberni Valley, Alberni Clayquot Regional District
- Organic Waste Diversion Assessment for Alberni-Clayoquot Regional District
- Case studies on Best Management Practices to Reduce and Divert Organic Waste for the BC Ministry of Environment
- Food Waste Composting Assessment for Comox Valley Regional District
- Compost Marketing Study for Regional District of Fraser-Fort George

Waste Diversion Projects

- Curbside Recycling Options for the City of Prince George for the Regional District of Fraser-Fort George
- Curbside Collection Implementation for Greater Terrace Area for Regional District of Kitimat-Stikine
- Case studies on best management practices to reduce and divert construction and demolition wastes for the BC Ministry of Environment
- Regulatory Approaches to Increasing Recycling on Construction and Demolition Work Sites for Metro Vancouver
- Developing Mandatory Recycling Space Requirements for Commercial and Multi-Family Developments for Metro Vancouver
- Financial assessment of future recycling scenarios for the Regional District of Fraser-Fort George

Extended Producer Responsibility

- Facilitate a national multi-stakeholder workshop about establishing EPR in Canada's northern and remote communities for Canadian Council of Ministers of the Environment (CCME) (with sonnevera inc.)
- Summary of Targeted Materials for EPR in the North for the Canadian Council of Ministers of the Environment (CCME) (with sonnevera inc.)
- Project coordination of a garbage, recycling and streetscape composition study for Multi-Material BC

- Study on the Operations and Effectiveness of the British Columbia End-of-Life Major Appliance Collection and Recycling System for MARR BC (with Ecoinspire)
- Phase 1 Study (Existing Recycling System in BC) for the Development of a Packaging and Printed Paper EPR Program for British Columbia for Multi-Material BC (with Glenda Gies and Associates)
- Development of the Multi-Material BC Stewardship Plan (with Glenda Gies and Associates)
- Assist with the Implementation of the Multi-Material BC Stewardship Plan (with Glenda Gies and Associates)

Other Solid Waste Management Projects

- Development of a waste disposal calculator and new waste management targets for the BC Ministry of Environment
- Development of the Solid Waste Facilities Bylaw for the Regional District of Kitimat-Stikine
- Assistance with the procurement of curbside collection services for the Town of Ladysmith
- Rural Waste Management Facilities and Services Review and Efficiency Study for the Regional District of Fraser-Fort George
- Stakeholder Consultation and Technical Advisor to the Regional District of Kitimat-Stikine for the Implementation of the Terrace Area Integrated Solid Waste Management Plan
- A waste disposal reporting and verification procedure for regional districts for the BC Ministry of Environment
- Landfill and Transfer Station Waste Composition Study for the Regional District of Nanaimo
- Two-Season Waste Composition Study for the City of Whitehorse (2009/10 and 2017/18)
- Assisting with the Implementation of a Nature Park on a Closed Landfill for the Regional District of Nanaimo
- Waste Management Business Plan for Turkey for confidential client (sub-consultant to AECOM), Turkey

2000 – 2009 **Environmental Planning Team Leader and Senior Environmental Planner**
Gartner Lee Limited, Burnaby, BC

Projects managed by Ms. Walker include:

- Solid Waste Management Plan and Community Consultation Process for Regional District of Fraser-Fort George, BC, Canada
- Residual Waste Processing Technologies Study for the Regional District of Nanaimo, Canada
- Residential Organics Collection Study and Field Test Design for the Regional District of Nanaimo, Canada
- Strategic Waste Strategy for the Yukon Government, Canada
- Solid Waste Management Business Plan for AQUATERA, Grande Prairie, Alberta, Canada
- Solid Waste Management Plan and Community Consultation Process for Squamish-Lillooet Regional District, BC, Canada
- Waste Composition Studies at landfills in Grande Prairie, Whistler and Nanaimo, Canada.
- Solid Waste Management Master Plan for Brunei Darussalam, Sultanate of Brunei Darussalam

- Waste Composition Study of Rag Picker Diverted Materials, for Kolkata Municipal Corporation, India
- Waste Composition Study at the Sungai Akar Landfill, Sultanate of Brunei Darussalam
- Integrated Solid Waste Management Plan for Kolkata Municipal Development Authority, India
- Hazardous Waste Management Feasibility Study for Malaysia, Malaysia
- Estimating Dioxin/Furan Emissions from On-site Residential Waste Combustion in Canada and a subsequent study on Approaches to Reducing On-Site Residential Waste Combustion for the Canadian Council for the Ministers of Environment (CCME), Canada
- Construction and Demolition Waste Composition Study for Metro Vancouver, BC, Canada
- Solid Waste Management Plan and Zero Waste Plan for the Regional District of Nanaimo, BC, Canada
- Composting Feasibility Study for the Squamish-Lillooet Regional District, Canada
- The development of a waste stream management licensing system for the Regional District of Nanaimo and Cowichan Valley Regional District, BC, Canada
- Industrial, Commercial and Institutional Waste Composition Study for the Fraser Valley Regional District, Canada

1994 – 2000

Special Projects Coordinator

Environmental Planning/Solid Waste Management, Regional District of Nanaimo, British Columbia, Canada

- Co-ordinated the development of the region's solid and liquid waste management plans and plan amendments.
- Developed and implemented public consultation strategies and communication plans.
- Prepared requests for proposals, tenders and contracts.
- Co-ordinated the siting process for a new landfill site for the region.
- Developed strategies for the management of organic wastes and construction, demolition and landclearing wastes.
- Co-ordinated a siting process for a transfer station.

1990 – 1992

Recycling Coordinator

City of Vancouver, British Columbia, Canada

- Co-ordinated solid waste management programs such as the residential recycling program, backyard composting program and centralized leaf composting.
- Responsible for educating residents about waste reduction and recycling.
- Designed and produced educational materials.
- Provided training to environmental educators and community organizations in regard to recycling and composting.
- Participated in the development of the GVRD Solid Waste Management Plan.
- Organized public forums on solid waste management.
- Supervised Vancouver's composting demonstration garden.

1988 – 1990

Consultant

Resource Integration Systems Ltd., Toronto, Ontario, Canada

- Consulted to the public and private sectors in the development, design and implementation of solid waste management programs.
- Developed educational and promotional materials, and conducted environmental audits.

P a p e r s a n d P r e s e n t a t i o n s

Increasing Waste Diversion in Multi-Family Buildings, Recycling Council of BC Annual Conference 2010, co-presentation with Sarah Wilmot

Planning for Your Plan, Recycling Council of BC Annual Conference 2008, co-presentation with Laurie Gallant and Darcy Mooney

Alberni-Clayoquot Regional District's Solid Waste Management Plan, March 29 2007, for COAST Waste Management Association's Annual Conference – What's Next in Waste

Squamish Lillooet Regional District's Solid Waste Management Plan, Recycling Council of BC Annual Conference 2007, co-presentation with Jesse Lee

Diving into the Dumpster: A Study of Multi-Family Waste, April 2006 for SWANA Northwest Regional Solid Waste Symposium and September 22 2006, for Recycling Council of Alberta– Back to the Future

Ragpicker to Recycler: The Waste-Based Economy of Calcutta, Recycling Council of Alberta Annual Conference 2005

Breaking the Barriers: Composting Breaks Through in BC, Recycling Council of BC Annual Conference 2004

Composting in the Squamish-Whistler Corridor, April 2003, for the SWANA Northwest Regional Solid Waste Symposium, by Wendy Horan, Maura Walker and Owen Carney

The "Dirt" on Composting in British Columbia: A Working Paper Addressing the Barriers to Expanded Composting in BC. April 2000, for SWANA Northwest Regional Solid Waste Symposium

As the Compost Turns– 1998 Composting Council of Canada Conference, a co-presentation with Brenda Phillips of the Capital Regional District.

Landfill Crisis Sparks Waste Reduction Strategies, Alternatives: Perspectives on Society & Environment, Mar/Apr 1991, vol. 17, number 4

Professional Affiliations

- *Canadian Institute of Planners and Planning Institute of BC*
 - Provisional Member

- *Coast Waste Management Association*
 - Member (1994 – Present)
 - President (2001 – 2002)
 - Vice President (1999 – 2000)
 - Director (1997 – 1998)

- *Composting Council of Canada*
 - Member (1995 – 2010)
 - Board Member (2005 – 2007)

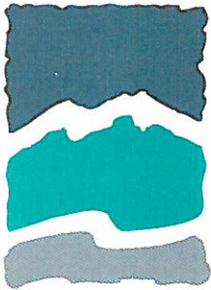
- *Recycling Council of British Columbia*
 - Member (1994 – Present)
 - Vice President (2001 – 2003)
 - Chair of Organics Working Group (1999 – 2001)
 - Director (1996 – 1998)
 - Policy Committee Member (1995 – 2005)

Appendix 2: Current RSWAC Membership

Board Representative - Chair	Alec McPherson
Board Representative – Vice Chair	Bill McKay
Community Representatives	VACANT
	Wally Wells
	Dr. Jim McTaggart – Cowan
	John Finnie
	Craig Evans
	Ellen Ross
	Gerald Johnson
	Michele Green
	Amanda Ticknor
Industry Representatives	Michael Tripp
	Dean Jones
	Stewart Young Jr.
	Derek Haarsma
Not - for - profit Representatives	Jan Hastings
	Ben Geselbracht
Non-Voting Technical Advisors	
First Nation Representatives	Michael Recalma – Qualicum First Nation
	Nanoose First Nation
	Snuneymuxw First Nation
City of Nanaimo	Charlotte Davies
City of Parksville	VACANT
Town of Qualicum Beach	Cam Purdon
District of Lantzville	Fred Spears
Ministry of Environment	Luc Lachance
Environment Canada	VACANT
Island Health	VACANT

Appendix 3

Consultation and Communication Plan Letters to the MoE



REGIONAL
DISTRICT
OF NANAIMO

February 13, 2015

File:

5365-00

Ministry of Environment
2080A Labieux Rd
Nanaimo BC V9T 6J9

Attention: A.J. Downie, Regional Director, Coast Region

Dear: Mr. Downie,

Re: Regional Solid Waste Management Plan Review

The Regional District of Nanaimo (RDN) is in the process of reviewing its 2004 Solid Waste Management Plan Report. As a requirement of the Province of BC's Guide to the Preparation of Regional Solid Waste Management Plans (the Guide) the RDN has prepared its Consultation & Communications Plan for Ministry approval. We anticipate that the Regional Solid Waste Advisory Committee (RSWAC) will ratify the Consultation & Communications Plan during their meeting on February 19, 2015.

If Ministry staff can provide us with feedback on the plan prior to the meeting it would be greatly appreciated. Although, your advice or direction can also be addressed at a later date in the final plan.

On August 26, 2014, the RDN submitted a link to our Stage One Existing System Report and a hard copy version was also provided to Ministry staff. For your convenience, here is another link to the report.

<http://www.rdn.bc.ca/cms/wpattachments/wpID224atID5946.pdf>.

The RDN has provided the Ministry with a description of the new RSWAC and the newly formed Solid Waste Management Advisory Select Committee (SWMSC) and a copy of the amended terms of reference. In addition, the committee structure is included in the Consultation and Communications Plan. The committee structure was modified in the spirit of the Ministry of Environment's Guide to Preparation of Regional Solid Waste Management Plans. A single advisory committee was selected as this better reflects the demographic and geographic nature of our Region as compared to separate public and technical advisory committees. The RSWAC's revised terms of reference has been expanded to include a wider diverse audience as we move forward introducing Stage Two and Three of the SWMP review process.

In addition, there will no longer be four elected officials assigned to the RSWAC there is only one RDN Board member who will act as the Committee Chair. These modifications are designed to improve communication, provide transparency, accountability and a productive vehicle for meaningful public involvement. The RSWAC is intended to be a sounding board before reaching out to the wider public.

6300 Hammond Bay Rd.
Nanaimo, B.C.
V9T 6N2

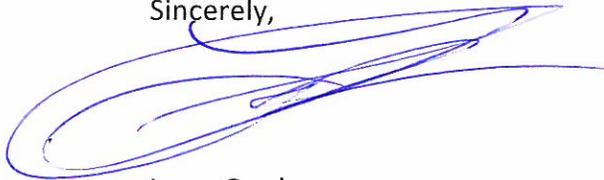
Ph: (250)390-4111
Toll Free: 1-877-607-4111
Fax: (250)390-4163

RDN Website: www.rdn.bc.ca

To ensure ongoing communications with the RDN Board and the RSWAC, a Solid Waste Management Select Committee (SWMSC) has been introduced and will comprise of a minimum of seven RDN Board Directors. The role of the new SWMSC is to provide oversight during development of the plan as well as be the liason between the RDN Board and the RSWAC. Decision making authority for the final plan will rest with the RDN Board. Once approved, it will be forwarded to the Ministry for final adoption.

Thank you for your assistance in reviewing the attached documents and should you have any questions during your review of the enclosed information, please do not hesitate to contact me at (250) 390-6560.

Sincerely,



Larry Gardner
Manager of Solid Waste

Encl.

cc: A. Leuschen, Senior Environmental Protection Officer, MOE
S. Horsburgh, Senior Solid Waste Planner, RDN



Consultation & Communications Plan

Solid Waste Management Plan Review:

Regional District of Nanaimo

January 26, 2015

Background

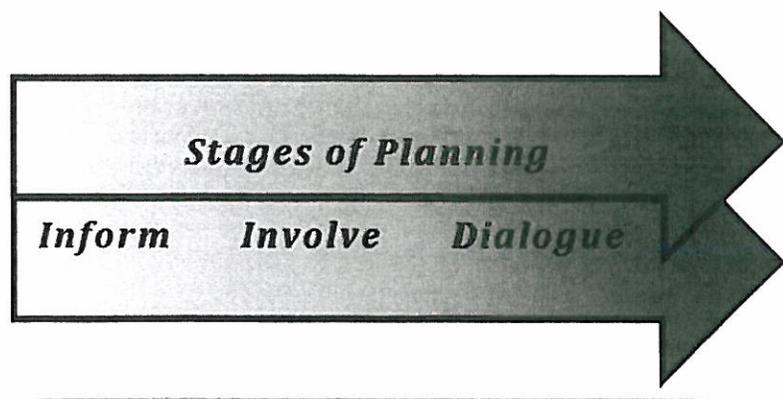
The Regional District of Nanaimo (RDN) is undertaking a review of its Solid Waste Management Plan (SWMP), which has been amended three times since provincial approval of the original Plan in 1988. The RDN has fully implemented their last SWMP, which was prepared in 2004. The current plan review is intended to identify “what’s next” and chart the course for solid waste management for the coming years.

The process to review and update the region’s SWMP is as follows:

- Stage 1 (completed report in 2013) – Review and analysis of current solid waste management system, action status of the 2005 Plan, and identification of issues and opportunities for improvement;
- Stage 2 (current stage) – Identify and review options to address the region’s future waste management requirements, select preferred options and prepared report presenting the findings; and
- Stage 3 – Prepare a draft amended SWMP, carry out a public review of the draft plan, incorporate changes from the public review and finalize the plan for Regional Board and Ministerial approval.

Community consultation is a mandatory component of the planning process and is critical to the creation of a plan that can be supported by the public. Consultation is carried out throughout the process and commonly begins with dissemination of information to more active dialogue with the community in Stages 2 and 3 as options are reviewed and selected.

Spectrum of Consultation



The Ministry of Environment outlines the expected components of a community consultation process in their document *Guide to the Preparation of Regional Solid Waste Management Plans by Regional Districts*. In addition, the RDN has a public consultation / communication framework to ensure a consistent, comprehensive and cost-effective approach to public consultation and communication

initiatives. This framework, along with the Ministry's guide, was used to prepare the following Consultation & Communications Plan.

Objectives

A Consultation & Communications and Plan is intended to achieve the following objectives:

- i. Ensure that the process to develop the plan is collaborative and reflects a broad range of perspectives
- ii. Provide opportunities to educate the public about the Solid Waste Management Plan and future options for managing waste
- iii. Provide opportunities for public input on a range of options and estimated costs
- iv. Increase support for the resultant solid waste management planning and programs
- v. Meet the consultation expectations of the Ministry of Environment.

Participants

There are several groups that may be directly and indirectly affected by the outcomes of the SWMP process. It is critical to the success of the SWMP that affected stakeholders are participants in the planning process. The following is a list of potential stakeholders:

- RDN staff
- Regional Board
- Municipal staff
- Municipal councils
- First Nations
- Ministry of Environment
- Residents throughout the region
- Businesses
- Construction and demolition industry
- Major institutions (Nanaimo General Hospital, School District 68 and 69, Vancouver Island University)
- Waste haulers
- Waste management facility owners and operators
- Neighbouring regional districts (Cowichan Valley, Alberni Valley, Comox Valley).

Consultation and Communications Plan

The RDN's framework has adopted 3 components to the plan: Participation, Engagement, and Communications. The activities associated with these three components, described in the following sections, have been employed by a number of regional districts to ensure their planning process meets the objectives listed above.

Participation

Participation refers to activities that enable a two-way conversation between those tasked with developing the SWMP and affected stakeholders, including the public. These activities provide opportunities for collaboration. Participation tools include:

- The Regional Solid Waste Advisory Committee
- The Solid Waste Select Committee
- Stakeholder Workshops

The Regional Solid Waste Advisory Committee (RSWAC) is the cornerstone of the Consultation and Communications Plan and will be in place throughout the planning process. This committee is a combination of public advisory representatives and technical advisory representatives that meets regularly throughout the planning process. The RSWAC provides advice to the Regional District Board in regards to the content of the plan and associated consultation activities. Members of RSWAC include representatives of the general public, business, waste management industry, local governments and First Nations from across the region. Terms of reference for the RDN's RSWAC are provided in Appendix A. These terms of reference have been approved by the RDN Board and applied to the establishment of the current RSWAC.

The Solid Waste Select Committee is made up of directors of the Regional District Board and acts as a steering committee during the process of developing the SWMP. The committee forms a direct link between the RSWAC and the Board. They are able to provide direct feedback to the RSWAC to ensure that the outcomes of the planning process are politically supportable, and also ensure that the Board is aware of the direction that the planning process is taking.

Stakeholder workshops will be held throughout the planning process as the need for them is identified. Workshops are intended to create a dialogue on specific elements of the SWMP, including generating new ideas and perspectives on issues, as well as deepening the collective understanding of those involved. The outcomes of the workshops will be used to supplement the discussions at the RSWAC meetings. Engagement or whatever word descriptor we used above.

Engagement

Engagement refers to activities where the community is drawn into the conversation and input is sought from the public. The focus is on receiving information rather than providing it. For purposes of developing a solid waste management plan, engagement activities can be used to solicit input on the public's current perceptions of solid waste management as well as their feedback on options identified during the planning process.

Engagement activities will include a dedicated email address to receive email comments and inquiries, an on-line survey to identify residents' issues and concerns regarding solid waste management, and stakeholder meetings. Stakeholder meetings may be held to obtain input on options affecting a specific industry groups (e.g. construction/demolition/ renovation contractors, multi-family building managers, etc.). The broader public will be solicited for their feedback on the RDN's solid waste system.

Stage 3 involves a range of activities intended to obtain feedback on the draft plan's recommendations, including:

- Public open houses and meetings
- Exit survey at the public open houses and meetings
- On-line surveys for those unable to attend an open house or meeting
- Stakeholder meetings
- Presentations to Municipal and First Nation Councils.

The variety and breadth of engagement activities selected should be reflective of the type and range of actions proposed in the SWMP and how best to involve the affected stakeholders. Consequently, the specific tools to be employed during the Stage 3 consultation process are best identified once Stage 2 is completed or nearing completion.

Communications

Communications refers to providing information to the public and is generally one-way communication. Communication activities during the planning process will include:

- SWMP Updates for Councils
- A SWMP webpage on the Regional District website
- Newsletters
- Information display
- Promotion (e.g. newspaper and radio ads, posters, Facebook, Twitter)

Regular communications with municipal and First Nation councils are intended to keep these organizations informed on the development of the plan. The format for these communications will be through circulation of RSWAC meeting minutes to the member municipalities and First Nations as well as through regular RDN Solid Waste Newsletters

The RDN's website will be used to make SWMP resources available to the public and other interested parties on an on-going basis. A dedicated solid waste management plan web page has been developed and will include:

- Reports and memoranda prepared by the consultants (e.g. Stage 1 report)
- Advisory committee minutes and presentations
- A "tell us what you think" link to a dedicated email address
- A link to sign up for regular SWMP updates
- Information on consultation events and other opportunities for input

At any point during the planning process, information can be distributed to update residents of the key issues under discussion, as well as opportunities and ongoing encouragement for them to participate in available consultation activities. Often this information can be part of a regular regional communication, such as the RDN's Regional Perspectives or Zero Waste Newsletter. A Stage 3 newsletter can be used to provide information on the key recommendations in the draft SWMP and how residents and businesses can provide their feedback.

A mobile information display is being developed for use in malls, regional disposal facilities, community centres and at community events. Similar to the newsletter, the display will feature information on the key recommendations in the draft SWMP and how to provide input.

During the Stage 3 Consultation process, promotion is used to inform the public and affected stakeholders about the draft plan and the opportunities available to them for providing input. It is important to use a variety of tools to increase awareness and encourage people to attend or provide feedback via the website. Possible promotional tools include:

- Campaign slogan or brand to use on all materials to increase recognition and awareness
- Posters in public areas (city halls, rec centres, senior centres, other facilities) to promote open houses and other events
- Distribute hard copies of newsletter / poster to key locations
- Email distribution to key contacts (local governments, neighbourhood groups, associations, Chamber of Commerce, etc.) including information for their websites and newsletters
- Significant draw prize to increase participation (in surveys, at open houses)
- Newspaper advertising
- Radio advertising
- Media releases to all media (TV, Radio, Newspaper, Shaw, etc) and follow up to increase interviews and media coverage
- Public service announcements
- Website copy, including link to online survey and display panels and presentation materials
Include offer to sign up for email project updates
- Facebook updates
- Twitter updates
- Promote at special events and community gatherings
- Promote via presentations to community groups and service clubs
- Signage at all solid waste facilities
- Inserts and/or notification via Regional Districts' and member municipalities' mailers (if available during the consultation process)
- Signage on-site at events.

The extent that the above tools are used will be based on the content of the draft plan and the appropriate level of promotion and consultation required.

A Consultation and Communications Plan for the RDN's SWMP

A presentation on SWMP communications and consultation was provided to RSWAC at their meeting on December 11, 2014. Based on feedback from the committee, a consultation plan for the RDN's SWMP has been prepared. The following table provides an overview of the proposed communication and consultation activities planned for each stage of the process to develop the SWMP. As noted above, the breadth of the Stage 3 consultation and communication activities will be defined once the content of the draft plan is known; a list of *potential* Stage 3 activities is provided below.

STAGE	PARTICIPATION	CONSULTATION	COMMUNICATIONS
Stage 1	<ul style="list-style-type: none"> • Establish Regional Solid Waste Advisory (RSWAC) and Steering Committee • RSWAC Meetings • Steering Committee Meetings 	<ul style="list-style-type: none"> • Establish protocol for tracking email and telephone input • Public workshop on waste management issues and solutions 	<ul style="list-style-type: none"> • Establish SWMP webpage on RDN website ○ Technical memos and reports ○ Advisory committee meeting minutes

			<ul style="list-style-type: none"> ○ Notices of consultation events ● Establish on-line sign-up for email updates Send out press release ● Article in RDN newsletter
Stage 2	<ul style="list-style-type: none"> ● Regional Solid Waste Advisory Committee meetings ● Steering Committee meetings ● Stakeholder workshops 	<ul style="list-style-type: none"> ● Track email and telephone input ● Survey ● Stakeholder meetings 	<ul style="list-style-type: none"> ● Website updates ● Newsletter ● Local government update for Municipal and First Nation councils ● Send out email update to distribution list ● Presentations to interested organizations (as requested)
Stage 3 (potential consultation and communication activities)	<ul style="list-style-type: none"> ● Regional Solid Waste Advisory Committee meetings ● Steering Committee meetings 	<ul style="list-style-type: none"> ● Open Houses ● Public Meetings ● Presentations to Municipal and First Nation Councils ● Meeting(s) with neighbouring regional districts ● Stakeholder meetings ● Presentations to community groups and other interested organizations ● Exit surveys (at open houses and public meetings) ● On-line Survey (website link to survey) ● Receive and track email and telephone input 	<ul style="list-style-type: none"> ● Website updates ● Newsletter, including <ul style="list-style-type: none"> ○ Key components of draft plan ○ Opportunities for input ○ Offer of presentations to interested groups ● Newspaper advertising of consultation opportunities ● Media releases ● Media interviews ● Local government update ● Facebook and Twitter postings ● FAQs (available on website and in hard copy) ● Notifications in local government publications ● Notifications on municipal websites

	<p>(with link to SWMP webpage)</p> <ul style="list-style-type: none"> • Updates to email distribution list • Public service announcements • Information display (for use in recreation centres, libraries and other public venues)
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Summarizing Input

Upon completion of the Stage 3 consultation activities, all of the input received from the public and affected stakeholders will be collated and summarized so that it can be reported to the RSWAC. The input can be reviewed by RSWAC with the intention of determining if modifications to the SWMP should be recommended to the Board.

Once the SWMP document meets with the Board’s approval, the Plan will need to be submitted to the Minister of Environment for approval, along with:

- i. Written commitments from municipalities and First Nations that are tasked to undertake measures identified in the SWMP
- ii. A report on the Public Review and Consultation Process.

The *Public Review and Consultation Process Report* should include:

- A description of all consultation activities undertaken during the course of the planning process, including:
 - RSWAC meetings
 - Steering Committee meetings
 - Workshops
 - Website
 - Stakeholder outreach, including meetings
 - Presentations to community groups
 - Newsletters
 - Media releases
 - Community displays
 - Advertising
 - Social media
- Copies of newsletters, advertising, press releases and other tools used to communicate with the general public and affected stakeholders
- A description of First Nation engagement activities
- The RSWAC terms of reference and a list of RSWAC members
- Minutes of RSWAC and Solid Waste Subcommittee meetings.

Appendix A

Regional Solid Waste Advisory Committee
Terms of Reference

**RDN – REGIONAL SOLID WASTE ADVISORY COMMITTEE (RSWAC)
SOLID WASTE MANAGEMENT PLAN
TERMS OF REFERENCE**

1. BACKGROUND AND NEED

The Regional District of Nanaimo is undertaking a review of the Solid Waste Management Plan. Public and agency consultation representative of the diversity of the community is integral to the review. In accordance with the Ministry of Environment's *Guide to the Preparation of Regional Solid Waste Management Plans* a single public and technical advisory committee will act as a "sounding board" of community interests and will provide advice to the Regional Board through the Solid Waste Management Select Committee.

2. ROLES AND RESPONSIBILITIES

The role of the RSWAC is to:

- Represent a balance of community interests;
- Act as advisory committee to the Solid Waste Management Select Committee on the development of the Solid Waste Management Plan;
- Review guiding principles and provide feedback for the Plan;
- Review information provided by the RDN and its consultants and provide comments and suggestions as well as highlight information gaps to be considered for the Plan;
- Provide input on design and implementation of public surveys and consultation processes;
- Assist in reviewing current programs and identifying issues and opportunities (Stage2 & Stage 3 report);
- Assist in developing and evaluating a variety of options and strategies for the draft Plan (Stage2 report);
- Participate in public consultation, as required (for example, attendance at Open Houses);
- Review public consultation results and provide input on the final Plan;
- Participate in smaller ad-hoc committees dealing with specific issues or tasks, as required; and,
- Contribute to programs and policies that are in the best interests of all residents of the RDN, balancing both community and industry needs and technical requirements.

Recommendations of the RSWAC are directed to the Solid Waste Management Select Committee.

3. COMPOSITION AND CHAIR

Chair and Vice Chair to be appointed by the Chairperson of the Board.

Voting Members:

- One representative from the Select Committee (or alternate);
- Up to 15 members representing a diversity of community interests such as from the following groups:
 - Private sector waste management industry service providers
 - Private sector solid waste facility representatives

- Non-profit group with an interest in solid waste management (e.g. reuse organization)
- Large institutional solid waste generator
- Business representatives, including one focused on the 3Rs
- Members at large for the community (community association, youth, senior)
- Regional Landfill Advisory Committee/Regional Landfill area representative
- Urban/rural geographic mix

Non-Voting Technical Advisors:

- Up to 12 members representing agencies including:
 - Regional District Staff – 3 members
 - Municipal Staff – 4 members
 - First Nations – 3 members
 - Provincial Agencies – 1 member
 - Federal Agencies – 1 member

4. RULES OF PROCEDURE

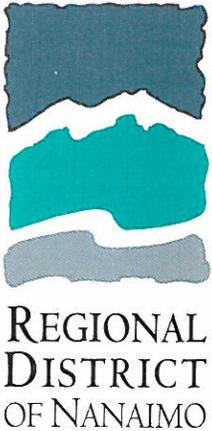
The Committee will act in accordance with the RDN Board Procedure Bylaw.

5. ADMINISTRATION

Administrative matters related to the RSWAC will be conducted by RDN staff acting through the Chair.

6. TERM

RSWAC will conclude its work when the Plan has been approved by the RDN Board. Members will be asked to commit for up to three years.



March 3, 2015

File: 5365-00

Ministry of Environment
2080A Labieux Rd
Nanaimo BC V9T 6J9

Attention: A.J. Downie, Regional Director, Coast Region

Dear: Mr. Downie;

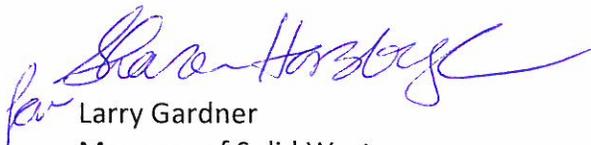
Re: Regional Solid Waste Management Plan Review

Further to our correspondence dated February 13, 2015, the Regional District of Nanaimo is pleased to submit an amended Consultation & Communications Plan for your approval. Please replace the previous plan that was submitted with the attached copy, which was adopted by the Regional Solid Waste Advisory Committee (RSWAC) at its February 19, 2015 meeting.

The primary change to the revised Consultation and Communications Plan is the inclusion of additional consultation activities during Stage 2 as recommended by the RSWAC.

Should you have any questions during your review of the enclosed information, please do not hesitate to contact me at (250) 390-6560.

Sincerely,


Larry Gardner
Manager of Solid Waste

Encl.

cc: A. Leuschen, Senior Environmental Protection Officer, MOE
S. Horsburgh, Senior Solid Waste Planner, RDN

6300 Hammond Bay Rd.
Nanaimo, B.C.
V9T 6N2

Ph: (250)390-4111
Toll Free: 1-877-607-4111
Fax: (250)390-4163

RDN Website: www.rdn.bc.ca

Appendix 4

Consultation and Communications Plan



Consultation & Communications Plan

Solid Waste Management Plan Review:

Regional District of Nanaimo

March 3, 2015

Background

The Regional District of Nanaimo (RDN) is undertaking a review of its Solid Waste Management Plan (SWMP), which has been amended three times since provincial approval of the original Plan in 1988. The RDN has fully implemented their last SWMP, which was prepared in 2004. The current plan review is intended to identify “what’s next” and chart the course for solid waste management for the coming years.

The process to review and update the region’s SWMP is as follows:

- Stage 1 (completed report in 2013) – Review and analysis of current solid waste management system, action status of the 2005 Plan, and identification of issues and opportunities for improvement;
- Stage 2 (current stage) – Identify and review options to address the region’s future waste management requirements, select preferred options and prepare report presenting the findings; and
- Stage 3 – Prepare a draft amended SWMP, carry out a public review of the draft plan, incorporate changes from the public review and finalize the plan for Regional Board and Ministerial approval.

Community consultation is a mandatory component of the planning process and is critical to the creation of a plan that can be supported by the public. Consultation is carried out throughout the process and commonly begins with dissemination of information to more active dialogue with the community in Stages 2 and 3 as options are reviewed and selected.

Spectrum of Consultation



The Ministry of Environment outlines the expected components of a community consultation process in their document *Guide to the Preparation of Regional Solid Waste Management Plans by Regional Districts*. In addition, the RDN has a public consultation / communication framework to ensure a consistent, comprehensive and cost-effective approach to public consultation and communication

initiatives. This framework, along with the Ministry's guide, was used to prepare the following Consultation & Communications Plan.

Objectives

A Consultation & Communications and Plan is intended to achieve the following objectives:

- i. Ensure that the process to develop the plan is collaborative and reflects a broad range of perspectives
- ii. Provide opportunities to educate the public about the Solid Waste Management Plan and future options for managing waste
- iii. Provide opportunities for public input on a range of options and estimated costs
- iv. Increase support for the resultant solid waste management planning and programs
- v. Meet the consultation expectations of the Ministry of Environment.

Participants

There are several groups that may be directly and indirectly affected by the outcomes of the SWMP process. It is critical to the success of the SWMP that affected stakeholders are participants in the planning process. The following is a list of potential stakeholders:

- RDN staff
- Regional Board
- Municipal staff
- Municipal councils
- First Nations
- Ministry of Environment
- Residents throughout the region
- Businesses
- Construction and demolition industry
- Major institutions (Nanaimo General Hospital, School District 68 and 69, Vancouver Island University)
- Waste haulers
- Waste management facility owners and operators
- Neighbouring regional districts (Cowichan Valley, Alberni Valley, Comox Valley).

Consultation and Communications Plan

The RDN's framework has adopted 3 components to the plan: Participation, Engagement, and Communications. The activities associated with these three components, described in the following sections, have been employed by a number of regional districts to ensure their planning process meets the objectives listed above.

Participation

Participation refers to activities that enable a two-way conversation between those tasked with developing the SWMP and affected stakeholders, including the public. These activities provide opportunities for collaboration. Participation tools include:

- The Regional Solid Waste Advisory Committee
- The Solid Waste Select Committee
- Stakeholder Workshops

The Regional Solid Waste Advisory Committee (RSWAC) is the cornerstone of the Consultation and Communications Plan and will be in place throughout the planning process. This committee is a combination of public advisory representatives and technical advisory representatives that meets regularly throughout the planning process. The RSWAC provides advice to the Regional District Board in regards to the content of the plan and associated consultation activities. Members of RSWAC include representatives of the general public, business, waste management industry, local governments and First Nations from across the region. Terms of reference for the RDN's RSWAC are provided in Appendix A. These terms of reference have been approved by the RDN Board and applied to the establishment of the current RSWAC.

The Solid Waste Management Select Committee is made up of directors of the Regional District Board and acts as a steering committee during the process of developing the SWMP. The committee forms a direct link between the RSWAC and the Board. They are able to provide direct feedback to the RSWAC to ensure that the outcomes of the planning process are politically supportable, and also ensure that the Board is aware of the direction that the planning process is taking.

Stakeholder workshops will be held throughout the planning process as the need for them is identified. Workshops are intended to create a dialogue on specific elements of the SWMP, including generating new ideas and perspectives on issues, as well as deepening the collective understanding of those involved. The outcomes of the workshops will be used to supplement the discussions at the RSWAC meetings.

Engagement

Engagement refers to activities where the community is drawn into the conversation and input is sought from the public. The focus is on receiving information rather than providing it. For purposes of developing a solid waste management plan, engagement activities can be used to solicit input on the public's current perceptions of solid waste management as well as their feedback on options identified during the planning process.

Engagement activities will include a dedicated email address to receive email comments and inquiries, an on-line survey to identify residents' issues and concerns regarding solid waste management, and stakeholder meetings. Stakeholder meetings may be held to obtain input on options affecting a specific industry groups (e.g. construction/demolition/ renovation contractors, multi-family building managers, etc.). The broader public will be solicited for their feedback on the RDN's solid waste system.

Stage 2 & 3 involves a range of activities intended to obtain feedback on the draft plan's recommendations, including:

- Public open houses and meetings
- Exit survey at the public open houses and meetings
- On-line surveys for those unable to attend an open house or meeting
- Stakeholder meetings
- Presentations to Municipal and First Nation Councils.

The variety and breadth of engagement activities selected should be reflective of the type and range of actions proposed in the SWMP and how best to involve the affected stakeholders. Consequently, the specific tools to be employed during the Stage 3 consultation process are best identified once Stage 2 is completed or nearing completion.

Communications

Communications refers to providing information to the public and is generally one-way communication. Communication activities during the planning process will include:

- SWMP Updates for Councils
- A SWMP webpage on the Regional District website
- Newsletters
- Information display
- Promotion (e.g. newspaper and radio ads, posters, Facebook, Twitter)

Regular communications with municipal and First Nation councils are intended to keep these organizations informed on the development of the plan. The format for these communications will be through circulation of RSWAC meeting minutes to the member municipalities and First Nations as well as through regular RDN Solid Waste Newsletters

The RDN's website will be used to make SWMP resources available to the public and other interested parties on an on-going basis. A dedicated solid waste management plan web page has been developed and will include:

- Reports and memoranda prepared by the consultants (e.g. Stage 1 report)
- Advisory committee minutes and presentations
- A "tell us what you think" link to a dedicated email address
- A link to sign up for regular SWMP updates
- Information on consultation events and other opportunities for input

At any point during the planning process, information can be distributed to update residents of the key issues under discussion, as well as opportunities and ongoing encouragement for them to participate in available consultation activities. Often this information can be part of a regular regional communication, such as the RDN's Regional Perspectives or Zero Waste Newsletter. A Stage 3 newsletter can be used to provide information on the key recommendations in the draft SWMP and how residents and businesses can provide their feedback.

A mobile information display is being developed for use in malls, regional disposal facilities, community centres and at community events. Similar to the newsletter, the display will feature information on the key recommendations in the draft SWMP and how to provide input.

During the Stage 3 Consultation process, promotion is used to inform the public and affected stakeholders about the draft plan and the opportunities available to them for providing input. It is important to use a variety of tools to increase awareness and encourage people to attend or provide feedback via the website. Possible promotional tools include:

- Campaign slogan or brand to use on all materials to increase recognition and awareness
- Posters in public areas (city halls, rec centres, senior centres, other facilities) to promote open houses and other events
- Distribute hard copies of newsletter / poster to key locations
- Email distribution to key contacts (local governments, neighbourhood groups, associations, Chamber of Commerce, etc.) including information for their websites and newsletters
- Significant draw prize to increase participation (in surveys, at open houses)
- Newspaper advertising
- Radio advertising
- Media releases to all media (TV, Radio, Newspaper, Shaw, etc) and follow up to increase interviews and media coverage
- Public service announcements
- Website copy, including link to online survey and display panels and presentation materials
Include offer to sign up for email project updates
- Facebook updates
- Twitter updates
- Promote at special events and community gatherings
- Promote via presentations to community groups and service clubs
- Signage at all solid waste facilities
- Inserts and/or notification via Regional Districts' and member municipalities' mailers (if available during the consultation process)
- Signage on-site at events.

The extent that the above tools are used will be based on the content of the draft plan and the appropriate level of promotion and consultation required.

A Consultation and Communications Plan for the RDN's SWMP

A presentation on SWMP communications and consultation was provided to RSWAC at their meeting on December 11, 2014. Based on feedback from the committee, a consultation plan for the RDN's SWMP has been prepared. The following table provides an overview of the proposed communication and consultation activities planned for each stage of the process to develop the SWMP. As noted above, the breadth of the consultation and communication activities in Stage 2 & 3 will be defined once the content of the draft plan is known; a list of *potential* activities is provided below.

STAGE	PARTICIPATION	CONSULTATION	COMMUNICATIONS
Stage 1	<ul style="list-style-type: none"> • Establish Regional Solid Waste Advisory (RSWAC) and Steering Committee • RSWAC Meetings • Steering Committee Meetings 	<ul style="list-style-type: none"> • Establish protocol for tracking email and telephone input • Public workshop on waste management issues and solutions 	<ul style="list-style-type: none"> • Establish SWMP webpage on RDN website ○ Technical memos and reports ○ Advisory committee meeting minutes

			<ul style="list-style-type: none"> ○ Notices of consultation events ● Establish on-line sign-up for email updates Send out press release ● Article in RDN newsletter
Stage 2 (potential consultation and communication activities)	<ul style="list-style-type: none"> ● Regional Solid Waste Advisory Committee meetings ● Steering Committee meetings ● Stakeholder workshops 	<ul style="list-style-type: none"> ● Track email and telephone input ● Survey ● Stakeholder meetings ● Public information meetings /Open Houses ● Meeting(s) with neighbouring regional districts ● Stakeholder meetings ● Presentations to community groups and other interested organizations ● Exit surveys (at open houses and public meetings) ● On-line Survey (website link to survey) 	<ul style="list-style-type: none"> ● Website updates ● Newsletter ● Local government update for Municipal and First Nation councils ● Send out email update to distribution list ● Presentations to interested organizations (as requested)
Stage 3 (potential consultation and communication activities)	<ul style="list-style-type: none"> ● Regional Solid Waste Advisory Committee meetings ● Steering Committee meetings 	<ul style="list-style-type: none"> ● Open Houses ● Public Meetings ● Presentations to Municipal and First Nation Councils ● Meeting(s) with neighbouring regional districts ● Stakeholder meetings ● Presentations to community groups and other interested organizations ● Exit surveys (at open houses and public meetings) ● On-line Survey (website link to 	<ul style="list-style-type: none"> ● Website updates ● Newsletter, including <ul style="list-style-type: none"> ○ Key components of draft plan ○ Opportunities for input ○ Offer of presentations to interested groups ● Newspaper advertising of consultation opportunities ● Media releases ● Media interviews ● Local government update ● Facebook and Twitter

- survey)
- Receive and track email and telephone input
- postings
- FAQs (available on website and in hard copy)
- Notifications in local government publications
- Notifications on municipal websites (with link to SWMP webpage)
- Updates to email distribution list
- Public service announcements
- Information display (for use in recreation centres, libraries and other public venues)

Summarizing Input

Upon completion of consultation activities, all of the input received from the public and affected stakeholders will be collated and summarized so that it can be reported to the RSWAC. The input can be reviewed by RSWAC with the intention of determining if modifications to the SWMP should be recommended to the Board.

Once the SWMP document meets with the Board's approval, the Plan will need to be submitted to the Minister of Environment for approval, along with:

- i. Written commitments from municipalities and First Nations that are tasked to undertake measures identified in the SWMP
- ii. A report on the Public Review and Consultation Process.

The *Public Review and Consultation Process Report* should include:

- A description of all consultation activities undertaken during the course of the planning process, including:
 - RSWAC meetings
 - Steering Committee meetings
 - Workshops
 - Website
 - Stakeholder outreach, including meetings
 - Presentations to community groups
 - Newsletters
 - Media releases
 - Community displays
 - Advertising

- Social media
 - Copies of newsletters, advertising, press releases and other tools used to communicate with the general public and affected stakeholders
 - A description of First Nation engagement activities
 - The RSWAC terms of reference and a list of RSWAC members
 - Minutes of RSWAC and Solid Waste Subcommittee meetings.

Appendix A

**Regional Solid Waste Advisory Committee
Terms of Reference**

**RDN – REGIONAL SOLID WASTE ADVISORY COMMITTEE (RSWAC)
SOLID WASTE MANAGEMENT PLAN
TERMS OF REFERENCE**

1. BACKGROUND AND NEED

The Regional District of Nanaimo is undertaking a review of the Solid Waste Management Plan. Public and agency consultation representative of the diversity of the community is integral to the review. In accordance with the Ministry of Environment’s *Guide to the Preparation of Regional Solid Waste Management Plans* a single public and technical advisory committee will act as a “sounding board” of community interests and will provide advice to the Regional Board through the Solid Waste Management Select Committee.

2. ROLES AND RESPONSIBILITIES

The role of the RSWAC is to:

- Represent a balance of community interests;
- Act as advisory committee to the Solid Waste Management Select Committee on the development of the Solid Waste Management Plan;
- Review guiding principles and provide feedback for the Plan;
- Review information provided by the RDN and its consultants and provide comments and suggestions as well as highlight information gaps to be considered for the Plan;
- Provide input on design and implementation of public surveys and consultation processes;
- Assist in reviewing current programs and identifying issues and opportunities (Stage2 & Stage 3 report);
- Assist in developing and evaluating a variety of options and strategies for the draft Plan (Stage2 report);
- Participate in public consultation, as required (for example, attendance at Open Houses);
- Review public consultation results and provide input on the final Plan;
- Participate in smaller ad-hoc committees dealing with specific issues or tasks, as required; and,
- Contribute to programs and policies that are in the best interests of all residents of the RDN, balancing both community and industry needs and technical requirements.

Recommendations of the RSWAC are directed to the Solid Waste Management Select Committee.

3. COMPOSITION AND CHAIR

Chair and Vice Chair to be appointed by the Chairperson of the Board.

Voting Members:

- One representative from the Select Committee (or alternate);
- Up to 15 members representing a diversity of community interests such as from the following groups:
 - Private sector waste management industry service providers
 - Private sector solid waste facility representatives

- Non-profit group with an interest in solid waste management (e.g. reuse organization)
- Large institutional solid waste generator
- Business representatives, including one focused on the 3Rs
- Members at large for the community (community association, youth, senior)
- Regional Landfill Advisory Committee/Regional Landfill area representative
- Urban/rural geographic mix

Non-Voting Technical Advisors:

- Up to 12 members representing agencies including:
 - Regional District Staff – 3 members
 - Municipal Staff – 4 members
 - First Nations – 3 members
 - Provincial Agencies – 1 member
 - Federal Agencies – 1 member

4. RULES OF PROCEDURE

The Committee will act in accordance with the RDN Board Procedure Bylaw.

5. ADMINISTRATION

Administrative matters related to the RSWAC will be conducted by RDN staff acting through the Chair.

6. TERM

RSWAC will conclude its work when the Plan has been approved by the RDN Board. Members will be asked to commit for up to three years.

2015 Solid Waste Management Plan Review Issue Identification

The table below outlines the issues captured from the results of the findings in the Stage One Existing System Report as well as input from the following sources:

- Regional Solid Waste Advisory Committee (RSWAC) meeting September 2013;
- A solid waste haulers and recyclers roundtable meeting held in February 2014;
- A solid waste planning workshop held for RDN Board members in May 2014;
- A Zero Waste community day workshop held in October 2014; and,
- Two meetings of the RSWAC held in October and December 2014.

CONTEXT & TOPIC AREA	ISSUES IDENTIFIED
<p>1. Reduce/Reuse: ‘Reduce & Reuse’ are at the top of the waste management hierarchy, however these behaviours receive less promotion that recycling and proper waste disposal.</p>	<p><i>-How can we encourage waste reduction?</i> <i>-How to encourage behaviours that move “up the hierarchy” from recycling to reduction and reuse</i> <i>-How to move towards Sustainable product design and manufacturing</i> <i>-Is the per capital waste generation rate increasing or decreasing?</i></p>
<p>2. Extended Product Responsibility (EPR): EPR shifts the end-of-life management costs of consumer goods from local government taxpayers to procedures and consumers. In BC, the Recycling Regulation (BC Reg. 449/2004) defines the products and packaging that are included in an EPR program. Management of products is managed by stewardship organizations who – in turn- organize collection services throughout the province.</p>	<p><i>-Lack of awareness and confusion with EPR/take back systems (what to take where)</i> <i>-Uncertainty regarding the implications of future EPR programs</i></p>
<p>3. Curbside Collection Services: There is a diverse range of residential services that include 3 stream collection: garbage, recycling and food waste.</p>	<p><i>-How to improve diversion and the use of existing curbside services (yard waste, textiles, and glass and incontinence products, kitty litter)</i> <i>-Food waste participation in rural areas?</i> <i>-Does the residential collection model need improvement?</i> <i>-Does additional recovery of recyclables from the garbage Multi Recovery Facilities (MRF’s) have a role?</i></p>

CONTEXT & TOPIC AREA	ISSUES IDENTIFIED
<p>4. Industrial, Commercial & Industrial (ICI): Disposal bans are the main policy mechanism employed by the RDN to encourage recycling by the ICI sector.</p>	<p><i>-Need increased diversion of ICI waste this is supported by the 2012 Waste Composition Study</i></p>
<p>5. Construction, Demolition and Renovation: Construction, demolition and renovation waste is composed of a wide variety of materials, including recyclable materials such as wood, cardboard, metal and drywall. There are several companies that provide recycling collection to this sector</p>	<p><i>-How to encourage more diversion of construction, demolition and renovation waste</i> <i>-WCB asbestos management requirements create a challenge to the recovery and recycling of gypsum and C&D waste</i> <i>-Acceptance of creosoted materials and the appropriate tipping fee</i> <i>-Conflicting strategies for management of wood waste</i> <i>-Diversion of asphalt shingles from landfill</i> <i>-Lack of data regarding C&D waste</i> <i>-Lack of clarity on Future C&D regulations under BC's Recycling Regulation</i> <i>-Uncertain outlook for the Wood Waste Market</i></p>
<p>6. Resource Recovery/Zero Waste Policies: Recovering valuable resources from our waste streams is garnering significant attention as commodity prices fluctuate.</p>	<p><i>-When and how to implement Resource Recovery</i> <i>-Which resource recovery technology is best suited to the RDN's waste stream and size</i> <i>-How to manage hard to recycle items</i> <i>-Lack of high quality depot services in the City of Nanaimo</i></p>
<p>7. Residual Waste Management: The RDN's air space is the most important asset. Options to increase capacity are optimization of diversion, operations and airspace. The current landfill life is until 2037. Issues that emerge need to be explored further in conjunction with a long range waste generation projections in the context of the future financial model.</p>	<p><i>-What are desirable options once the regional landfill is full?</i> <i>-What options aren't desirable?</i> <i>-Illegal Dumping</i> <i>-WSML Licensing scheme/ Flow control options</i> <i>-Managing future waste generation</i></p>
<p>8. How does Waste to Energy (WTE) fit into the RDN's "Zero Waste Strategy"? Under what circumstances should WTE be considered/not considered.</p>	<p><i>- If not located in RDN</i> <i>- If only servicing RDN</i> <i>- If servicing Vancouver Island only</i> <i>- Specific technologies?</i> <i>- Large volumes typically required to make WTE financially attractive (competitive with landfilling)</i> <i>-Zero Waste International Alliance definition of Zero Waste does not allow combustion of waste for energy purposes</i></p>

CONTEXT & TOPIC AREA	ISSUES IDENTIFIED
<p>9. Financing the Solid Waste System: A sustainable financial business model is essential for the provision of solid waste services.</p> <p>The majority of funding for the Solid Waste function is currently drawn from RDN tipping fees. Since 2014, expenses are exceeding revenues with the deficit being funded by increasing the Tax requisition. Current funding mechanism not able to adapt to change in market forces. The following three mechanisms for consideration: decrease in spending, adjust tipping fees, and taxation generated the following issues.</p>	<ul style="list-style-type: none"> -How to pay for waste reduction initiatives -current method of funding the solid waste function through tipping fees is unsustainable -How to finance the RDN's solid waste management infrastructure -How to fund Nanaimo Recycling Exchange & Non-profits -Private waste export of MSW & how it destabilizes the RDN waste management system -Stable funding for non-profits -Lack of full cost recovery associated with provision of EPR Collection Services -Recycling markets limited market for post-consumer glass, and film plastic

**SOLID WASTE MANAGEMENT PLAN REVIEW
WORK PLAN & PROPOSED TOPICS**

DATES	MEMORANDUMS & DRAFT PLAN DEVELOPMENT
<p>Feb 19</p> 	<p>MEMORANDUM 1 Projected Waste Generation</p> <p>Forecasting future waste quantities is fundamental for planning waste management programs and services. If we don't know how much waste we are going to need to manage we can't plan for the types of programs and services we will need to provide. Applying the Provincial model for waste generation suggests the following: Under a status quo scenario of 70% diversion over the next 10 years forecasts a per capita waste disposal of 291kg with a total amount of residuals of 50,715 metric tonnes annually by 2025.</p> <p>Under the Province's most optimistic forecast of 81% diversion over the next 10 years a per capita waste disposal of 185kg with a total amount of residuals of 32,119 metric tonnes annually by 2025 is achievable. <i>Discussion Point: Does the RSWAC committee want to set the new target at 80% for the new plan?</i></p>
<p>April 16</p>	<p>MEMORANDUM 2 Reduce, Reuse, Education & EPR</p> <p>The main challenges related to waste reduction and reuse are the dominant culture of consumption and the design and manufacture of consumer goods. The RDN's efforts to date primarily focus on educating residents and businesses and supporting Extended Producer Responsibility (EPR) programs that are offered at by community run and privately operated recycling depots. <i>Discussion Points: Does the RSWAC advocate for stronger EPR and support the continuation of existing EPR programs, increase education efforts and advocate for more EPR programs?</i></p>
	<p>MEMORANDUM 3 The 3rd R: Recycling - Collection Services and End Uses</p> <p>Strategies and practices related to collection and end uses of food waste, garbage and recyclables are well established and accepted in the region. The responsibility for funding residential and multi-family recycling programs shifted to industry stewards in May 2014. Organics management is provided by the private sector that has been instrumental for the RDN to implement its organics management strategy, which includes a ban on commercial food waste. <i>Discussion Point: Does the RSWAC support the continuation of existing programs as well as discussing ways to harmonize or expand collection options.</i></p>

<p>May 28</p>	<p>MEMORANDUM 4 Zero Waste Plan & Regulatory Issues The memorandum will address several regulatory and community issues that were identified through issue identification phase that included gaps in data for the commercial sector and waste import/export, expanding disposal bans, review of the Waste Stream management bylaw, community planning for waste management facilities and ongoing concerns about illegal dumping. Regional districts have the authority under the BC Environmental Management Act to regulate the solid waste industry to ensure diversion, prevent abandonment of materials, track movement of waste, and protect the public interest by managing waste flow to ensure financial sustainability. <i>Discussion Point: Is the RSWAC satisfied with the level of regulation of waste facilities and haulers and the RDN’s approach for coordinating illegal dumping?</i></p>
	<p>MEMORANDUM 5 Memo 5 - Resource Recovery The memo will focus on the recovery of energy and non-energy solid waste resources at the RDN. A number of resource recovery technologies and approaches are discussed and compared with information drawn from various feasibility studies conducted over the past years. The tri region study identified a number of financial projections for Waste to Energy scenarios ranging from enhancing the existing system to potential short term (up to 2020) and long term (beyond 2020) options. The RDN has to meet 70% diversion before waste to energy can be considered as a solid waste management option; therefore WTE will only be considered conceptually during this plan development. Waste to Energy counts as recovery if 60% energy is recovered. The Metro Vancouver Waste to energy proposal raised the profile of out of district waste being managed at an in-region WTE facility. <i>Discussion Point: the RSWAC committee is divided on the Waste to Energy debate. Is there a role for Waste to Energy in future Solid Waste Planning? Is there a place for an Out-of Region WTE or an RDN WTE facility?</i></p>
<p>June 18</p>	<p>MEMORANDUM 6 Residual Management Residuals management in the RDN consists of disposal of municipal solid waste at the Regional Landfill, owned and operated by the RDN, and disposal of construction and demolition waste at a variety of privately operated facilities throughout the RDN. The Regional Landfill’s most important asset is its airspace which makes it paramount to conserve the landfill for as long as possible. Options for increasing capacity are the optimization of diversion, operations and airspace. The current fill design provides landfill capacity until 2037. Discussion Points: Are there other fill design concepts given the projected decrease in volume that could increase landfill life? These concepts need to be explored further in conjunction with a revised landfill capacity study. In addition it will be necessary to review this in the context of the financial model as the current method of funding the solid waste function through tipping fees is unsustainable.</p>
	<p>MEMORANDUM 7 Financial Management A sustainable financial business model is essential for the provision of solid waste services. The majority of funding for the RDN function is currently drawn from tipping fees charged at the Regional Landfill and Church Road Transfer Station. Since 2013, expenses are exceeding revenues with the deficit being funded by reducing spending and increasing the tax requisition. <i>Discussion Point: to bring future finances in balance: the memorandum will review three mechanisms: (i) decrease spending, (ii) increase/decrease tipping fees and (iii) tax requisition. A modelling exercise maybe required based on the projected waste tonnage to test various assumptions and combinations.</i></p>

Appendix 5 – Questions and comments received from Get Involved

Question/Comment	RDN response
<p>Our strata manages its own waste/recycle & presently we don't have organic. Will the RDN bring in mandated organic waste management covering strata? Our strata is single family but road, lighting etc are strata, along with waste. The strata is sympathetic to organic waste management & is trying to do some future planning.</p>	<p>Thank you for your comment and question. Yes, part of the updated Solid Waste Management Plan is the introduction of new regulation for Mandatory Waste Source Separation which would mean that all strata complexes would be required to have separated garbage, recycling and compost on site. Strata would have the option of either handling organics (compost) themselves or contracting this out to private waste haulers. More information on Mandatory Waste Source Separation and Multi-Family Waste can be found here and here.</p>
<p>There is a ton of garbage being deposited in our parks, on our streets and in the surrounding country side. Is there any plan to address this problem? I suggest some sort of "free dumping" would take care of a great deal of this mess.</p>	<p>Thank you for your comment. Currently, the updated Solid Waste Management Plan does not include having "free dumping". The reason being that "free dumping" are not actually free. Costs associated with having free dumping days are actually very high and the cost burden is just spread out to other residents and users of the landfill. It also encourages people to hold on to their waste and to wait for the free day which can lead to unsightly premises and an extremely busy, almost unmanageable landfill. This ultimately means reduced revenue for the landfill, which means a shortage in funding for zero waste programs. Also, over time, as people are become more environmentally aware and as they learn of the many existing free options for recycling, there tends to be less dumping in communities overtime. The plan also includes funding for education and enforcement to help combat illegal dumping. If you are interested you can review the report that the Regional Solid Waste Advisory Committee reviewed the option of including Complimentary Disposal Services at Regional District of Nanaimo Solid Waste Facilities here</p>
<p>I live in a complex of 10 row houses, I had the landlord's permission to set up composting for the units. It seems to work but I have trouble with people not knowing what is compost (or perhaps not caring). The other problem I had was rats. I think that composting " at home" is a better way to compost than on a large scale in respect to smell and availability also the " not in my backyard" stuff. I feel that a decent composter would address the rat issue. I am wondering if you have given any thought to this sort of composting for multi housing.</p>	<p>Thank you for your comment. It is always great to hear about residents that are taking initiatives in trying to reduce their waste. The RDN does not currently provide collection service to multifamily homes, they receive service from private collectors. An initiative that we have put forward in the updated Solid Waste Management plan is the licensing of waste haulers. One of the things that this initiative does is to ensure that all Multifamily residents are offered garbage, recycling and food waste collection as many in the regional district do not currently have food waste collection. Although the RDN does not have backyard composting as a new initiative in the updated plan, we do provide funding to local organizations to provide zero waste education and we also provide resources on our website related to backyard composting and grass-cycling.</p>

Question/Comment	RDN response
	If you are interested resources related to more rodent resistant backyard composting units please email zerowaste@rdn.bc.ca
<p>I only have one concern but I'm not sure it's entirely yours to shoulder: the trash on the streets, beaches, and running into the streams and watersheds. My son and I have committed to picking up straws as it's a specific item that we could help clean up – otherwise we'd be overwhelmed by the trash on the ground. It's really sad to see the attitude of our fellow citizens (not all) I just want to say I'm glad this is happening, perhaps the new initiative will encourage people to do more. Also, I'm not sure if education is offered to students from elementary through to university but I think we need to get kids thinking about this now so that they are not clueless about what can be recycled or composted when they set out into the world on their own.</p>	<p>Thank you for your thoughtful question. Trash in our ecosystems is a major concern, and one that we can tackle by joining forces with community members and groups, non-profit organizations and local business, and other levels of government. One of the existing RDN Solid Waste programs is the Illegal Dumping Program, which includes surveillance and enforcement activities as well as ongoing clean-up of illegal dumping sites and free disposal for community clean-up events. A great nationwide initiative is the Great Canadian Shoreline Cleanup – you can join forces with other community members by taking part in one of the scheduled cleanups, or organize your own! The website is: http://shorelinecleanup.ca/ On the topic of education, one of the initiatives proposed in our new Solid Waste Management Plan is Expanded Zero Waste Education. Helping residents make the right choices every day is critical to achieving Zero Waste. For that reason, education is a crucial component — making sure people know what, when, where and how to reduce, recycle, divert and compost. Check out our factsheet on the existing and proposed Expanded Zero Waste Education programs here: https://www.getinvolved.rdn.ca/4006/documents/7881</p>

Appendix 6

Executive Summary

Regional District of Nanaimo: Solid Waste Management Plan Summary

Planning for the Future of Our Waste

Our Region

The Regional District of Nanaimo (RDN) provides regional governance and services to more than 155,000 people on Vancouver Island’s central east coast. It is expected to grow by another 52,000 residents to approx. 207,650 within the next 10 years.

Governed by a 17-member Regional Board, the RDN covers a large, diverse area of nearly 207,000 hectares with distinct communities that include the municipalities of Nanaimo, Lantzville, Parksville, and Qualicum Beach, as well as seven unincorporated Electoral Areas.

The RDN is sited within the traditional territory of several First Nations, including the Snuneymuxw, Shaw-naw-as, and Qualicum First Nations.

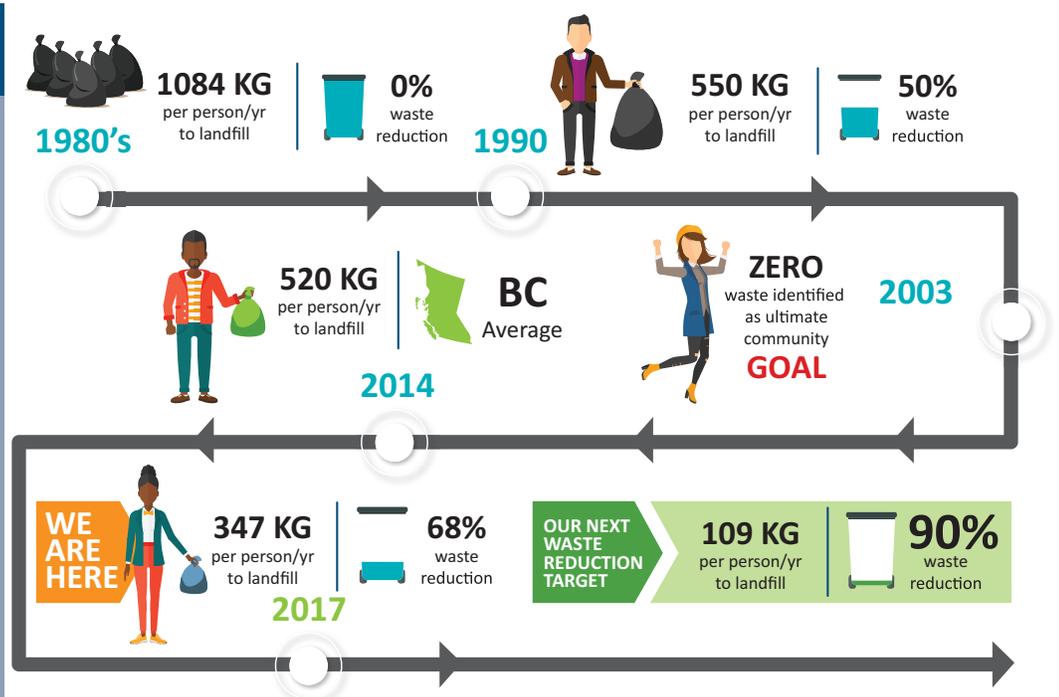
Our Plan

In British Columbia, regional districts are required by the Provincial *Environmental Management Act* to develop a Plan — a long-term vision — that defines how the regional district will manage its solid waste, including waste diversion and disposal. The RDN prepared its first Plan in 1988, with updates that followed in 1996 and 2004.

The RDN has tracked its waste disposal since the 1980s. Since then, residents have reduced, recycled, diverted and composted more than 68 per cent of their waste that was otherwise destined for the landfill. Residents are now throwing away about one-third of what they were in the 1980s — 347 kg/capita/year in 2014 compared to 1,084 kg/capita per year from 1980s disposal estimates. The amended Plan is targeting a diversion rate of 90 per cent, meaning per person disposal would be about 109 kg/year by 2027.

A New Target

Proposed: Adopt a new target to reduce the amount of waste going to the landfill by 90 per cent by the year 2027, equal to the average per person throwing away 109 kg of garbage per year. Thanks to the ongoing participation of our community, the RDN could reach this target through enhancing existing education and enforcement programs, encouraging more businesses to recycle by introducing new regulations and working with other governments, manufacturers and waste producers to reduce waste at the source.



The RDN is achieving some of the highest waste diversion in the world. In 2002, the RDN adopted “zero” as its waste diversion target, meaning that the region will continuously strive to reduce the amount of waste requiring disposal. The RDN was the first jurisdiction on Vancouver Island and one of several forward-looking local governments in Canada and around the world to move beyond recycling and adopt a Zero Waste approach to eliminating waste.

New programs like Curbside Recycling and the Green Bin food waste program have extended the life of the RDN’s landfill, reduced greenhouse gas emissions and created a local industry of recycling and composting that supports 190 jobs, adding more than \$17M to the local economy.

This updated Plan shows the RDN’s commitment to achieving Zero Waste addressing both waste diversion and residual waste (what is left over after everything has been composted or recycled) and includes two main components. One is an update of the Zero Waste Strategy including a Zero Waste definition and strengthening existing Zero Waste programs particularly Education, Construction and Demolition, and Multi-Family and Industrial, Commercial and Institutional recycling, composting and waste diversion. The second is the introduction of bylaws to regulate and enable Mandatory Waste Source Separation and Waste Hauler Licensing.

The Opportunity

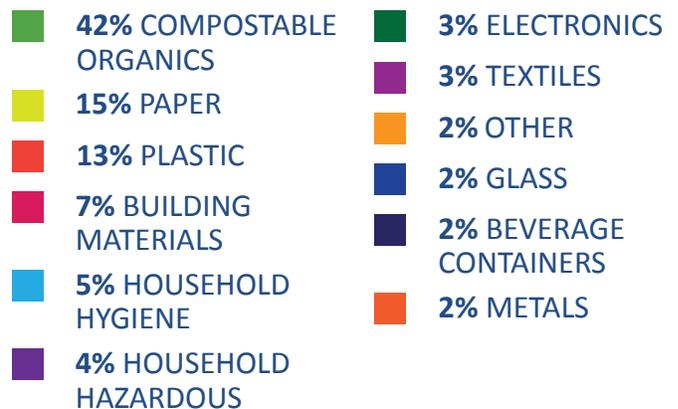
A recent review of the landfill shows that more than half of what’s being dumped, or about 58 per cent, can be readily reused, recycled or composted, and most is coming from the commercial, construction and demolition, and multi-family sectors.



ROOM FOR IMPROVEMENT

Here is a snapshot of the types of commercial waste still being landfilled.

This, along with multi-family waste, represents the greatest opportunity to reduce and recycle.



Zero Waste Defined

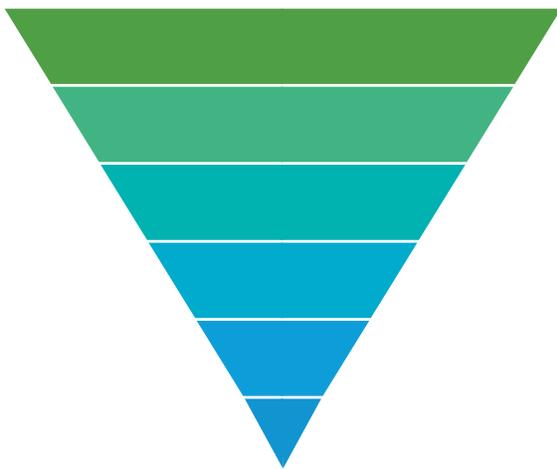
To achieve its Zero goal in the long term, the RDN recognizes it needs to maximize source separation and will need to move beyond the largely voluntary programs that currently exist across the region.

Proposed: Adopt the Zero Waste International Alliance (ZWIA) definition:

Zero Waste is a goal that is ethical, economical, efficient and visionary, to guide people in changing their lifestyles and practices to emulate sustainable natural cycles, where all discarded materials are designed to become resources for others to use.

Zero Waste means designing and managing products and processes to systematically avoid and eliminate the volume and toxicity of waste and materials, conserve and recover all resources, and not burn or bury them. Implementing Zero Waste will eliminate all discharges to land, water or air that are a threat to planetary, human, animal or plant health.

ZW Hierarchy of Highest & Best Uses



- Reduce, reuse & return
- End subsidies for wasting
- Product & packaging redesign
- Clean production & takebacks
- Reuse, repair, remanufacture
- Recycle, compost & digest
- Regulate (bans, biological energy recover, landfills with re-processing)
- Not ok: incineration, bioreactor landfills

Our Guiding Principles

To achieve the goals set by the RDN Board seven principles were established to guide the development and implementation of the Plan;

1. Promote the Zero Waste Hierarchy of highest and best uses and support a circular economy.
2. Maximize use of waste materials and manage residual waste appropriately.
3. Support polluter and user-pay approaches and manage incentives to maximize behavior outcomes.
4. Prevent organics and recyclables from going in the garbage.
5. Collaborate with other regional districts wherever practical.
6. Develop collaborative partnerships with interested parties to achieve regional targets set in plans.
7. Level playing field within regions for both private and public solid waste management facilities.

Our Existing Programs

The RDN has made significant advances, introducing a broad range of solid waste management programs and infrastructure since the 1980s. In 1991, the RDN introduced Canada's first user pay residential garbage collection system. Since then, the RDN and its partners have expanded curbside recycling programs, banned paper, metal, commercial food waste, clean wood waste and other recyclable materials from the landfill, and successfully promoted composting throughout the region.

The 2004 amended Plan introduced the Zero Waste strategy and expanded on policies and programs to increase diversion. This strategy has effectively created a private-sector market for recyclables such as wood waste, some commercial and demolition waste, yard waste, food waste and product stewardship programs.

Involving the private sector has meant reduced costs to government and established a robust waste management industry in the region, resulting in world-class waste diversion levels.

Existing programs include:

- **School Education Program** - a primary school program that focuses on the concept of zero waste.
- **Illegal Dumping Program** - includes surveillance and enforcement activities as well as ongoing clean-up of illegal dumping sites and free disposal for community clean-up events.
- **Disposal Bans** - certain compostable/recyclable materials are banned from being buried in the landfill and must be recycled or composted. These include drywall, cardboard, paper, metal and tires, commercial food waste, yard and garden waste, wood waste and product stewardship materials designated under BC's recycling regulation. Banning specific wastes from the landfill, when viable recycling alternatives are in place, has been used effectively by the RDN to increase recycling, composting and waste diversion since 1991.
- **Zero Waste Promotion** - the Zero Waste Promotion and Education program includes the website, newsletters, guides, and participation in community events.
- **Recycling and Organics at RDN Facilities** – self-haul customers disposing of wastes can also recycle items such as appliances, propane tanks, scrap metal, gypsum, cardboard, paper, glass, and metal and plastic food and beverage containers. Self-haul and commercial customers can also compost food waste, yard waste and wood waste at these facilities.
- **Waste Stream Management Licensing Bylaw** - this Bylaw regulates all facilities that handle municipal solid waste, setting out operating and reporting requirements. The RDN processes new applications, reviews operating plans, monitors reporting and inspects existing licensed waste management facilities.
- **Residential Curbside Garbage, Recycling and Food Waste Collection** – the RDN provides residential garbage, recycling and food waste collection to more than 28,000 households, with biweekly garbage collection and weekly food waste collection.
- **Advocacy** - the RDN continues to advocate for greater waste diversion in the region by working with federal, provincial and local government agencies as well as BC stewardship groups. The RDN believes the costs and risk to manage end-of-life products should progressively transfer to the manufacturers of goods and the consumers who use them, rather than local government, to encourage more sustainable manufacturing and consumer choices.
- **Greener Purchasing Policy** - Implement an internal Purchasing Policy to minimize the environmental impact of purchasing and operations. Although the effect may be minimal on actual waste diversion, it demonstrates leadership and is consistent with the RDN Board's strategic goals.





Our Proposed Solid Waste Management Plan Programs

As the RDN works toward its Zero Waste goal, the key will be to build on its successes to date, nurture the existing framework of services and programs, improve service delivery and continue to reduce the amount of waste sent to landfill.

- **Expanded Zero Waste Education**

Helping residents make the right choices every day is critical to achieving Zero Waste. For that reason, education is a crucial component — making sure people know what, when, where and how to reduce, recycle, divert and compost. Educating people around regulations and making sure people are following the bans on landfilling materials that can be recycled, composted or taken elsewhere is also important. This will help make it easier for residents and businesses alike to make sure the right waste goes to the right location.

Proposed in the Plan is to enhance existing education, awareness and enforcement programs to help multi-family and commercial sectors improve their food waste and recycling programs; enhance existing public education for Zero Waste and waste reduction (includes public events, school and community presentations, advertising for campaigns, social media and more); and, enhance education and enforcement for construction and demolition waste to help ensure waste is sorted for reuse, chipping, composting or recycling before being landfilled.

A greater emphasis on reaching adult audiences through traditional and social media, as well as being more active in a variety of public events, is also proposed. The RDN will continue its advocacy efforts around greater waste diversion in the region by working with federal, provincial and local government agencies as well as BC stewardship groups, producers and the public.

- **Household Hazardous Waste**

Household hazardous waste is generally managed through BC product stewardship programs with established collection programs for the majority of household hazardous waste products, such as paint, pesticides, solvents and used motor oil. However, there are non-stewarded household hazardous waste (i.e. unidentified hazardous products or non-domestic pesticides) without a recycling or safe disposal option. The RDN will explore options for further expanding collection of non-stewarded residential household hazardous waste which may include sponsor and/or run residential drop-off events.

- **Expanded Industrial, Commercial and Institutional (ICI) Waste Management**

The RDN encourages recycling by the ICI sector through variable tipping fees and landfill bans which prohibit the disposal of recyclables, food waste and yard waste in the landfill in favour of recycling and composting instead. However, a significant amount is still making its way to the landfill, including food scraps (28 per cent), yard waste (eight per cent), compostable paper (six per cent), and recyclable paper and cardboard (12 per cent) with metal, pallet wrap and drywall making up the remainder of the recyclable portion of the ICI garbage.

In addition to enhancing education, enforcement and assistance for multi-family and commercial, new regulations are proposed that require waste generators to separate garbage from recycling and food waste.

- **Expanded Construction and Demolition Waste Management**

Construction and Demolition waste generates a wide range of materials most of which is reusable or recyclable. These include concrete, asphalt, wood, gypsum wallboard, metal, cardboard, asphalt roofing and plastic.

The RDN promotes diversion of these materials through disposal bans on cardboard, gypsum (drywall), metal and wood, and high tipping fees on loads of Construction and Demolition waste arriving at the Regional Landfill. The RDN will improve and reintroduce education and communications regarding Construction and Demolition waste in the RDN.

- **New Regulatory Tools**

The RDN's existing "Waste Stream Management Licensing Bylaw" was the first regulatory tool used as part of the Solid Waste Management Plan (SWMP) to create more opportunities for recycling and composting. This Bylaw regulates all facilities that handle municipal solid waste, setting out operating and reporting requirements. It sets high standards for the local waste management industry and creates a level playing field for the industry. The result is less risk and cost to the taxpayers for clean-up of poorly operated facilities, abandoned facilities and abandoned municipal solid waste and recyclable material (illegal dumping). Furthermore, the Bylaw sets reporting requirements making it possible to track waste diversion and progress of the SWMP.

As part of the updated Plan, the RDN proposes to continue with the existing Licensing bylaw as well as create two new additional bylaws — "Mandatory Waste Source Separation" and "Waste Hauler Licensing."

- **Mandatory Waste Source Separation Regulation** - A Waste Source Separation Regulation is a potential tool that would help ensure recyclables and compostables don't end up being landfilled. While many businesses and multi-family buildings already have recycling programs, this proposed regulation would expand to require all existing and new commercial, institutional and industrial businesses to have separate containers for recyclables, organics and waste.
- **Waste Haulers Licensing** - The second proposed new regulation would require businesses that haul waste for profit to obtain a license from the RDN. This is similar to the Waste Stream Management Licensing Bylaw that was introduced in the 2004 RDN SWMP. Licensing waste haulers provides the ability for the RDN to change the existing financial model to one where the waste industry is more profitable if they divert waste rather than dispose of it. The intent is to promote the "business of diversion" and foster industry innovation to achieve the lowest system cost with the highest waste diversion.

Both of these proposed regulations would also require additional Provincial approvals before they come into effect. Subject to adoption of the Plan, the RDN will conduct further consultation on the introduction of waste source separation regulation as a potential tool to help ensure these recyclables and compostables don't end up being landfilled.

- **Zero Waste Recycling**

The RDN proposes to promote Zero Waste Recycling by making funding available to target materials that are currently not part of a stewardship program or are not part of an established commercial market and end up in the landfill. The objective of this funding is:

1. **Maximizing waste diversion;**
2. **Encouraging non-profit and private sector innovation to develop markets and processes; and**
3. **Improving convenience for recycling materials.**

It is envisioned that the RDN will target recycling of specific materials or processes that do not have local commercial markets. The RDN will fund the Nanaimo Recycling Exchange (NRE) to act as a research/recycling hub for recycling items currently not commercially marketable. Acting as a research/recycling hub, the NRE would develop methods, markets and collaborations for items not currently easily recyclable, investigate barriers to recycling these items, and develop recycling programs that would ultimately benefit the RDN as a whole.



Our Residual Waste

While the long-term goal is Zero Waste, the RDN recognizes there is a need for landfill capacity in the future. The Regional Landfill has capacity until 2040 based on current landfilling rates. Depending on the speed and success of further diversion initiatives, the life of the landfill could be extended for an additional 10 to 15 years.

Just how much residual waste is generated depends on population growth and the success of the Zero Waste Plan's implementation. Economic growth in the region, new product stewardship programs, and the unanticipated development of private waste management facilities in the area will also be a factor.

During the life of this Plan, the RDN expects technologies will be advanced and the economic viability of residual waste processing and disposal may change. The RDN will continue to review and consider alternative technologies that are consistent with the Zero Waste Hierarchy and Zero Waste commitment.

Discussions with adjacent regional districts to identify potential cooperative strategies for waste management system improvements have been ongoing for a number of years and will continue. Future options for residual management could include collaboration with other local governments, siting a landfill and/or considering export on or off the island.

Costs

The updated Plan will begin in 2018, with full rollout of all components expected by 2021. Cost recovery mechanisms to fund the Plan's implementation include user rates, tipping fees and taxation.

The difference in costs to ratepayers is minimal — about \$10 more per year per person between the existing SWMP and the proposed SWMP. The costs are entirely from improvements to the Zero Waste Strategy — about \$10 more per year per person with an existing diversion rate of 68 per cent compared to the proposed strategy that is targeting a 90 per cent diversion rate.

Annual Net Per Capita Cost of Solid Waste Services in the RD[†]

	ANNUAL NET COST (\$ MILLION)	PER CAPITA COST (\$)
Current Zero Waste Strategy (68%)	\$3.3	\$53.66
Proposed Zero Waste Strategy (90%)	\$4.9	\$63.69
DIFFERENCE	\$1.6	\$10.03
Total Current SWMP	\$14.7	\$94.44
Future Proposed SWMP	\$16.3	\$104.47
DIFFERENCE	\$1.6	\$10.03

[†]Based on 10 year Budget, 2017 – 2026

New Zero Waste Program	Annual Average Cost	Total Cost per Household*
Expanded Zero Waste Education	\$40,000	\$0.55
Household Hazardous Waste	\$100,000	\$1.38
Expanded ICI Waste Management Diversion	\$200,000	\$2.71
Expanded Construction and Demolition Diversion	\$40,000	\$0.57
Waste Hauler Licensing	\$469,000	\$6.23
Mandatory Waste Source Separation	\$373,000	\$4.96
Zero Waste Recycling	\$300,000	\$4.07

*Based on an Avg \$500,000 value



Making it Happen

Our Implementation

A draft of this Plan will be subject to public consultation in the fall of 2017. Input from the consultation process will be incorporated into the final version of the Plan which will be presented to the Regional Board for their approval. Once approved by the Board, it will be submitted to the BC Ministry of Environment for final approval.

Contact Us

For more information on the Plan and public consultation and opportunities to provide input, please visit getinvolved.rdn.ca or contact the RDN at 250-390-6560 or toll-free at 1-877-607-4111.

Appendix 7

Factsheets

AS SOMEONE IN THE INDUSTRIAL, COMMERCIAL AND INSTITUTIONAL (ICI) SECTOR, HERE'S WHAT YOU NEED TO KNOW



THE BUSINESS OF DIVERSION

Providing incentives and regulations to increase source separation and collection of recycling and organics, create new local businesses and extend the lifespan of our landfill.

AT A GLANCE

There are two proposals in the Regional District of Nanaimo (RDN) draft Solid Waste Management Plan aimed at building the business of diversion that are key to the ICI sector:

- 1. Mandatory Waste Source Separation** - All Industrial, Commercial and Institutional (ICI) businesses would be required to have a system to separate their waste into organics, recycling and garbage containers for collection. Collection would be done by a hauler licensed by the RDN, or businesses could transport their own waste.
- 2. Enlisting Licensed Waste Haulers as Partners** - Businesses that haul waste for profit – usually the same companies who pick up waste from commercial buildings – would be required to obtain a License. These Licensed Haulers would help ensure their commercial customers have systems in place for separating and collecting organics, recycling and garbage.

These two proposals would also be supported by enhancing the education to help this ICI sector set up their recycling programs if they don't already have one.

Our community benefits by developing an economic model for businesses to thrive and increase services. Since 2004, thanks to your participation, waste diversion programs like recycling have extended the life of the RDN's landfill, reduced greenhouse gas emissions and created a local industry of recycling and composting that supports 190 jobs, adding more than \$17M to the local economy.

ROOM TO REDUCE

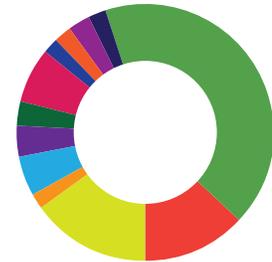
Residents and businesses in the RDN have much to be proud of. Since we started tracking our solid waste – garbage – some 36 years ago, we've reduced, recycled, diverted and composted more than 68% of the waste that was being sent to the landfill.

And yet there's more to be gained from our garbage. A recent review of our landfill shows there's still a fair amount of material in it – about 58% – that can be readily reused, recycled or composted. And most of this comes from the commercial and multi-family sectors.

The Industrial, Commercial and Institutional (ICI) sector represents more than 60% of landfilled waste in the RDN.

Currently, the RDN already encourages recycling by the ICI sector through variable tipping fees and landfill bans on recyclables such as paper, plastic, food, and yard waste.

Research shows there's more to be done. A 2012 waste study found about 42% of ICI garbage was compostable, including food scraps (28%), yard waste (7%) and compostable paper products (6%), and another 15% was considered easily recyclable.



- 42% COMPOSTABLE ORGANICS
- 15% PAPER
- 13% PLASTIC
- 7% BUILDING MATERIALS
- 5% HOUSEHOLD HYGIENE
- 4% HOUSEHOLD HAZARDOUS
- 3% ELECTRONICS
- 3% TEXTILES
- 2% OTHER
- 2% GLASS
- 2% BEVERAGE CONTAINERS
- 2% METALS

ROOM FOR IMPROVEMENT: Here is a snapshot of the type of commercial waste still being landfilled. This, along with multi-family waste, represents the greatest opportunity to reduce and recycle.

OUR JOURNEY TO ZERO WASTE

Our goal is to one day send no waste to the landfill – it's called our Zero Waste Strategy.

So how will we reach our Zero Waste goal? Over the next 10 years, we are aiming to reduce the amount of waste going to the landfill by 90%, equal to the average person throwing away 109 kg of garbage per year.

FROM HERE TO HERE

How can we get to a 90% waste reduction goal?

CURRENT = 68%

GOAL = 90%



- 6% Enhance existing education & enforcement programs
- 10% Introduce new regulations
- 6%+ Collaborate with and convince governments, manufacturers and others to reduce waste



WE WANT TO HEAR FROM YOU!
WHAT DO YOU THINK ABOUT THE PROPOSED OPTIONS?

Visit www.getinvolved.rdn.ca/swmp for more info.
Take our Quick Poll and let us know if you support the 90% target.

BUILDING ON SUCCESS: ICI SECTOR

We can all do more to improve recycling and composting opportunities, especially for the commercial, construction and demolition sectors.

Some commercial construction and demolition waste gets hauled out of our region to less expensive landfills that don't require waste to be sorted for recycling or composting. In 2014, 8% or 4,300 tonnes of waste left the region that could have been landfilled or recycled locally, reducing the economic opportunity in our region.

New regulatory tools, like requiring haulers to make sure the waste they collect is separated for recycling or composting and that their customers have recycling or food waste programs in place, are key to help us better manage our waste to the benefit of our residents and businesses, and help us reach our 90% goal.

WHAT IS BEING PROPOSED IN THE DRAFT PLAN FOR THE ICI SECTOR

The Plan recommends enhancing education and assistance for the ICI sector, as well as increasing education and enforcement of existing landfill bans. In addition, there are two key proposals:

- 1. Source Separation** - Keeping recyclables and food waste out of the landfill is key. The RDN proposes to require source separation of waste through a bylaw requiring every business to have individual bins for garbage, recyclables and organics for collection. Collection would be done by a Licenced Hauler or the building manager could transport their own waste.
- 2. Enlisting Licensed Waste Haulers as Partners** would help ensure every business has a recycling and food waste composting program. This would not only help prevent waste from being hauled out of region to less expensive private landfills, it would also help ensure that we take responsibility for our own garbage by making sure we recycle or compost it locally. It would also offer an economic incentive for the private sector to provide more waste management services locally, improving convenience for recycling.

These two proposals would require more consultation to determine how best to move forward.

- 3. Zero Waste Economics** - The Plan promotes an economic model that favours the business of recycling over waste disposal. As businesses develop around waste diversion, everyone benefits from the growth of our local economy and from the greater opportunity and convenience to drop off end-of-life products.

COST OF THE PLAN

The current RDN's waste management services cost approximately \$14 million – and we have achieved an impressive 68% waste reduction. To reach our 90% waste reduction target, the projected cost for all programs for all sectors is \$16 million, which works out to an annual per capita cost increase of about \$10 per year.

For more details on facts and figures, visit our website at www.getinvolved.rdn.ca/swmp

NEXT STEPS

Subject to adoption of the Plan, the RDN would conduct further consultation on the introduction of licensing haulers and source separation regulations. Should the Province grant this authority, further consultation with the ICI sector and waste haulers would be necessary to develop the program, determine costs and how to best implement any improvements.



LET US KNOW WHAT YOU THINK

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Mail: 6300 Hammond Bay Road, Nanaimo, BC, V9T 6N2

AS A RESIDENT OR MANAGER IN AN APARTMENT OR CONDOMINIUM, HERE'S WHAT YOU NEED TO KNOW



THE BUSINESS OF DIVERSION

Providing incentives and regulations to increase source separation and collection of recycling and organics, create new local businesses and extend the lifespan of our landfill.

AT A GLANCE

There are two proposals in the Regional District of Nanaimo (RDN) draft Solid Waste Management Plan aimed at building the business of diversion that are key to the multi-family sector:

- Mandatory Waste Source Separation** - All multi-family dwellings would be required to have a system to separate their waste into organics, recycling and garbage containers for collection. Collection would be done by an RDN Licensed Hauler, or building managers could make their own arrangements.
- Enlisting Licensed Waste Haulers as Partners** - Businesses that haul waste for profit – usually the same companies who pick up waste from multi-family buildings--would be required to obtain a License. These Licensed Haulers would help ensure their multi-family customers have systems in place for separating and collecting organics, recycling and garbage

These two proposals would also be supported by enhancing education to help multi-family buildings set up their recycling programs if they don't have one already.

ROOM TO REDUCE

Residents and businesses in the RDN have much to be proud of. Since we started tracking our solid waste – garbage – some 36 years ago, we've reduced, recycled, diverted and composted more than 68% of the waste that was being sent to the landfill.

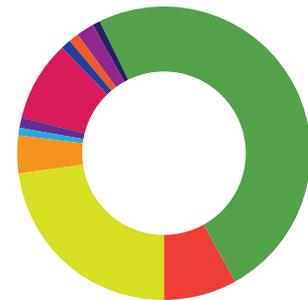
Since 2004, thanks to our community's participation, new programs have extended the life of the RDN's landfill, reduced greenhouse gas emissions and created a local industry of recycling and composting that supports 190 jobs, adding more than \$17M to the local economy. And yet there's more to be gained from our garbage, especially for the multi-family sector.

A recent review of our landfill shows there's still a fair amount of material in it – about 58% –that can be readily reused, recycled or composted.

There are more than 13,000 multi-family residential units in the RDN and each building is responsible for hiring their own collection services for garbage and recycling.

Although close to 95% of multi-family buildings have recycling services for cardboard, paper and plastic and containers, research shows that recycling rates in multi-family buildings are low. A 2012 RDN study showed the majority of waste in multi-family buildings is recyclable (26%) or compostable (44%).

ROOM FOR IMPROVEMENT: Here is a snapshot of the types of multi-family waste still being landfilled. This, along with commercial waste, represents the greatest opportunity to reduce and recycle.



- 49% COMPOSTABLE ORGANICS
- 23% PAPER
- 9% BUILDING MATERIALS
- 8% PLASTIC
- 4% OTHER
- 2% TEXTILES
- 1% GLASS
- 1% HOUSEHOLD HAZARDOUS
- 1% HOUSEHOLD HYGIENE
- 1% BEVERAGE CONTAINERS
- 1% METALS

SETTING A NEW TARGET

Our goal is to one day send no waste to the landfill – it's called our Zero Waste Strategy.

SO HOW WILL WE REACH OUR ZERO WASTE GOAL?

Over the next 10 years, we are aiming to reduce the amount of waste going to the landfill by 90%, equal to the average person throwing away 109 kg of garbage per year.

FROM HERE TO HERE

How can we get to a 90% waste reduction goal?

CURRENT = 68%

GOAL = 90%

Thanks to the ongoing participation of our community, here's how we could reach this target:



- 6% Enhance existing education & enforcement programs
- 10% Introduce new regulations
- 6%+ Collaborate with and convince governments, manufacturers and others to reduce waste

We know that 90% is a big number but we believe that with the combination of programs proposed in this draft plan and your continued support, we can all make this work.



WE WANT TO HEAR FROM YOU!
WHAT DO YOU THINK ABOUT THE PROPOSED OPTIONS?

Visit www.getinvolved.rdn.ca/swmp for more info.
Take our Quick Poll and let us know if you support the 90% target.

BUILDING ON SUCCESS: *MULTI FAMILY RESIDENCES*

As we work toward our Zero Waste goal, the key will be to build on our successes to date. The Solid Waste Plan recommends a two-fold approach to help us improve service and extend the lifespan of our landfill:

- Continue with ongoing programs such as school education, disposal bans, and recycling at RDN facilities
- Introduce mandatory waste separation and collection so multi-family homes can benefit from the same programs as single family homes, such as recycling and food waste collection

Helping residents to make the right choices every day is critical to achieving Zero Waste. For that reason, this plan would continue to build on the huge strides our community has made.

WHAT IS BEING PROPOSED IN THE DRAFT PLAN FOR MULTI FAMILY RESIDENCES

- 1. Source Separation** - Keeping recyclables and organics like food waste out of the landfill is key. The RDN proposes to require source separation of waste through a bylaw requiring every business and multi-family residence to have and maintain individual bins for garbage, recyclables and organics for collection. Collection would be done by a Licenced Hauler or the building manager could transport their own waste.
- 2. Enlisting Licensed Waste Haulers as Partners** - Through licensing of Waste Haulers (the private companies that pick up waste at multi-family buildings) waste collection service provided to customers would include separated recyclables and organics. Haulers would help their customers set up their program if they didn't already have one.
- 3. Enhancing existing awareness, enforcement and public education** for Zero Waste and waste reduction (includes public events, school and community presentations, advertising campaigns, social media and more). The RDN will continue its advocacy efforts to create more opportunities for waste diversion in the region by working with federal, provincial and local government agencies as well as BC stewardship groups, producers and the public.
- 4. Household Hazardous Waste (HHW)** is managed through BC product stewardship programs which have set up collection programs for the majority of HHW products, such as paint, pesticides, solvents, and used motor oil. However, there are non-stewarded household hazardous wastes (i.e. unidentified hazardous products or non-domestic pesticides) without a recycling or safe disposal option. The RDN will explore options to further expand collection of non-stewarded residential HHW which may include sponsoring and/or running residential drop-off events.
- 5. Zero Waste Recycling** - A 2012 study of our garbage showed that there is still a significant amount of materials that could be recycled but there's no place to take them. These materials are not part of a stewardship program, nor are there any established markets for them and these materials end up in the landfill. The RDN proposes to promote Zero Waste recycling by providing funding to the Nanaimo Recycling Exchange for a pilot project to recycle these materials with the goal of promoting Zero Waste and developing markets.

The pilot project would enable the Nanaimo Recycling Exchange to act as a research/recycling hub for recycling items that are not currently commercially marketable. The project would develop methods and markets for items that can't currently be recycled, investigate barriers to recycling these items, and develop recycling programs that would ultimately benefit our residents and everyone in the RDN.
- 6. Zero Waste Economics** - The Plan promotes an economic model that favours the business of recycling over waste disposal. As businesses develop around waste diversion, everyone benefits from the growth of our local economy and from the greater opportunity and convenience to drop off end-of-life products.

COST OF THE PLAN

The current RDN's waste management services are approximately \$14 million – and we have achieved an impressive 68% waste reduction. To reach our 90% waste reduction target, the projected cost for all programs for all sectors is \$16 million, which works out to an annual per capita cost increase of about \$10 per year.

For more details on facts and figures, visit our website at www.getinvolved.rdn.ca/swmp

NEXT STEPS

Watch for more opportunities to provide your feedback on this plan. Once the updated plan is presented and approved, a detailed implementation schedule will lead the way for future programs. For more information or the detailed version of this draft Plan, simply visit our website at www.getinvolved.rdn.ca/swmp

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Mail: 6300 Hammond Bay Road, Nanaimo, BC, V9T 6N2

AS A RESIDENT IN A SINGLE FAMILY DWELLING,
HERE'S WHAT YOU NEED TO KNOW

AT A GLANCE

While the new Solid Waste Management Plan focuses more on businesses and multi-family residences, there are a few key programs proposed for single family residences:

- Increasing education and awareness around our curbside collection so the right waste goes to the right place, and reducing contamination of household recycling and green bins
- More opportunities for disposing of household hazardous waste, including sponsoring or hosting drop-off events
- And supporting our local businesses and non-profits so they can provide opportunities to help us recycle and reuse materials not accepted in the curbside program

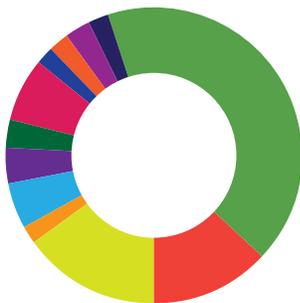
ROOM TO REDUCE

Residents and businesses in the RDN have much to be proud of. Since we started tracking our solid waste – garbage – some 36 years ago, we've reduced, recycled, diverted and composted more than 68% of the waste that was being sent to the landfill.

Since 2004, thanks to your participation, programs like curbside recycling and the green bin food waste program have extended the life of the RDN's landfill, reduced greenhouse gas emissions and created a local industry of recycling and composting that supports 190 jobs, adding more than \$17M to the local economy.

And yet there's more to be gained from our garbage. A recent review of our landfill shows there's still a fair amount of material in it — about 58% —that can be readily reused, recycled or composted.

Our goal is to one day send no waste to the landfill – it's called our Zero Waste Strategy.



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- 3% TEXTILES
- 2% OTHER
- 2% GLASS
- 2% BEVERAGE CONTAINERS
- 2% METALS

ROOM FOR IMPROVEMENT:

Here is a snapshot of the type of commercial waste still being landfilled. This, along with multi-family waste, represents the greatest opportunity to reduce and recycle.

SETTING A NEW TARGET

So how will we reach our Zero Waste goal? Over the next 10 years, we are aiming to reduce the amount of waste going to the landfill by 90%, equal to the average person throwing away 109 kg of garbage per year.

Thanks to the ongoing participation of our community, here's how we could reach this target:

We know that 90% is a big number but we believe that with the combination of programs proposed in this draft plan and your continued support, we can all make this work.

FROM HERE TO HERE

How can we get to a 90% waste reduction goal?

CURRENT = 68%
GOAL = 90%



- 6%** Enhance existing education & enforcement programs
- 10%** Introduce new regulations
- 6% +** Collaborate with and convince governments, manufacturers and others to reduce waste



WE WANT TO HEAR FROM YOU!
WHAT DO YOU THINK ABOUT THE PROPOSED OPTIONS?

Visit www.getinvolved.rdn.ca/swmp for more info.
Take our Quick Poll and let us know if you support the 90% target.

BUILDING ON SUCCESS: *SINGLE FAMILY RESIDENCES*

As we work toward our Zero Waste goal, the key will be to build on our successes to date, such as enhancing the existing waste reduction programs, improving service delivery and continuing to reduce the amount of waste sent to the landfill.

Helping residents to make the right choices every day is critical to achieving Zero Waste. For that reason, this Plan would continue to build on the huge strides our community has already made. Education is a crucial component — making sure people know what, when, where and how to reduce, recycle, divert and compost. Increasing awareness and ensuring people are following the bans on landfilling materials that can be recycled, composted or taken elsewhere is also important. This will help make it easier for residents and businesses alike to make sure the right waste goes to the right place.

WHAT IS BEING PROPOSED IN THE DRAFT PLAN FOR SINGLE FAMILY RESIDENCES

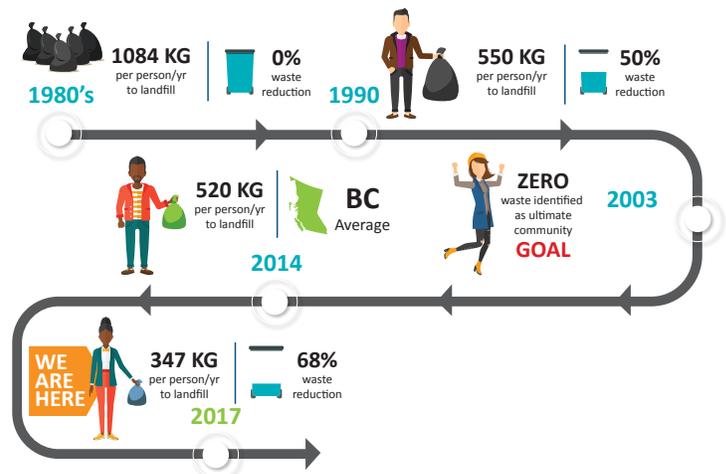
1. Enhancing existing awareness and public education for Zero Waste and waste reduction. This may include school and community presentations, advertising campaigns, reaching adult audiences through traditional and social media, as well as being more active in a variety of public events, to help us get the right waste to the right place. The RDN will also continue its advocacy efforts by working with federal, provincial and local government agencies as well as BC stewardship groups, producers and the public to create more opportunities to reduce, reuse and recycle materials that currently end up in the landfill.

2. Household hazardous waste (HHW) is managed through BC product stewardship programs which have set up collection programs for the majority of HHW products, such as paint, pesticides, solvents, and used motor oil. However, there are non-stewarded household hazardous wastes (i.e. unidentified hazardous products or non-domestic pesticides) without a recycling or safe disposal option. The RDN will explore options to further expand collection of non-stewarded residential HHW which may include sponsoring and/or running residential drop-off events.

3. Zero Waste Recycling - A 2012 study of our garbage showed that there is still a significant amount of materials that could be recycled but there's no place to take them. These materials are not part of a stewardship program, nor are there any established markets for them and these materials end up in the landfill. The RDN proposes to promote Zero Waste recycling by providing funding to the Nanaimo Recycling Exchange for a pilot project to recycle these materials with the goal of promoting Zero Waste and developing markets.

The pilot project would enable the Nanaimo Recycling Exchange to act as a research/recycling hub for recycling items that are not currently commercially marketable. The project would develop methods and markets for items that can't currently be recycled, investigate barriers to recycling these items, and develop recycling programs that would ultimately benefit our residents and everyone in the RDN.

4. Zero Waste Economics - The Plan promotes an economic model that favours the business of recycling over waste disposal. As businesses develop around waste diversion, everyone benefits from the growth of our local economy and from the greater opportunity and convenience to drop off end-of-life products.



COST OF THE PLAN

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AS A WASTE INDUSTRY BUSINESS, *HERE'S WHAT YOU NEED TO KNOW*



THE BUSINESS OF DIVERSION

Providing incentives and regulations to increase source separation and collection of recycling and organics, create new local businesses and extend the lifespan of our landfill.

AT A GLANCE

There are two proposals in the draft Solid Waste Management Plan (Plan) aimed at building the business of diversion that are key to the waste management industry:

- 1. Mandatory Waste Source Separation** - All businesses, institutions and multi-family dwellings would be required to have separate collection of organics, recycling and refuse.
- 2. Waste Hauler Licensing** - Businesses that haul waste for profit would be required to obtain a License. The Licensed Hauler would receive a discounted tipping fee applied to waste that is landfilled. A disposal levy would apply to all waste shipped by a Licensed Hauler to a disposal facility whether in or out of region. The combined amount of the discounted tipping fee and disposal levy would be a lower net cost to Licenced Haulers than the base tip fee applied to other customers. The two objectives are to encourage the flow of waste through industry while fostering innovation around waste diversion.

These two proposals benefit both the waste industry and our community by developing an economic model for businesses to thrive and increase services. Already, since 2004, thanks to your participation, waste diversion programs have extended the life of the RDN's landfill, reduced greenhouse gas emissions and created a local industry of recycling and composting that supports 190 jobs, adding more than \$17M to the local economy.



WHO WOULD REQUIRE A LICENSE?

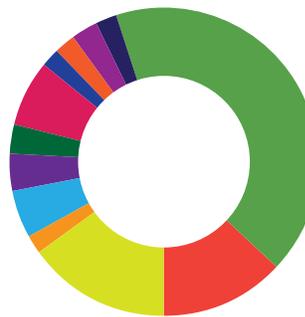
Anyone that picks up or drops off municipal solid waste for profit in the RDN.

ROOM TO REDUCE

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And yet there's more to be gained from our garbage. A recent review of our landfill shows there's still a fair amount of material in it — about 58% —that can be readily reused, recycled or composted. And most of this comes from the commercial and multi-family sectors.

ROOM FOR IMPROVEMENT: Here is a snapshot of the type of commercial waste still being landfilled. This, along with multi-family waste, represents the greatest opportunity to reduce and recycle.



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WHAT DO YOU THINK ABOUT THE PROPOSED OPTIONS?

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BUILDING ON SUCCESS: *WASTE INDUSTRY*

We can all do more to improve recycling and composting opportunities, especially for the commercial, construction and demolition, and multi-family sectors.

Some commercial (including multi-family), construction and demolition waste gets hauled out of our region to less expensive landfills that don't require waste to be sorted for recycling or composting. In 2014, 8% or 4,300 tonnes of waste left the region that could have been landfilled or recycled locally, reducing the economic opportunity.

The Plan recommends enhancing education and assistance for multi-family and commercial sectors, as well as increasing enforcement of existing landfill bans. In addition, there are two key proposals:

A Waste Source Separation Regulation would help ensure recyclables and compostable don't end up being landfilled. Currently, recycling and organics collection is voluntary for the multi-family and commercial sectors. This proposed regulation would require all existing and new commercial, institutional and industrial businesses to have recycling and organics collection.

This option would include multi-family apartments and condos as they are not currently included in the residential collection programs provided by the RDN or member municipalities. This would expand the business of diversion for waste haulers, and provide an important service to our businesses and residents.

Enlisting Waste Haulers as Licensed Partners would help ensure every business or multi-family building has a recycling and food waste composting program. This would not only help prevent waste from being hauled out of region to less expensive private landfills, it would also help ensure that we take responsibility for our own garbage by making sure we recycle or compost it locally. It could also offer an economic incentive for the private sector to provide more waste management services locally, improving convenience for recycling and extending the lifespan of our landfill.

HOW WOULD THIS WORK

1. Licensed Haulers would pay a disposal levy to the RDN for any waste that is collected and disposed of by landfilling or incineration at any facility within or outside the RDN. The levy will not apply to any waste that is diverted or recycled.

This provides an 'incentive' that encourages source separation by customers or that extracts recyclable material from the waste stream. Also, those who ship waste out of the RDN for disposal avoid their portion of solid waste services costs that would otherwise be collected through tipping fees. This disposal levy ensures that all waste generators in the region pay their fair share of these costs.
2. Licensed Haulers would pay a discounted tipping fee at the RDN landfill and transfer station. The combined disposal levy and discounted tipping fee would be less than the tipping fee applied to all non-licensed landfill customers, providing a worthwhile financial incentive to be licensed.
3. Licensed Haulers would track how much waste they are disposing and diverting as well as submit records and pay the disposal levy. Licensed Haulers would also be subject to auditing at the request of the RDN to ensure that the waste disposal amount is accurately tracked.
4. Licensed Haulers would pay an annual licensing fee along with proof of a business license and insurance. The licensing fee would be a nominal amount relative to the financial benefit of being licensed.
5. The new source separation regulation would require all waste generators to separate garbage from recycling and food waste. This regulation and Waste Hauler Licensing will lead to an increased demand for, and development of services, that increase waste diversion.

COST OF THE PLAN

The current RDN's waste management services are approximately \$14 million – and we have achieved an impressive 68% waste reduction. To reach our 90% waste reduction target, the projected cost for all programs for all sectors is \$16 million, which works out to an annual per capita cost increase of about \$10 per year.

For more details on facts and figures, visit our website at www.getinvolved.rdn.ca/swmp

NEXT STEPS

Subject to adoption of the Plan, the RDN would conduct further consultation on the introduction of licensing haulers and source separation regulations. Should the Province grant this authority, further consultation with waste haulers would be necessary to develop the program, determine costs and harmonize the strategy with potentially affected stakeholders.

LET US KNOW WHAT YOU THINK

Here's how you can learn more and provide your feedback on the update of the region's Draft Solid Waste Management Plan:

Visit: www.getinvolved.rdn.ca/swmp | **Email:** zerowaste@rdn.bc.ca | **Call:** 250-390-6560 or toll-free 1-877-607-4111

Mail: 6300 Hammond Bay Road, Nanaimo, BC, V9T 6N2

Appendix 8 - Examples of Social Media Posts

Post	Image
<p>Your participation in existing Solid Waste programs like Curbside Recycling and the Green Bin food waste program have extended the life of the RDN’s landfill, reduced greenhouse gas emissions and created a local industry of recycling and composting that supports 190 jobs, adding more than \$17M to the local economy.</p> <p>We want to hear from you! Fill out our survey at getinvolved.rdn.ca/swmp and you'll be entered to win an \$100 Visa Gift Card! #GetInvolved</p>	
<p>Did you know? The amended Solid Waste Management Plan is targeting a diversion rate of 90 per cent, meaning per person disposal would be about 109 kg/year by 2027.</p> <p>We want to hear from you! Fill out our survey at getinvolved.rdn.ca/swmp and you'll be entered to win an \$100 Visa Gift Card! #GetInvolved</p>	
<p>You're doing a great job! RDN residents are now throwing away about 1/3 of what they were in the 1980s.</p> <p>We want to hear from you! Fill out our survey at getinvolved.rdn.ca/swmp and you'll be entered to win an \$100 Visa Gift Card! #GetInvolved</p>	

Zero Waste Fact: More than half of what's being dumped in our landfill can be readily reused, recycled or composted.

We want to hear from you! Fill out our survey at getinvolved.rdn.ca/swmp and you'll be entered to win an \$100 Visa Gift Card! #GetInvolved



What's being proposed in the Solid Waste Management Plan?

Reduce the amount of waste going to the landfill to 90% in 10 years. That's equal to the average person throwing away 109 kg of garbage per year. Compare that to our current levels of 347 kg per person!

Thanks to your ongoing participation, we could reach this target through enhancing existing education and enforcement programs, encouraging more businesses to recycle by introducing new regulations and working with other governments, manufacturers and waste producers to reduce waste at the source.

We want to hear from you! Fill out our survey at getinvolved.rdn.ca/swmp and you'll be entered to win an \$100 Visa Gift Card! #GetInvolved



Appendix 9 - In person survey response break down

Question	Response	#	%
Respondents		516	
Have you heard about the RDN updating their Solid Waste Management Plan?	Yes	156	30.2%
	No	357	69.2%
	Other	3	0.6%
Our target is 90% - Do you support this goal?	Yes	500	96.9%
	No	14	2.7%
	Other	2	0.4%
If yes: an increase \$10/ person /year. Do you support this cost?	Yes	405	81.0%
	No	91	18.2%
	Slightly-Moderately / Other	4	0.8%
If no: What is acceptable increase? (In-person only)	No increase (\$0)	56	61.5%
	\$0-\$10, Ave. \$4.42	27	29.7%
	Other	8	8.8%
Which region do you live in?	Area A	53	10.3%
	Area B	4	0.8%
	Area C	24	4.7%
	Area E	15	2.9%
	Area F	21	4.1%
	Area G	10	1.9%
	Area H	10	1.9%
	Total RDN Areas	141	27.3%
	City of Nanaimo	260	50.4%

	District of Lantzville	14	2.7%
	City of Parksville	49	9.5%
	Town of Qualicum Beach	39	7.6%
	Out of Area / Other	13	2.5%
Do you work in the waste industry?	Yes	39	7.6%
	No	472	91.5%
	Other	5	1.0%

Appendix 10 – Advertising examples



REGIONAL DISTRICT OF NANAIMO
ESTABLISHED 1967

ROAD TO 90% WASTE REDUCTION

Help us plan for sustainable Solid Waste Management

Take our survey
Enter to win a \$100 Visa Gift Card

VISIT US



REGIONAL DISTRICT OF NANAIMO
ESTABLISHED 1967

ROAD TO 90% WASTE REDUCTION
Help us plan for sustainable Solid Waste Management

Take our survey
Enter to win a \$100 Visa Gift Card

VISIT US



REGIONAL DISTRICT OF NANAIMO
ESTABLISHED 1967

ROAD TO 90% WASTE REDUCTION
Help us plan for sustainable Solid Waste Management

Take our survey
Enter to win a \$100 Visa Gift Card

VISIT US



REGIONAL DISTRICT OF NANAIMO
ESTABLISHED 1967

ROAD TO 90% in the next 10 years

Help us plan for sustainable Solid Waste Management at the RDN.

Take our survey by registering at www.getinvolved.rdn.ca/SWMP and you will be entered to WIN a \$100 Visa Gift Card!



REGIONAL DISTRICT OF NANAIMO
ESTABLISHED 1967

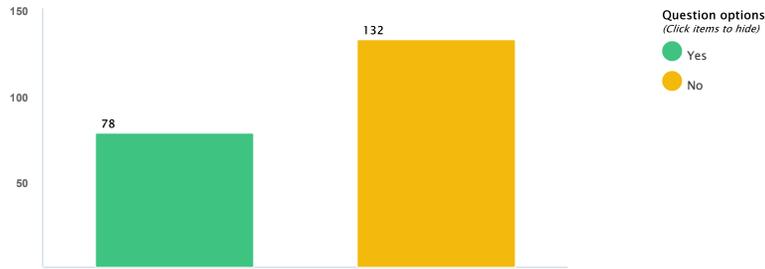
ROAD TO 90% WASTE REDUCTION

Win a \$100 VISA Gift Card
TAKE THE RDN SURVEY

Appendix 11

Online survey summary

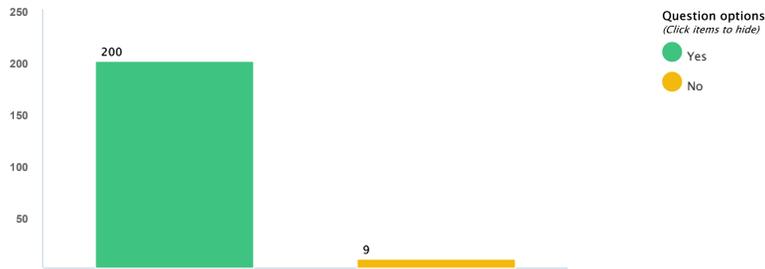
Q1 Before this survey, had you heard about the RDN updating its Solid Waste Management Plan?



Overview Pulse Responses

Optional question (210 responses, 0 skipped)

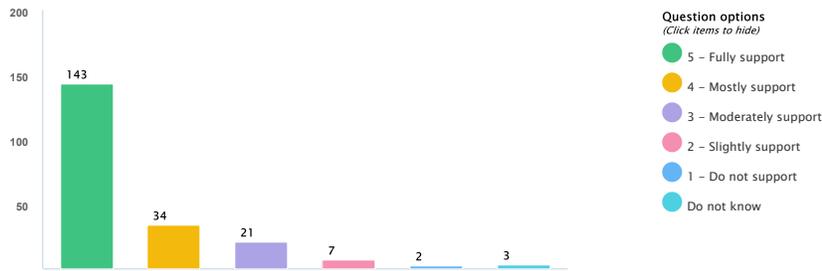
Q2 The RDN diverts 68% of its waste, meaning that each person sends around 347 kg of waste to the landfill every year. The BC average is 520 kg. Our target diversion rate is 90% by 2027, which is 109 kg of waste per person sent to the landfill every year. Do you support the target of a 90% diversion rate?



Overview Pulse Responses

Optional question (210 responses, 0 skipped)

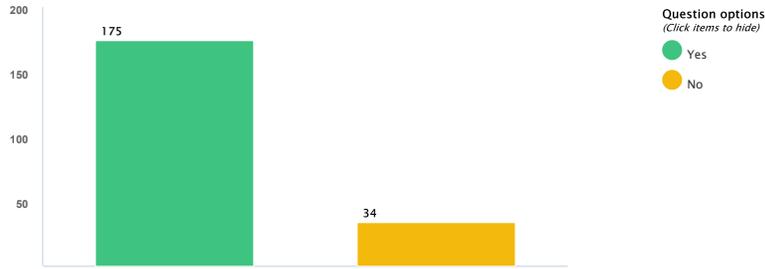
Q3 The plan proposes to expanded Zero Waste education to provide more education targeted at adult audiences through traditional and social media, as well as being more active in a variety of public events.



Overview Pulse Responses

Optional question (210 responses, 0 skipped)

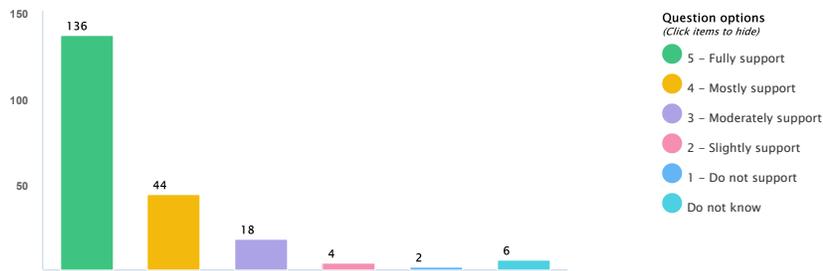
Q4 Do you support expanded Zero Waste education at the above cost?



Overview Pulse Responses

Optional question (210 responses, 0 skipped)

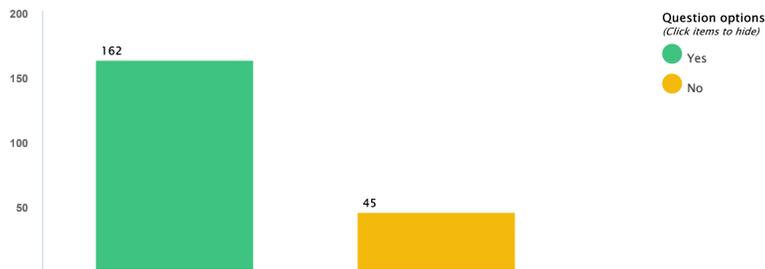
Q5 The plan proposes the RDN will explore options for further expanding collection of non-stewarded residential HHW which may include sponsor and/or run residential drop-off events.



Overview Pulse Responses

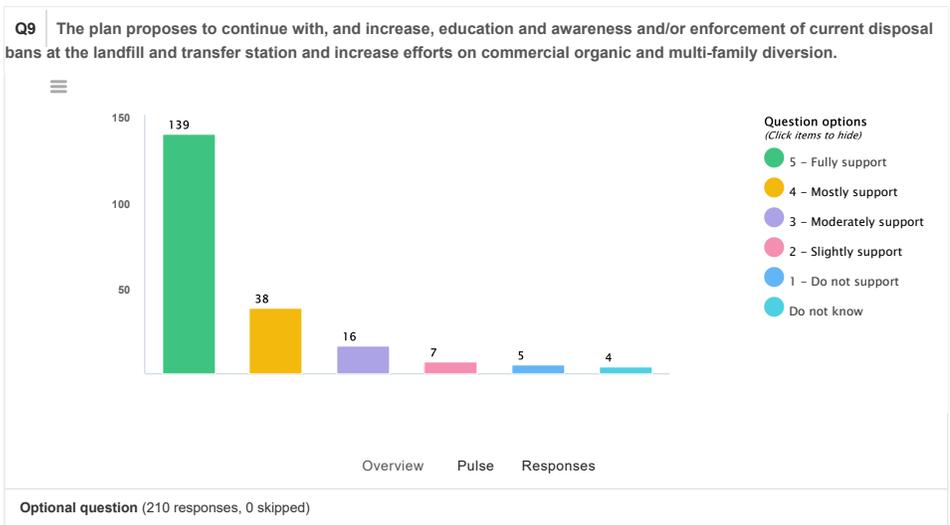
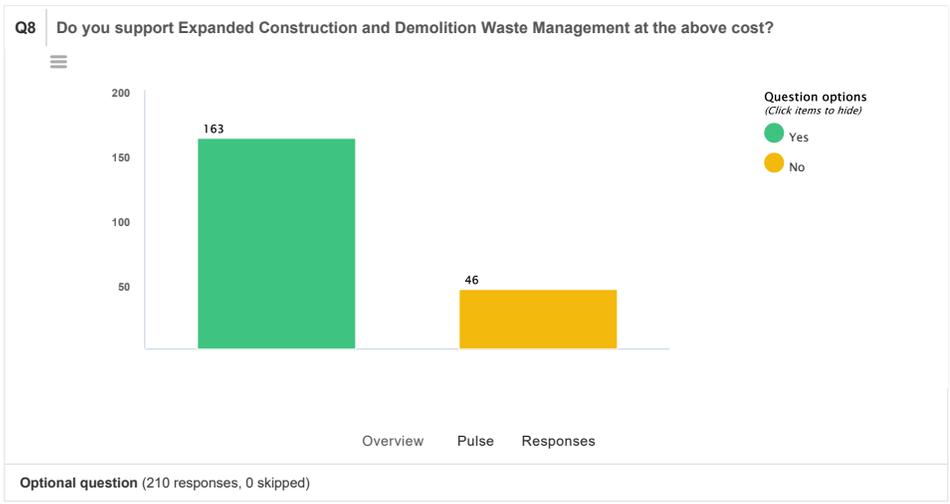
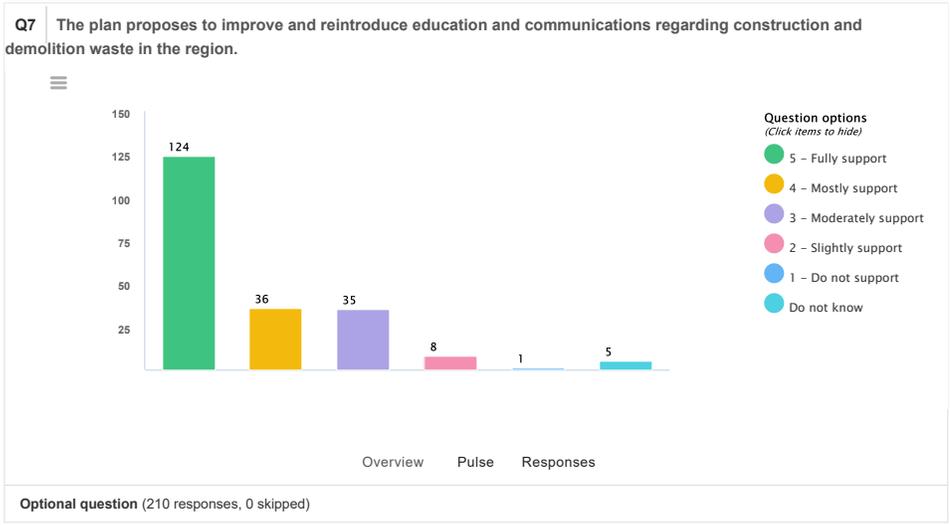
Optional question (210 responses, 0 skipped)

Q6 Do you support managing non stewarded HHW at the above cost?

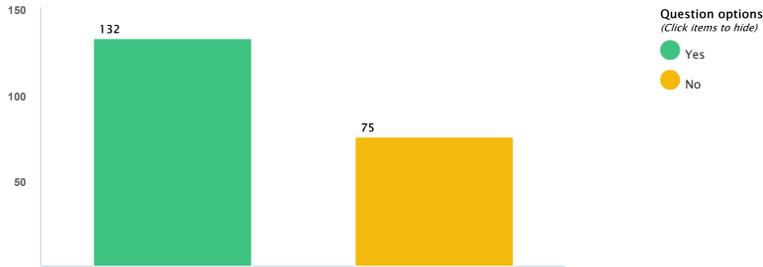


Overview Pulse Responses

Optional question (210 responses, 0 skipped)



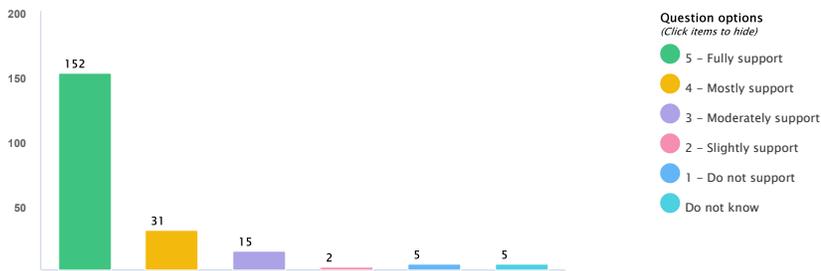
Q10 Do you support Expanded Industrial, Commercial and Institutional (ICI) Waste Management at the above cost?



Overview Pulse Responses

Optional question (210 responses, 0 skipped)

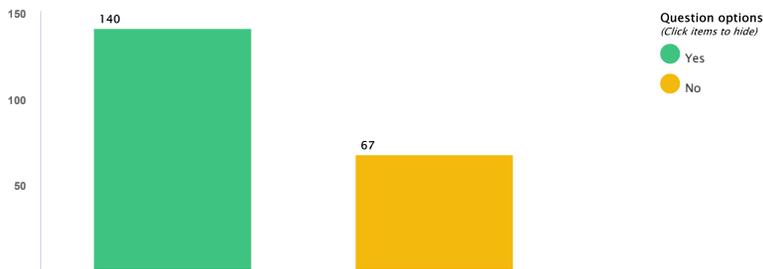
Q11 The plan proposes that this regulation expands the multiple bin concept to all waste generators which includes businesses and multi-family (collection would continue to be done by private sector hauler).



Overview Pulse Responses

Optional question (210 responses, 0 skipped)

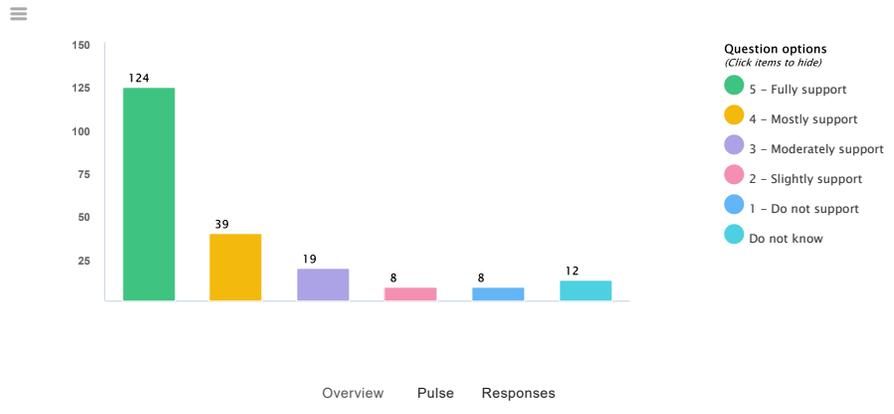
Q12 Do you support mandatory source separation regulation at the above cost?



Overview Pulse Responses

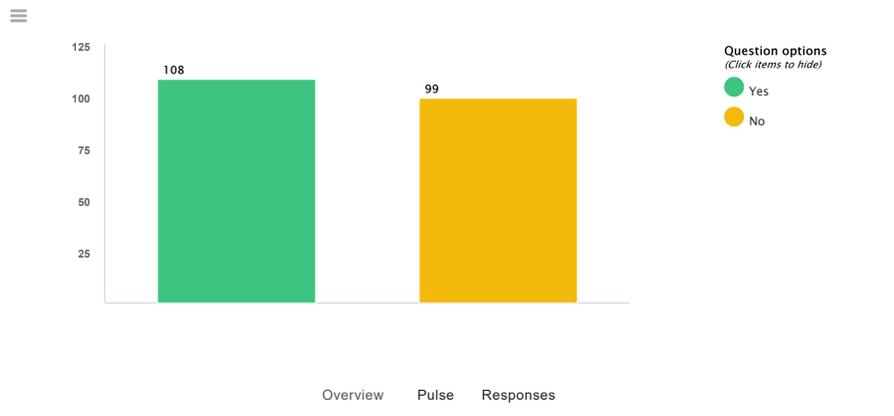
Optional question (210 responses, 0 skipped)

Q13 The plan proposes the RDN license haulers to change the existing financial model to one where the waste industry is more profitable if they divert waste rather than dispose of it in a landfill.



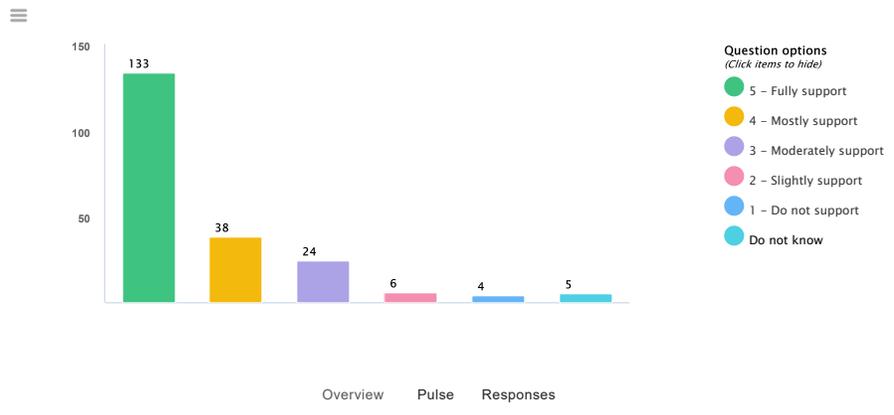
Optional question (210 responses, 0 skipped)

Q14 Do you support Waste Hauler Licensing at the above cost?



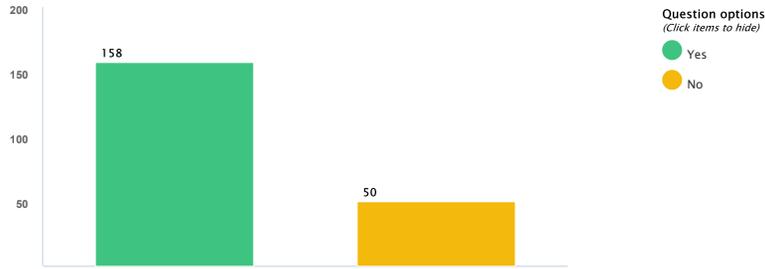
Optional question (210 responses, 0 skipped)

Q15 The plan proposes that the RDN will promote zero waste recycling by making funding available to target recyclable material that is not currently recycled. The objective the funding is to maximize waste diversion, to encourage non-profit and private sector innovation to develop markets and processes and to improving convenience for recycling materials.



Optional question (210 responses, 0 skipped)

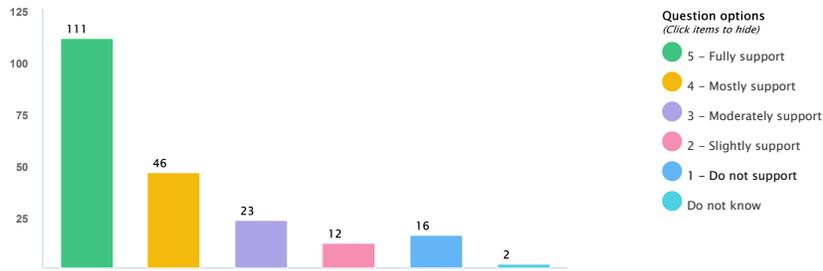
Q16 Do you support Zero Waste Recycling at the above cost?



Overview Pulse Responses

Optional question (210 responses, 0 skipped)

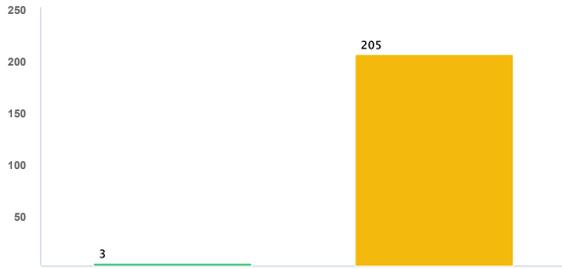
Q17 The cost increase of all proposed programs in the Solid Waste Management Plan is estimated to be \$10 per person per year. What is your level of support for the programs at this cost?



Overview Pulse Responses

Optional question (210 responses, 0 skipped)

Q20 Do you work in the waste industry?



Question options

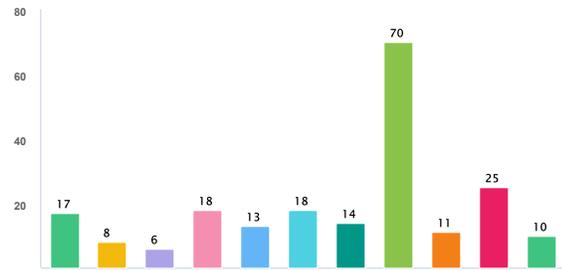
(Click items to hide)

- Yes
- No

Overview Pulse Responses

Optional question (210 responses, 0 skipped)

Q21 Which region do you live in?



Question options

(Click items to hide)

- Area A - Cassidy, Cedar, Yellowpoint, South Wellington
 - Area B - Gabriola, DeCourcy, Mudge Islands
 - Area C - Extension, Arrowsmith-Benson, East Wellington, Pleasant Valley
 - Area E - Nanoose Bay
- ▲ 1/3 ▼

Overview Pulse Responses

Optional question (210 responses, 0 skipped)

Appendix 12 – Online survey responses

Questions/Comments	RDN Response
<p>I live in an apartment building where we are all renters. We have 1 large bin for garbage & 1 for recycling. There is no composting. I have been putting my compost into my freezer & then take it to a friends composting bin a few times a month. i would like to see it this service added to our building & it be picked up at least once a week. (gets stinky - the garbage bin stinks bad in the summertime). (Often the recycle bin is very full - that could be picked up more often as well.) And have non-refundable glass products picked up on a regular basis, the bin we have is full all the time. The owner of the building (1680 Dufferin Crescent, Nanaimo), lives in Victoria & I don't think he cares about these services at all. The managers may be more open to it but they aren't very proactive either.</p>	<p>Thank you for your inquiry, it is wonderful that you are proactive about diverting your compost! Unfortunately, there are no facilities within the City of Nanaimo or greater regional district where residents can drop off compost/organics. The closest residential drop-off site I am aware of is the Peerless Road Recycling Centre, just south of Ladysmith.</p> <p>However, if your apartment building's waste is currently being picked up by a commercial waste hauler, it might not be too big of a shift for them to implement compost pickup. For example, if your building gets their garbage picked up twice per week, enough compost could be diverted to make it possible to switch to one compost pickup and one garbage pickup. The RDN did a waste composition study in 2012 that showed 42% of waste coming from multi-family buildings is compostable!</p>
<p>The drivers of the trucks learning what 50lbs really feels like and not let them leave behind your cans which are well below 50lbs but you're at the end of the route so they are "tired". I pay for my service I expect it to be rendered.</p>	<p>We have recently had conversations with our curbside collection contractor to ensure their scales are accurately calibrated. A common occurrence is for materials to absorb moisture from the air once they are put out on the curb, making the container go from an acceptable weight to overweight.</p> <p>Extra garbage tags can be purchased for \$3 at locations listed here: http://www.rdn.bc.ca/garbage.</p> <p>If there is ever another occurrence where your container was tagged for being overweight, and you believe it was below 50 lbs, please contact our contractor, Waste Connections, at 250-248-8109.</p> <p>Please let me know if I can provide any further information or clarification.</p>
<p>Although I laud the initiatives I believe in users pay. So every building permit should include a fee for recycling and job sites need to be inspected to ensure diversion of waste is implemented. The same for all the retail outlets especially food stores who waste enormous amount of foods direct in the dumpster. Manufacturers of food products use excessive packaging which should be penalized by fees.</p>	<p>Thank you for completing the Solid Waste Management Plan survey and providing your comments on user pay and other possible policies for incentivizing waste diversion.</p> <p>You may be interested in reading the Advocacy document on our Public Information Board, found here: https://www.getinvolved.rdn.ca/4006/documents/7874</p> <p>Please let me know if I can provide any further information or clarification.</p>

<p>I am very concerned about illegal dumping so am worried about the haulers licensing and fees.</p>	<p>Hello,</p> <p>Thank you for completing the Solid Waste Management Plan survey and requesting more information on hauler licensing and fees in relation to illegal dumping.</p> <p>For more information on Illegal dumping and hauler licening and fees, please review our Public information boards here: https://www.getinvolved.rdn.ca/4006/documents/7885</p> <p>https://www.getinvolved.rdn.ca/4006/documents/7892</p> <p>Please let me know if I can provide any further information or clarification.</p>
<p>My question is why do we separate our paper from other recyclables when it's picked up it is all dumped together in the truck?</p>	<p>Thank you for filling out our Solid Waste Management Plan survey, as well as inquiring into the separation of recyclables.</p> <p>Yes, the yellow bag and blue box materials go into the same compartment in the trucks. The RDN signed on with the RecycleBC province-wide program in 2014, which allows our recyclables to access better sorting technology once collected. We kept the same system to maintain continuity for residents, as you all have had wonderful participation in the recycling programs before and after the changes. Also, we've had feedback that the yellow bag makes it easier to store these materials until collection day, and it also helps keep paper dry at the curb and prevents it from flying into your neighbor's yard or the street.</p> <p>Another piece of information is that you can use any container for your curbside recyclables, as long as it is less than 100 litres, weighs less than 50 pounds / 23 kilograms, and has the Yellow Recycling sticker affixed to it. The Yellow Recycling stickers are available at the RDN administration office, the Church Road Transfer Station, the regional landfill, and the Waste Connections office in Parksville.</p> <p>Please let me know if I can provide any additional information.</p>
<p>The cost per person is not huge but it would seem to put more and more in home owners. We have a huge rental market that contributes to the waste but not at a cost. High tipping fees leads to more contractors dumping in the woods and side of road.</p>	<p>Hello Deedee,</p> <p>Thank you for completing the Solid Waste Management Plan survey.</p> <p>Property tax is one of the ways to pay for the proposals in this plan but those decisions have not been made yet, this will take place after receiving approval from the Regional Board and the Ministry of Environment. One of the reasons why property tax was considered is because property tax is an expense on homes, and renters pay towards all expenses related to a property. An increase in property tax can still be shared equitably among all residents this way.</p> <p>Please let me know if I can provide any further information or clarification.</p>
<p>I would have liked more info on why some of the programs are so expensive eg the waste haulers licensing. Something</p>	<p>You recently took the solid waste management plan survey and requested more information related to costs. Are you free for a chat? I can send you the information you have requested</p>

<p>like \$469,000 How does that work?</p>	<p>over email but I think it would useful to have a conversation to explain the program. Give me call at my direct line 250-390-6576 and we can discuss the programs and how we came to the financial numbers that have been presented.</p>
<p>Would like to see a yard waste pick up if even once or twice a year</p>	<p>Hello Roberta,</p> <p>Thank you for completing the Solid Waste Management Plan survey and requesting more information on the consideration of curbside yard waste collection.</p> <p>Curbside yard waste collection was a Plan option that was reviewed by the Regional Solid Waste Advisory Committee. It was not included in the plan due to the extremely high cost. More information about the decision to not implement yard waste collection can be found here: https://www.getinvolved.rdn.ca/4006/documents/7592</p> <p>Please let me know if I can provide any further information or clarification.</p>
<p>I would like to see all plastic and glass recycled curb side. Thank you</p>	<p>Thank you for completing the Solid Waste Management Plan survey and requesting more information on curbside collection of glass and plastic bags.</p> <p>Glass containers and plastic bags, along with foam packaging, require special handling during collection, transportation, and sorting. For example, glass is very prone to breakage, risking worker safety and having small fragments become unsortable and contaminating loads when mixed up with other materials. Plastic bags are prone to blocking optical sensors in the sorting facilities, causing shutdowns of the system.</p> <p>Separate glass container recycling was a plan option reviewed by the Regional Solid Waste Advisory Committee. It was not included in the plan due to high costs. The background information can be found here: https://www.getinvolved.rdn.ca/4006/documents/7578</p> <p>Please let me know if I can provide any further information or clarification.</p>
<p>Making compost mandatory is an amazing idea. There's so much going into the garbage bin at my complex that could be thrown into the compost. It's also really bad at VIU residences</p>	<p>Thank you for completing the Solid Waste Management Plan survey and providing your positive feedback on mandatory composting.</p> <p>In waste composition studies, compost consistently makes up the largest portion of divertible waste being brought to the landfill. With your support, and hopeful approval from the Regional Board and Ministry of Environment, we can greatly reduce the amount of compostable waste being sent to the landfill.</p> <p>Please let me know if I can provide any further information or clarification.</p>
<p>This survey would have been more effective if the first information clarified that full support would cost \$10 per year per person. I fully support all programs at this cost but indicated not willing to support the individual costs of some services since it was difficult to calculate overall cost</p>	<p>Hello Shirley,</p> <p>Thank you for completing the Solid Waste Management Plan survey and providing your feedback on the structure of the survey. We will be sure to take that into account in the future.</p>

<p>as I answered each question and not knowing how many more costs were to come.</p>	
<p>Nowhere do I see a reference in this plan for a "level playing field" between the private and non-for-profit recyclers. With this policy created without public scrutiny you are undoing the good you think you are doing. Not-for-profit recycling agencies are the down-to-earth visionaries and the inspiration for families and companies alike. They started the movement and companies and governments have gained from their wisdom. They must work together but they are NOT on the same "playing field." Your plan is theory; the NRE is proven. Until you get serious about working with the not-for-profit your plan isn't worth the paper it's written on.</p>	<p>Thank you for completing the Solid Waste Management Plan survey and requesting more information on a level playing field.</p> <p>As accepted by the Regional Solid Waste Advisory Committee, we have adopted the 7 Guiding Principles for solid waste management, as developed by the Province. As you mentioned, one of these is to "Level playing field within regions for both private and public solid waste management facilities." In this, private includes both for-profit and not-for-profit businesses, and acknowledges the innovation and efficiency in services provided by for-profit and not-for-profit organizations in the region.</p> <p>You may also be interested in the amendment to plan, where the proposed program will allocate \$300,000 per year in funding to the Nanaimo Recycling Exchange to act as a research and recycling hub for items currently not commercially marketable.</p>
<p>What is the impact for local inhabitants of the Chinese ban on the importation recycled materials?</p>	<p>In the Regional District of Nanaimo we are very lucky that our curbside material is collected in partnership in RecycleBC. Because of the high volume of material and low contamination rates, RecycleBC actually markets their material in BC so there has been little to no effect by the Chinese National Sword campaign.</p> <p>As RecycleBC is a not for profit organization that is mandated by the provincial government, they submit an audited annual report to the Provincial government. For more information about the program, fees and recycling rate, you can view the annual report here https://recyclebc.ca/recycle-bcs-2016-annual-report/.</p>
<p>Should the initiative to continue with the exemplary service provided by the Nanaimo Recycle Exchange fail to get the appropriate funding by the RDN / City of Nanaimo, will the RDN / City of Nanaimo provide a similar service conveniently centrally located and with similar user cost structure?</p>	<p>The RDN Board has decided to include the following proposed program in the draft Solid Waste Management Plan amendment.</p> <p>"RDN funding of the Nanaimo Recycling Exchange to act as a research/recycling hub for recycling items currently not commercially marketable, in the amount of \$300,000 per year for 5 years"</p> <p>The results of the public consultation are anticipated to be provided to the Board in May. If you would like more information on the RDN's Solid Waste Management Plan, information can be accessed at the following site: https://www.getinvolved.rdn.ca/swmp</p> <p>Essentially all the materials that NRE manages are currently accepted at other locations in community which also accept the material for free. Please visit http://www.rdn.bc.ca/what-goes-where to find a location near you.</p>

<p>Is the NRE in its current form going to be funded to continue past the end of March? What do we residential users do if it is closed? This is a growing concern - surely you can let people know what is going on here....some NRE staff, I was told, are looking for jobs elsewhere because THEY don't know what is coming up.</p>	<p>Thank you for completing the Solid Waste Management Plan survey and requesting more information on ...</p> <p>You may also be interested in the Regional Board's recommended amendment to plan, where the proposed Zero Waste Recycling program will allocate \$300,000 per year in funding to the Nanaimo Recycling Exchange to act as a research and recycling hub for items currently not commercially marketable.</p> <p>Please contact the NRE directly for their plans on providing services in the upcoming months.</p> <p>In addition to the NRE, there are many drop-off depots in the region that accept the majority of residential recyclables – To find the location nearest you, please visit our What Goes Where? Tool at http://www.rdn.bc.ca/what-goes-where</p> <p>Please let me know if I can provide any further information or clarification.</p>
<p>I also think we need more education about Solid and Liquid waste plans/methods in Nanaimo. We have many newcomers to our Province either from other countries and Provinces, where these methods are very different.</p>	<p>Thank you for completing the Solid Waste Management Plan survey and requesting more information on solid waste education.</p> <p>One of the proposed programs is the expansion of Zero Waste Education to help us reach adults and children alike, as discussed in more detail in the Education document on our Public Information Board, found here: https://www.getinvolved.rdn.ca/4006/documents/7881</p> <p>Please let me know if I can provide any further information or clarification.</p>

Appendix 13 – Picture of travelling display



Appendix 14

Newsletter excerpt

zero|waste

B e y o n d C o m p o s t i n g



Our Updated Solid Waste Plan
is aiming for a new target of
90% waste diversion

Get Involved RDN!

Visit getinvolved.rdn.ca to:

- Find out **What We've Heard** to date with regards to updating the RDN's Solid Waste Management Plan.
- **Read the background information** and the detailed reports prepared as part of updating the RDN's Solid Waste Management Plan on the RDN's achievements since the original plan was developed.
- **Missed a meeting?**
Read our informational posters and our Solid Waste Management Plan summary to stay up to date!
- **Fill out our survey.** Coming soon!



ASK US A QUESTION AND WE WILL RESPOND.

COMING IN DECEMBER

YOUR NEW GARBAGE, RECYCLING AND FOOD WASTE COLLECTION SCHEDULE

In December, new two-year schedules will be mailed to households that receive RDN curbside collection service. The new collection schedules will be in effect from January 1, 2018 to December 31, 2019. If you don't receive your new schedule by December 31, you can access it online:

- Visit www.rdn.bc.ca/curbside and enter your address at the prompt. If you do not have computer access, you can call Waste Connections of Canada (1-866-999-8227) or the RDN office (1-877-607-4111) to request a new schedule.
- Qualicum Beach residents should contact the Town office at 250-752-6921.
- Need a collection day reminder? See Page 2 of this newsletter for information on setting up reminders.



Illegal Dumping • Curbside Recycling • Adverse Weather • Make Memories not Garbage

Beans to bones in the bin!

ADVERSE WEATHER DISRUPTIONS TO COLLECTION SERVICE

As we saw last winter, severe weather like snow storms can effect curbside collection by causing unsafe driving conditions and roads blocked by downed trees or power lines. Safety is the priority for the collection contractor. Slippery roads can be unsafe for large collection vehicles, putting collection staff and other road users at risk.



During severe winter weather every effort is made to collect the curbside materials. If a regular collection day is missed due to weather or road conditions, the following procedure will apply:

- Take your material in for the night, this will help to deter pests.
- Have your material back at the curb by 8am. Collection staff will attempt to pick up the missed material in the two days following the missed collection.

- If road conditions prevent collection on the subsequent two days, including weekends, the missed material will be collection on the next corresponding collection day.

When severe weather strikes, the **RDN Curbside App** is the best place to get information about your curbside collection. The App is free to download to any smart device from either the App Store or Google Play. Download today!

Road Maintenance Responsibilities

Please note that the Regional District is not responsible for road maintenance (such as snow clearing). In the electoral areas this is a function of Emcon Services, a contractor to the Ministry of Transportation and Infrastructure. Roads and streets within municipalities are maintained by municipal crews.

For example; if your garbage was missed, you can put twice the material on the next garbage collection day. Standard weight and size limits apply.

ADD-A-DAY

CHECK YOUR COLLECTION SCHEDULE FOR CHANGES IN PICK-UPS OVER THE HOLIDAYS

Garbage, recycling and green bin collection schedules follow an add-a-day system. After each statutory holiday **your collection day will advance by one day.**

Please check your schedule for changes to your collection days over the Christmas and New Year holidays or call the collection contractor, **Waste Connections of Canada**, if you have questions at **1-866-999-8227.**

WHAT IS ILLEGAL DUMPING?

Illegal dumping is **purposefully leaving waste on private or public land** rather than using legal disposal methods like recycling or landfilling. Pursuant to RDN Bylaw No. 1386, those who generate (own), deliver or abandon waste illegally can be . . .

subject to a fine of up to \$200,000.

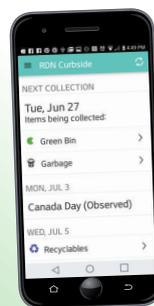
See illegal dumping happening in your neighborhood, call the **Provincial Report All Poachers and Polluters at 1-877-952-7277.** To learn more about illegal dumping and what you can do to help, **visit www.rdn.bc.ca/illegaldumping.**



RDN CURBSIDE APP

Simplify your life with the RDN Curbside App

Never miss a collection day!



- View, download or print your collection schedule
- Sign Up for Reminders
- Confused which items go in your green bin, blue bin, garbage or back to a depot? Use the "What Goes Where" tool to look up an item and find out where it goes.



- EMAIL
- PHONE CALL
- TWITTER
- ICALENDAR
- DOWNLOAD THE APP

Visit www.rdn.bc.ca/curbside for a link to download the app.

Need help setting up a reminder? We are happy to help.
250-390-6560 Toll free 1-877-607-4111

HAVE YOU RECEIVED A NOTE FROM US?

RDN staff worked alongside our curbside collection drivers to let residents know if they are doing a great job when it comes to curbside recycling, or if there are areas for improvement. We are continually working to improve our diversion rates and that all starts with getting households on board. A lot of residents we talked

GREAT JOB!

to were unaware of new items that can be recycled at the curbside and a number of common items that we do not take such as plastic bags, film plastics, and glass.

DID YOU KNOW? THE FOLLOWING ITEMS ARE ACCEPTED FOR CURBSIDE COLLECTION

- Tetra Pak (Aseptic) boxes and cartons e.g. soups, sauces
- Paper-based microwave bowls and cups
- Aerosol cans (empty) and caps e.g. air fresheners, shaving cream, deodorant, hairspray, whip cream
- Spiral wound paper cans and lids, e.g. frozen juice containers
- Plastic clamshells
- Plastic cold drink cups and lids
- Plastic garden pots and seedling trays
- Paper cups for hot and cold beverages
- Frozen dessert boxes e.g. ice cream
- Milk and cream cartons
- Paper bags with single and multiple paper layers (may include plastic layer) e.g. pet food bags
- Shredded paper (must be in a tied clear plastic bag)



WHAT CAN BE DONE WITH ITEMS THAT CAN'T BE RECYCLED AT THE CURB?

The region has several Drop-Off Depots that accept plastic bags and overwrap, foam (Styrofoam) containers, trays and cushion packaging, and non-deposit glass jars and bottles.

These Drop-Off Depots may also accept curbside packaging and printed paper materials, as well as small appliances, electronics, used oil, batteries, lights, paint and even household hazardous waste like solvents and flammable liquids.

Check with them or the RDN Curbside app (details on page 2 of this newsletter) to confirm accepted items.

Qualicum Bottle & Recycling Depot

4- 141 Fourth Ave E, Qualicum Beach
Phone: 250-752-8884

Parksville Bottle and Recycling Depot Ltd.

611 A Alberni Highway, Parksville
Phone: 250-248-0224

Alpine Disposal & Recycling

2250 McGarrigle Road, Nanaimo
Phone: 250-751-1089

www.alpinegroup.ca

Regional Recycling

839 Old Victoria Road, Nanaimo
2375 Hayes Road, Nanaimo
Phone: 1 855-701-7171

www.regionalrecycling.ca/nanaimo

Nanaimo Recycling Exchange

2477 Kenworth Road
Phone: 250-758-7777

www.recycling.bc.ca

Gabriola Island Recycling Organization (GIRO)

700 Tin Can Alley, Gabriola Island
Phone: 250-247-9257

www.girodepot.com

(Do not accept Styrofoam)



**HAVE YOUR
TURKEY and
TRIM HOLIDAY
WASTE!**



The holidays are an uplifting time. It's also a time that brings a heavy environmental footprint.

The annual waste created in Canada from gift wrapping and shopping bags amounts to more than 545,000 tonnes according to the Recycling Council of BC. By using the green bin and curbside recycling program, residents can divert much of their holiday waste, keeping it out of the region's landfill.

Here are some tips on caring for your green bin:

- Remember: no plastic, metal, tin foil, glass or biodegradable bags. Compostable bags are accepted.
- To keep your food waste from sticking to the green bin during cold weather, line the bottom with newspaper. Spraying the sides with a vegetable oil spray can help too.

- Please don't put your small kitchen catcher at the curbside. If you have more food waste than can fit in your green bin, store it in a cool secure place or in your freezer until your next collection day.

What to feed your green bin over the holidays:

- Turkey trimmings, gizzards, giblets, stuffing, bones and other food leftovers.
- Food-soiled paper products, including napkins, paper towels, paper plates, cups, and paper tablecloths.
- Wax-coated paper containers, such as gable-top eggnog, dairy and ice cream cartons. (Please remove plastic spouts and lids.)
- Cut flowers and houseplants such as poinsettias, nuts, shells and even spices.

**MAKE MEMORIES
NOT GARBAGE THIS
HOLIDAY SEASON**

The festive season is fast approaching. For most of us it's the most wonderful time of the year, but because of the amount of garbage we produce it's also one of the most wasteful. By remembering the **3Rs – reduce, reuse and recycle** – you can enjoy the spirit of the season while easing the load on our landfill and environment. Here are some suggestions how:

Sustainable Gifts

Consider giving sustainable gifts such as homemade presents or gifts of time or services. Options include making a donation in the person's name to a charity, giving bus tickets, skating or swimming passes, or gifts from products that are grown or made locally and sustain our region's economy.

Styrofoam

Taking advantage of some great holiday deals and upgrading to 52" plasma TV, or new home entertainment system? What are you going to do with all the Styrofoam packaging? Consider buying from a store that will take back the packaging or return it to your nearest **Recycle BC** drop off depot.

Gift Wrap

Most gift wrap can't be recycled because of its high ink content and blending with materials such as metal, wax or plastic lamination. Instead choose reusable gift bags, tea towels, cloth napkins or even reusable shopping bags for gift wrap that can be reused.

Maximize your Curbside Program

Be a good sort over the holidays. Ask yourself if paper, plastic, metal or glass can be recycled at the curbside or at a drop-off depot before you trash it. Remember your Green Bin isn't just for food scraps, you can feed it soiled paper products including paper plates, cups, waxed cardboard, and paper take-out food and drink containers.



**REGIONAL
DISTRICT
OF NANAIMO**

CONTACT INFORMATION

Email: zerowaste@rdn.bc.ca
www.rdn.bc.ca

Regional District of Nanaimo, Solid Waste Services
6300 Hammond Bay Rd., Nanaimo, BC V9T 6N2
Ph. (250) 390-6560 or 1-877-607-4111 (Toll-free)

Beyond Composting



Appendix 15: Responses from feedback forms

Area	Comment
Parksville	Single use packaged snacks was not a good example. Do not agree with not supporting a Share Shed at Transfer Station it would be a valuable asset.
Parksville	Very informative and helpful. I will be more attentive to what I do and this will help educate people about the waste management program. Thank you for your service.
A	Too many abbreviations.
H	Very informative.
H	What about having free drop off for yard branches/twigs - no cost to RDN for the pick up or delivery to the transit station.
H	Very interesting information, thank you.
H	Interested in exploring options for yard waste disposal options for yard waste disposal options: <ol style="list-style-type: none"> 1. need to alternatives to backyard burning and open burning 2. Need to improve air quality and reduce burning 3. Potential chipping and pick up of yard waste on an annual basis 4. Potential pick up of leaves 5. composting workshop for homeowners may be a cost effective options 6, need a yard smart program similar to waste smart
H	Very informative, puts a face to who does the management and what your goals are, why we're doing what we're doing etc.
Nanaimo	The NRE is an essential part of our waste management system. I use it on a weekly basis for both company and personal waste diversion of products like soft plastics that would otherwise pollute the landfill. The conditions of their building are horrible and the city of Nanaimo and the people who help deal with waste recycling there deserve a proper facility, whether is it proper for the City of Nanaimo or Regional District of Nanaimo to fund it should not a sticking point.
Nanaimo	I am extremely exciting about your plan to upgrade services for multifamily apartments and condos. My wife and I live in a condo and we have garbage and recycling but no organic waste disposal except to slip in into friends green bins. I would at least like a facility to take green waste to. I hope this happens soon, it pains us to have to mix organic waste with garbage.
Nanaimo	The NRE needs to expand as it's the lowest cost one stop centre in the region. For profits cannot compost and do not have the vision to take us the authentic zero waste. It needs to become the regions resource recovery centre, spawning new businesses and jobs. The NRE saves us lots of money, in part because it reduces illegal dumping The NRE could help the RDN to separate and divert materials they could do this at the landfill as is done elsewhere. I support going to 90% and would rejoice if the commercial haulers stop exporting waste material.
QB	Please provide more education especially new residents. Standardize recycling across Canada. How to deal with K-cups, yogurt cups, plastic bags and vegetable bags. Need to provide fully recycling, kitchen waste and garbage pickup for commercial institutions and multifamily.
QB	I enjoy and find the RDN newsletter that is mail dropped 3-4 times a year into our mailboxes very informative. Please ensure that any acronyms used in the newsletter have an explanation of what they stand for. Thank you for an informative and interesting presentation. I learned a lot and have a much greater understanding of how our waste management system actually works. I am please at the past success of the RDN's diversion strategy and look forward to achieving 90%.

Appendix 16

Open house display boards

ADVOCACY

EXISTING ZERO WASTE PROGRAM

Historically, the costs and responsibilities of waste management has been undertaken by local governments and taxpayers. There is currently a shift occurring that is transferring the responsibility for the costs and risk of end-of-life product management to the manufacturers of goods and the consumers that use them. The RDN will continue to advocate for greater waste diversion in the region by engaging with federal, provincial and local governments and BC stewardship groups to provide the appropriate market mechanism to encourage more sustainable manufacturing and consumer choices.



WHAT DOES THE RDN PLAN TO DO?

Advocacy role may include:

- **Petition Provincial/Federal Government to act on matters outside local jurisdiction in an effort to minimize waste**
 - Petition senior governments on an on-going basis, and in a variety of ways, including writing letters, arranging meetings at senior staff and political level and involving the media.
 - Consider partnerships with other organizations for joint advocacy initiatives.
- **Encourage, demonstrate and advocate for consumers and producers to move towards a closed loop system.**
 - Educate the public on the Zero Waste Hierarchy.
 - Support and promote local re-use and repair programs.
 - Demonstrate how to build a closed loop system.
 - Advocate for producers to ensure their products and product packaging end of life is consistent with the Zero Waste Hierarchy.
- **Promote the continuous improvement of EPR Programs**
 - Work with senior governments and Industry Stewards to advance programs that improve convenience, participation and higher levels of waste diversion
 - Insist that new EPR programs must meet or exceed current recycling collection programs and offer consistency of services.
 - Collaborate with the BC Product Stewardship Council, Stewardship Association of British Columbia, the Canadian Council of Ministers of the Environment and the Recycling Council of BC.
 - Partner with neighboring regional districts and other organizations to ensure a broader more unified message is expressed when shared concerns are brought forward.



COST

Ongoing Cost to Manage Advocacy	Yearly Budget
Total	\$20,000

Costs associated with the RDN's current activities regarding advocacy are difficult to determine given the broad range of activities carried out by political and staff representatives. These range from support for organizations such as the Recycling Council BC, active participation in organizations such as the Coast Waste Management Association, to engaging with the Province on policy and regulation development. The continued role of advocacy will remain variable depending on level of participation and costs related to the engagement opportunities (e.g. association dues, travel expenses).



WHAT DOES THIS MEAN FOR YOU AND OUR REGION?

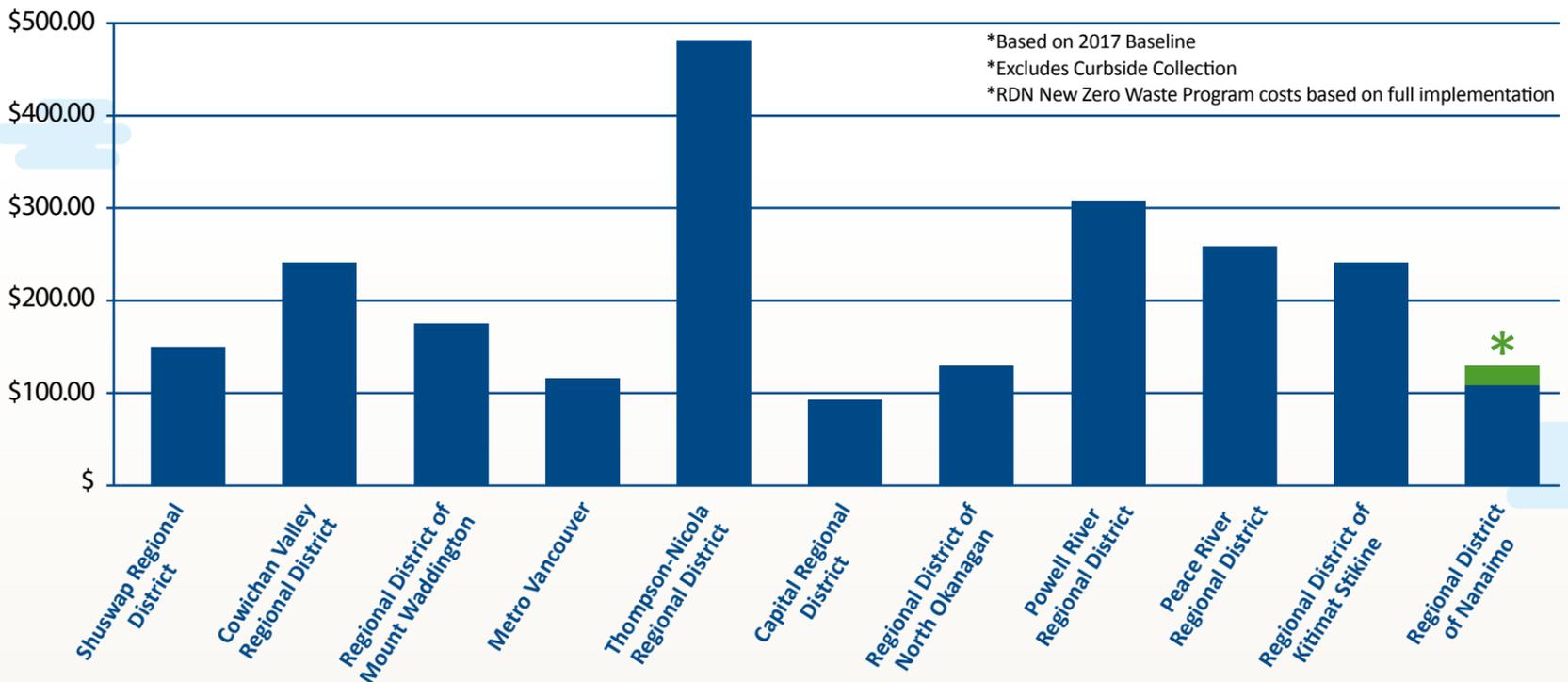
RDN will act as a voice for residents to encourage the provincial and federal government to ensure that producers take responsibility for proper collection and disposal of products and packaging. As well as encourage the reduction of hazardous materials and extraneous packaging.



COST COMPARISON OF SOLID WASTE COSTS WITH OTHER JURISDICTIONS

BACKGROUND INFORMATION

AVERAGE FAMILY SOLID WASTE SERVICES COSTS BASED ON \$500,000 HOUSEHOLD



WHAT DOES THIS LOOK LIKE FOR RDN PER CAPITA COSTS?

	ANNUAL NET COST (\$ MILLION)	PER CAPITA COST (\$)
Current Zero Waste Strategy (68%)	\$3.3	\$53.66
Proposed Zero Waste Strategy (90%)	\$4.9	\$63.69
DIFFERENCE	\$1.6	\$10.03
Current Residential Curbside	\$5.1	\$32.51
Proposed Residential Curbside	\$5.1	\$32.51
DIFFERENCE	\$0.0	\$0.00
Current Disposal Operations	\$6.4	\$40.78
Future Disposal Operations	\$6.4	\$40.78
DIFFERENCE	\$0.0	\$0.00
Total Current SWMP	\$14.7	\$94.44
Total Proposed SWMP	\$16.3	\$104.47
DIFFERENCE	\$1.6	\$10.03

Based on 10 year budget 2017 - 2026

WHAT ARE THE COSTS ASSOCIATED WITH THE SOLID WASTE MANAGEMENT PLAN?

BACKGROUND INFORMATION

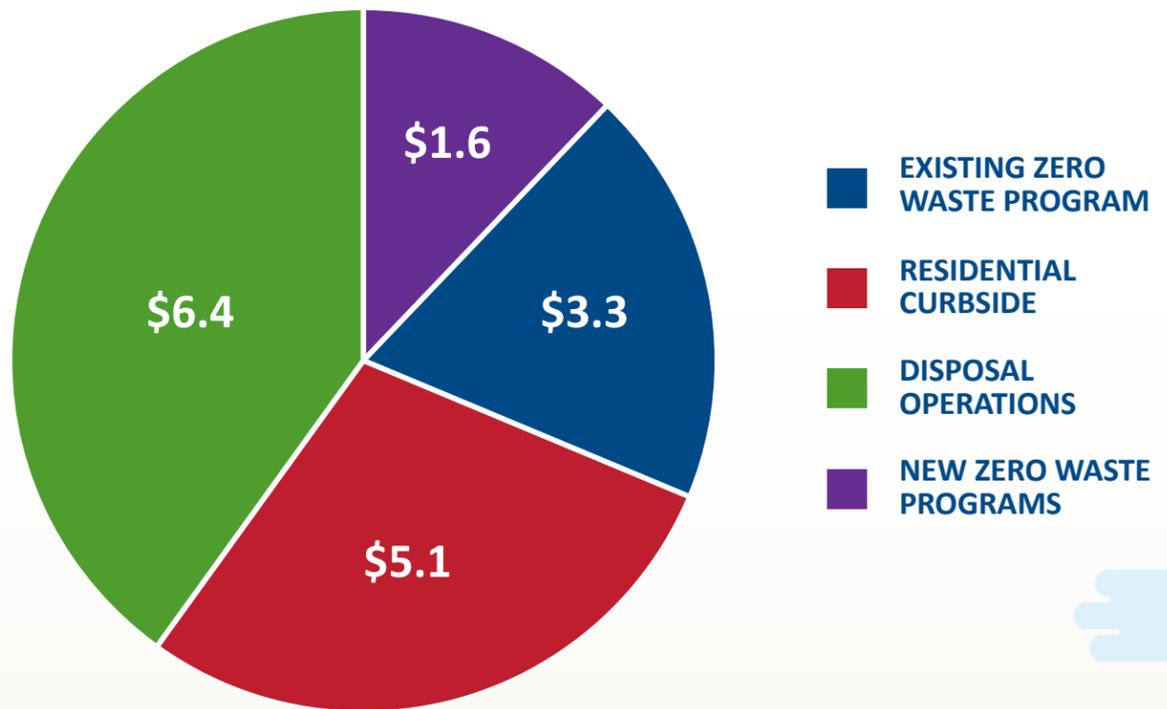
EXISTING

Total Cost: \$14.7 Million

PROPOSED

Total Cost: \$16.3 Million

(Cost per year based on 10 year annualized costs)



NEW ZERO WASTE PROGRAMS	IMPLEMENTATION YEAR	ESTIMATED DIVERSION	BUDGET
Expanded Zero Waste Education	2018	Not Quantifiable	\$40,000
Household Hazardous Waste	2018	<1%	\$100,000
Expanded Industrial, Commercial & Institutional Waste Management Diversion Increased education of existing landfill bans and a relaunch of Commercial Organics Diversion Strategy and Multi-Family Diversion Strategy	2018	3%	\$100,000
	2018		\$100,000
Expanded Construction and Demolition Waste Diversion Improve and reintroduce education and communication regarding CD waste in the region	2018	3%	\$20,000
	2018		\$20,000
Enhanced enforcement of existing landfill bans targeted at the ICI sector			\$100,000
Waste Haulers Licensing	2019-20	10%	\$469,000
Mandatory Waste Source Separation	2019-21	10%	\$373,000
Solid Waste Emergency/Disaster Response Plan	2022	N/A	N/A
Zero Waste Recycling	2019	1%	\$300,000
Total			\$1,538,000



RESIDENTIAL CURBSIDE COLLECTION PROGRAM

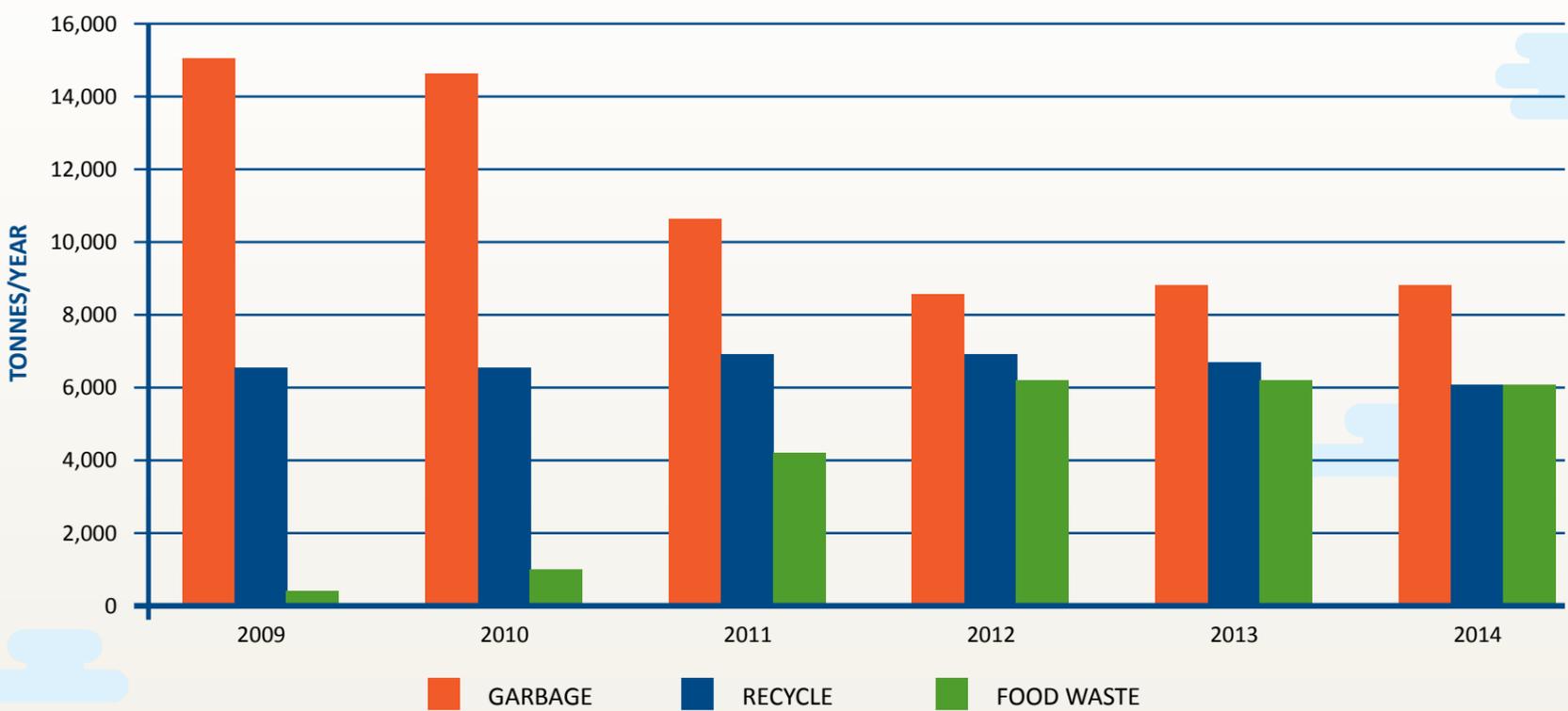
EXISTING ZERO WASTE PROGRAM

The Regional District of Nanaimo (RDN) provides curbside collection of residential garbage, recycling and/or food waste in the seven Electoral Areas, District of Lantzville, Qualicum Beach and City of Parksville. The City of Nanaimo provides collection services to residences within their boundaries.

- Households separate their materials into food waste, recyclables, and garbage.
- Food waste is stored in your green bin and set out at the curb for weekly collection.
- Recyclables and garbage collection alternates every two weeks.

CURBSIDE COLLECTION TONNAGES

ANNUAL CURBSIDE TONNAGE COLLECTED 2009-2014



WHAT DOES THE RDN PLAN TO DO?

The Regional Solid Waste Advisory Committee considered the following options for inclusion in the Solid Waste Management Plan with regards to Curbside Collection however they were not supported for inclusion in the Plan:

- Household Glass Collection
- Yard Waste Collection
- Curbside Collection Program – Compliance and Enforcement to Improve Diversion

The Plan proposes to continue supporting the current residential curbside collection program.

COST

Projected Costs to Manage Residential Curbside Collection	Yearly Budget
Total	\$4,623,000
2017 Utility Fee per Single Family Dwelling	\$141.85

Both the RDN and the City of Nanaimo have user pay curbside garbage collection programs. The cost of managing curbside organics and residual waste is fully funded by the utility fees and off-set by funding from Recycle BC for the curbside recycling program.

DISPOSAL BANS

EXISTING ZERO WASTE PROGRAM

Banning specific wastes from the landfill, when viable recycling alternatives are in place, has been used effectively by the RDN to increase recycling, composting and waste diversion since 1991.

There are currently landfill bans for:

- recyclable/compostable materials including drywall (1991)
- cardboard (1992)
- paper (1998)
- metal (1998)
- tires (1998)
- commercial food waste (2005)
- yard and garden waste (2007)
- wood waste (2007)
- EPR materials designated under BC's recycling regulation (2007)
- household plastic containers (2009)
- metal food and beverage containers (2009)

Disposal bans are considered to be a critical policy mechanism to drive diversion activities, particularly in the Industrial, Commercial and Institutional (ICI) and construction/demolition sectors.



WHAT DOES THE RDN PLAN TO DO?

Currently the enforcement of disposal bans at the Regional Landfill and at the Church Road Transfer Station has only been applied to the most egregious cases of contamination. Minor amounts of banned materials such as paper, food waste or recyclable plastic is not uncommon. The RDN will increase enforcement and education of existing disposal bans to ensure that compostable and recyclable material stays out of the landfill.

WHAT DOES THIS MEAN FOR YOU AND OUR REGION?

When a resident or a business brings material for drop off at the Regional Landfill or Church Road Transfer Station, the load must not contain any banned material. If a load is found to have banned material, it may be fined or prevented from dropping its material off until all banned material is sorted.



ZERO WASTE EDUCATION

EXISTING ZERO WASTE PROGRAM

The RDN contracts a 3rd party non-profit agency to deliver a zero waste school education program which provides free classroom workshops to schools throughout the RDN. Facilitators bring examples of things made from recycled material to show how recycling is helping work towards the goal of Zero Waste.

They discuss how a landfill works and show the results of a recent waste audit using a Garbage Pizza. Participants learn about natural resources and the importance of wisely using renewable resources. The Zero Waste workshops can be tailored to adults who want to improve home or office recycling.



SCHOOL WORKSHOPS INCLUDE:

- Zero Waste
- Compost
- Plastic Pollution
- Consumer to Conservator

WHAT DOES THE RDN PLAN TO DO?

Continue funding for design and delivery of a primary school program that focuses on the concept of zero waste. The RDN and the City of Nanaimo produce most of the solid waste management promotion and education materials provided in the Regional District.

The objectives of the RDN program are to:

- Increase waste diversion;
- Educate all generators about the solid waste management priorities of the Regional District;
- Promote participation in waste diversion programs;
- Promote the “Zero Waste” concept;
- Encourage proper participation in garbage and recycling collection programs; and
- Encourage compliance with Regional District material bans.

Education activities include: staffing at public events and speaking engagements; mall displays; articles in the Regional newsletter “Regional Perspectives”; the region-wide “Zero Waste” newsletter; a Zero Waste school education program; garbage and recycling program brochure (for RDN contract areas); and a web site featuring a recycling database, Zero Waste tool kit and program information.

A greater emphasis is proposed to be targeted at adult audiences through traditional and social media, as well as being more active in a variety of public events.

COST

Ongoing Cost to Manage School Education Program	Yearly Budget
Total	\$30,000

Expanded Zero Waste Education	Yearly Estimated Budget
Total	\$40,000
Projected Tax Rate per \$100,000 Property Value	\$0.11

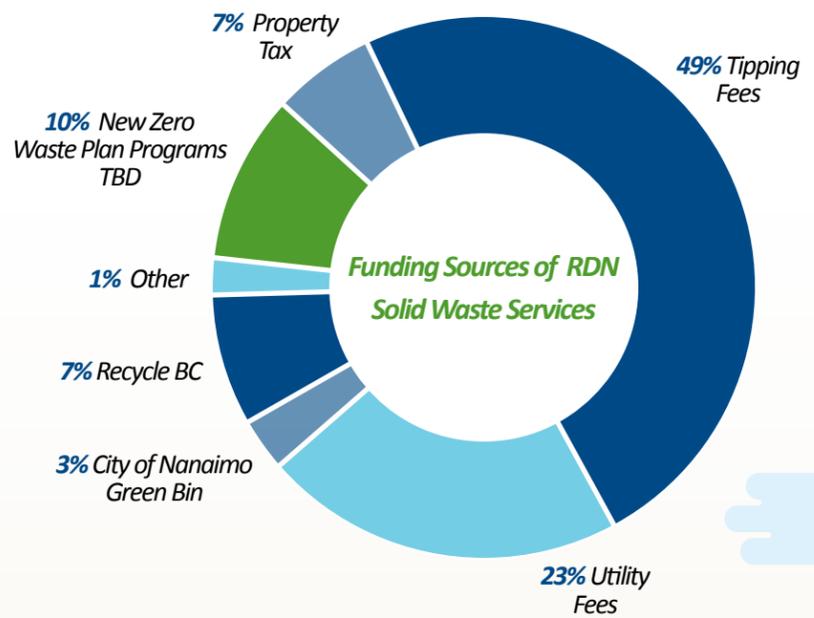
WHAT DOES THIS MEAN FOR YOU AND OUR REGION?

Development and delivery of public workshops/event displays and maintaining an active social media presence can benefit the community as a whole. Education programs are presented to help both children and adults achieve zero waste goals.

HOW ARE... SOLID WASTE SERVICES PAID FOR?

Solid Waste Services funding is primarily from:

- Landfill Tipping Fees (49%)
- Utility Fees for Residential Curbside Collection (23%). (Note that funds received from Recycle BC (7%) are for residential curbside collection of recycles and have been applied since 2013 to reduce the Utility Fee)
- Property Taxes



What is your preference for funding any of the new Zero Waste programs proposed?

If new programs were to be funded by taxation, the table below presents the cost:

(tax rates are based on the full implementation of the updated Zero Waste Plan in 2020)

Solid Waste Services Tax Rate per \$100K Assessed Value	City of Nanaimo	City of Parksville	Town of Qualicum Beach	District of Lantzville	Electoral Area A	Electoral Area B	Electoral Area C	Electoral Area E	Electoral Area F	Electoral Area G	Electoral Area H	Average RDN Tax Rate
Zero Waste Education	\$0.12	\$0.11	\$0.11	\$0.11	\$0.13	\$0.10	\$0.09	\$0.10	\$0.13	\$0.11	\$0.10	\$0.11
Household Hazardous Waste	\$0.30	\$0.28	\$0.27	\$0.28	\$0.32	\$0.25	\$0.23	\$0.24	\$0.33	\$0.28	\$0.26	\$0.28
ICI Waste Management	\$0.59	\$0.55	\$0.52	\$0.55	\$0.64	\$0.50	\$0.45	\$0.47	\$0.64	\$0.55	\$0.51	\$0.54
CD Waste Management	\$0.12	\$0.12	\$0.11	\$0.13	\$0.13	\$0.10	\$0.09	\$0.10	\$0.13	\$0.11	\$0.11	\$0.11
Mandatory Waste Source Regulation	\$1.08	\$1.01	\$0.96	\$1.00	\$1.16	\$0.91	\$0.82	\$0.86	\$1.17	\$1.00	\$0.93	\$0.99
Waste Hauler Licensing	\$1.36	\$1.27	\$1.20	\$1.26	\$1.46	\$1.14	\$1.04	\$1.09	\$1.47	\$1.26	\$1.17	\$1.25
Zero Waste Recycling	\$0.89	\$0.83	\$0.78	\$0.82	\$0.95	\$0.75	\$0.68	\$0.71	\$0.96	\$0.82	\$0.77	\$0.81
Total New Zero Waste Program	\$4.45	\$4.18	\$3.95	\$4.16	\$4.80	\$3.76	\$3.40	\$3.57	\$4.82	\$4.13	\$3.85	\$4.10
Total Ongoing SW Programs	\$3.31	\$3.11	\$2.93	\$3.08	\$3.56	\$2.79	\$2.53	\$2.65	\$3.59	\$3.07	\$2.86	\$3.04
Total SW Services Tax Rate	\$7.76	\$7.29	\$6.88	\$7.25	\$8.36	\$6.55	\$5.93	\$6.22	\$8.41	\$7.20	\$6.71	\$7.14

Cost per \$100,000	\$7.76	\$7.29	\$6.88	\$7.25	\$8.36	\$6.55	\$5.93	\$6.22	\$8.41	\$7.20	\$6.71	\$7.14
Cost per \$500,000	\$38.82	\$36.44	\$34.40	\$36.24	\$41.80	\$32.77	\$29.65	\$31.09	\$42.06	\$35.98	\$33.56	\$35.71

RECYCLING AND ORGANICS COLLECTION AT RDN FACILITIES

EXISTING ZERO WASTE PROGRAM

As a convenience to ensure an on-going opportunity to dispose of food waste, yard waste and recycling, the RDN accepts source-separated recycling, yard waste and food waste at both the transfer station and landfill. This material is transferred to private facilities for processing.



WHAT DOES THE RDN PLAN TO DO?

The Regional Solid Waste Management Advisory Committee considered a number of options for inclusion in the Solid Waste Management Plan in relation to recycling and organics collection at RDN Facilities. After examining these options it was decided by the Committee to maintain current service levels and not consider new options at RDN Facilities.

Why isn't there a "Share Shed" at the Landfill and Transfer Station?

Many landfills and transfer stations have "Share Sheds" or "Last Chance Areas" where customers can place usable unwanted items that others customers can take for free. This concept was considered as an option in updating the Solid Waste Management Plan.

This was not selected as a preferred option mainly because it would detract from the many for-profit and non-profit locations in the RDN rely on receiving donated items and selling them. One of the main themes of the Solid Waste Management Plan is for the local government to not compete with others that have invested in providing a service.

Why don't you accept Product Stewardship items at the Landfill and Transfer Station?

Product Stewardship items are materials that fall under a provincially mandated program where producers are responsible for the items "end of life" (e.g. electronics, lightbulbs).

As noted above, one of the main themes of the Solid Waste Management Plan is for the government to not compete with others that have invested in providing a service. Although some recyclables are accepted at the landfill and transfer station as a convenience, the emphasis of the Solid Waste Management Plan is to "build the business of diversion". There are many private locations in our regional district that have invested to set up Product Stewardship depots. The RDN does not want to compete with these businesses.

Why doesn't the RDN provide Complimentary Drop Off Days?

Charging fees to some residents and not to others could be considered discriminatory. Introducing a program that a small percentage of the population participates in, means that costs are transferred to a larger population of those who do pay. Additionally, it may not be legal to waive tipping fees for residential, but not for commercial, users.

COST

Ongoing Cost to Manage Recycling & Organics Collection at RDN Facilities	Yearly Budget
Total	\$161,000

WHAT DOES THIS MEAN FOR YOU AND OUR REGION?

As a convenience, the RDN provides the opportunity for self-haul customers at the disposal facilities to recycle items such as appliances, propane tanks, scrap metal, gypsum (at CRTS), cardboard, paper, glass, and metal and plastic food and beverage containers. Self-haul and commercial customers can also compost food waste, yard waste and wood waste at these facilities.



THANK YOU!

HOUSEHOLD HAZARDOUS WASTE

NEW ZERO WASTE PROGRAM

Household Hazardous Waste (HHW) is any waste from your home that is considered dangerous. It includes any leftover household product that is marked flammable, corrosive, explosive or poisonous. Most of these can be taken to a depot that accepts ReGeneration program products free of charge. However, there are some materials that are not covered by the ReGeneration Stewardship program.

To learn more about what can be recycled, visit www.rdn.bc.ca/curbside

WHAT DOES THE RDN PLAN TO DO?

Provide a location(s) for non-stewarded residential household hazardous waste to be dropped off free of charge. Options to be considered are:

- 1) "HHW Roundup" - day events throughout the Regional District where materials can be dropped off; or,
- 2) Contracting a business to collect HHW on a regular basis.

The RDN will also Advocate for the Federal and Provincial government to include more non-stewarded HHW items in existing stewardship programs to encourage manufacturers to take more responsibility for the 'end-of-life' of products they make or sell, and preventing waste in the first place.

DIVERSION

Estimated potential waste stream diversion: <1%

Although there is a small diversion potential, this is the "nasty" stuff we want to keep from being improperly disposed.

COST

Projected Costs to Manage Non-Stewarded HHW	Yearly Estimated Budget
Total	\$100,000
Projected Tax Rate per \$100,000 Property Value	\$0.28

WHAT DOES THIS MEAN FOR YOU AND OUR REGION?

Residents will be able to drop off their HHW products that are not currently covered by a stewardship program for free. Correct disposal of HHW is important to prevent the spread of chemicals in our soil, air, and water. When HHW ends up in our landfill, it can leech out and contaminate our soil and groundwater. Correct disposal of HHW ensure that this material is dealt with in an environmental sound manner.

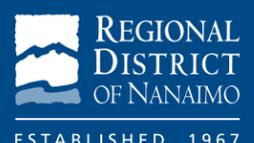
IMPLEMENTATION TIMELINE: 2018



REGIONAL DISTRICT OF NANAIMO



For more information: getinvolved.rdn.ca
Email: zerowaste@rdn.bc.ca
Regional District of Nanaimo, Solid Waste Services
6300 Hammond Bay Rd, Nanaimo, BC, V9T 6N2



ILLEGAL DUMPING

EXISTING ZERO WASTE PROGRAM

Illegal dumping is purposefully leaving waste on private or public land rather than using legal disposal methods like recycling or landfilling. Pursuant to RDN Bylaw No. 1386, those who generate (own), deliver or abandon waste illegally can be subject to a fine of up to \$200,000.

Illegal dumping is a long-standing concern in the RDN. In 2016, over 35 tonnes of illegally dumped material was recovered and disposed of appropriately. Illegally dumped material can have serious effects on the environment, wildlife habitat and the ability of others to use and enjoy outdoor recreational areas.

Illegal dumping includes but is not limited to:

- Garbage
- Yard and Garden Waste
- Construction and demolition waste
- Bulky items (furniture, appliances etc...)

WHAT DOES THE RDN PLAN TO DO?

The RDN will continue to operate an Anti-Illegal Dumping program that includes:

- Prevention of illegal dumping through education;
- Funding the clean-up of illegal dump sites;
- Waiving of tipping fees for community clean-up efforts;
- Illegal dumping surveillance and enforcement activities; and
- Funding for clean up of Illegal Dumping at select charities involved in waste diversion in the RDN (i.e. Thrift stores)

COST

Projected Costs to Manage Illegal Dumping	Yearly Budget
Total	\$101,000

WHAT DOES THIS MEAN FOR YOU AND OUR REGION?

Socializing the cost of Anti-Illegal Dumping programs helps to combat illegal dumping throughout our region and reduce the impact of improperly disposed of material on the receiving environment.



For more information: getinvolved.rdn.ca
Email: zerowaste@rdn.bc.ca
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INDUSTRIAL, COMMERCIAL AND INSTITUTIONAL (ICI) WASTE DIVERSION

BACKGROUND INFORMATION

ICI waste is waste generated from businesses, industries, institutions and multi-family buildings. The RDN encourages recycling by the ICI sector through variable tipping fees and landfill bans which prohibit the landfilling of recyclables, food waste and yard waste. An assessment of the garbage disposed by the ICI sector was done as part of the RDN's 2012 waste composition study. The data estimates that approximately 42% of the garbage disposed is compostable, including food scraps (28%), yard waste (8%) and compostable paper products (6%). An estimated 16% is considered recyclable and consists primarily of paper and cardboard (12%) with metal, pallet wrap and drywall making up the remainder of the recyclable portion of the ICI garbage.



WHAT DOES THE RDN PLAN TO DO?

The RDN will continue to work within current regulatory authorities to improve ICI organics and recycling diversion which may include increased education and awareness and/or increased enforcement of current landfill bans at the landfill and transfer station.

DIVERSION

Estimated potential waste stream diversion: 3%

COST

Projected Costs to expand ICI Waste Diversion	Yearly Estimated Budget
Increased education of existing landfill bans and a relaunch of Commercial Organics Diversion Strategy and Multi-Family Diversion Strategy	\$100,000
Increased enforcement of existing landfill bans targeted at the ICI sector	\$100,000
Projected Tax Rate per \$100,000 Property Value	\$0.54

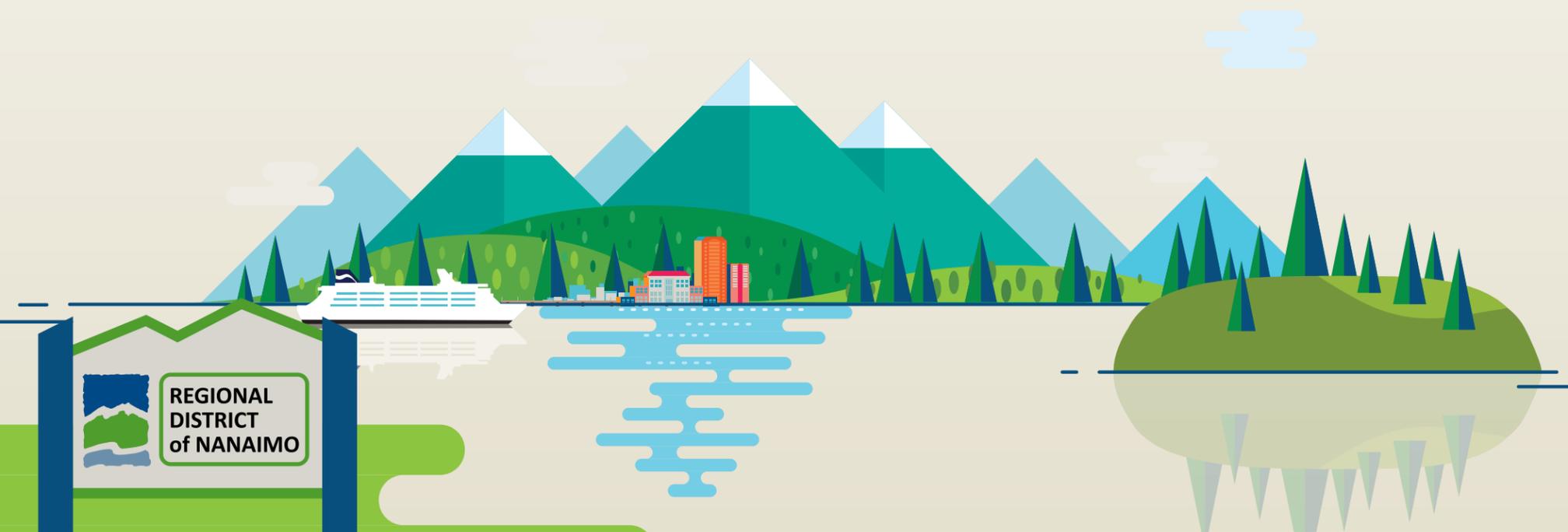
WHAT DOES THIS MEAN FOR YOU AND OUR REGION?

It is expected that the Multi-Family and IC&I sector would experience a marginal increase in diversion though additional outreach and that diversion would increase commensurate with increased enforcement of the landfill bans and issuing of fines. This approach runs the risk of increasing waste leakage where private haulers opt to haul waste out of district in order to bypass landfill bans.

IMPLEMENTATION TIMELINE

2018 Increased Education

2020 Increased Enforcement



MANDATORY WASTE SOURCE SEPARATION

NEW ZERO WASTE PROGRAM

It is the requirement for all waste generators to separate garbage, recyclables and organics.

The RDN residential curbside collection program is an example of this. The RDN mandates that each single family residence participates in curbside collection service of garbage, recyclable and organics. Single family residents have embraced the program and high levels of waste diversion have been achieved.

The Solid Waste Management Plan proposes to expand this concept to all waste generators which includes businesses and multi-family residences.



WHAT DOES THE RDN PLAN TO DO?

The RDN proposes to require source separation of waste through the two following options:

- 1) Enact a bylaw that requires every business and multi-family residence to have and maintain individual bins for refuse, recyclables and organics.
- 2) Through licensing of Waste Haulers, requiring as a condition of a license, that a waste collection service provided to customer must include provisions for separated recyclables and organics.



DIVERSION

Estimated potential waste stream diversion: 10%

Estimated diversion resulting from new Mandatory Waste Source Separation and Waste Hauler Licensing Regulation combined.



COST

Projected Costs to Manage Mandatory Source Separation Regulation	Yearly Estimated Budget
Total	\$373,000
Projected Tax Rate per \$100,000 Property Value	\$0.99



WHAT DOES THIS MEAN FOR YOU AND OUR REGION?

Subject to adoption of the Plan, the RDN will conduct further consultation on the introduction of mandatory waste source separation regulation and the details of how this would be regulated. The new strategy proposes that all commercial, institutional, industrial and multi-family locations source separate their municipal waste.



IMPLEMENTATION TIMELINE: 2019 - 2021

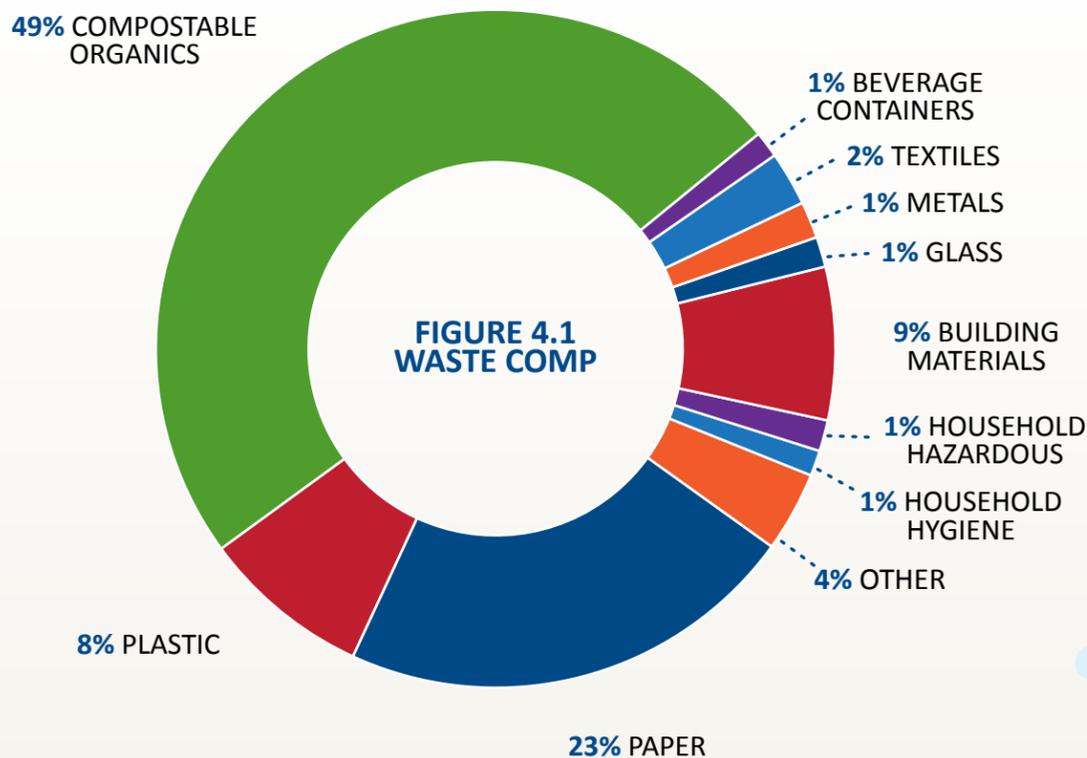


MULTI-FAMILY WASTE DIVERSION

NEW ZERO WASTE PROGRAM

Multi-family waste diversion is aimed at increasing the level of recycling and composting in multi-family residences. Waste collection at multi-family dwelling is largely done by commercial waste haulers. The pace of multi-family development is expected to increase in future years.

As the amount of multi-family housing increases, so do the expectations that service levels should be similar to those provided for single-family housing. Below is a chart from the 2012 Waste composition for multi-family residences.



WHAT DOES THE RDN PLAN TO DO?

The Mandatory Waste Source Separation regulation will help ensure that multi-family residences have access to increase services for recycling and composting, stopping this material from ending up in the landfill.

Mandatory Waste Source Separation regulation together with Waste Hauler Licensing regulation would help ensure every multi-family building has a recycling and food waste composting program. This will discourage waste from being hauled out of region to less expensive private landfills and it will help ensure we take responsibility for our own garbage by making sure we recycle or compost it locally.

DIVERSION POTENTIAL

Multi-Family waste generation assumptions:

- A multi-family household would set out the same amount of garbage and food waste (excluding recyclables) as a single family household (280 kg/yr) with no allowance made for garbage use, lack of domestic livestock or backyard composter use, household size or demographic differences.
- $280 \text{ kg} \times 29\% = 81 \text{ kg/dwelling unit}$ of green bin material a year available for capture.
- $81 \text{ kg} \times 13,430 \text{ households}$ (based on the 2012 staff report) = 1,088 tonnes of material available for capture.
- 75% participation rate (similar to single family curbside set-outs) = 815 tonnes of material diverted.

WHAT DOES THIS MEAN FOR YOU AND OUR REGION?

Given that the residential sector makes up the smallest component of the region's waste stream, and that residents receiving curbside service have made important steps in achieving 60% diversion through participation in food waste and recycling programs, the opportunity to achieve greater overall levels of diversion is attainable by having the multi-family sector receive the same level of service. By having access to more service, multi-family housing waste diversion is expected to have a greater impact on landfill diversion than focusing efforts solely on curbside collection.

RESIDUAL MANAGEMENT

BACKGROUND INFORMATION

The waste that cannot be eliminated or diverted through composting or recycling is referred to as “residual waste”, and ultimately requires disposal. The Residual Waste Management Strategy addresses the long-term disposal needs of the region and aims to minimize social, environmental and financial impacts and risks.



The Residual Waste Management Strategy contains the following major features:

- Continued use of the Regional Landfill in Cedar for waste generated in the RDN for the projected lifespan of the landfill until 2038; Success of zero waste programs could extend the life of the landfill another 10 to 15 years.
- Continued use of the Church Road Transfer Station (CRTS) in Parksville to receive waste from the northern portion of the RDN.
- Researching new and emerging residual waste management technologies that could reduce the RDN’s reliance on landfilling or waste export.
- Discussions with adjacent regional districts to identify potential cooperative strategies for waste management systems.
- Although we are on the road to Zero Waste, there will be some necessary landfilling capacity for the foreseeable future. The RDN will investigate future landfilling options beyond the life of the existing site.

CEDAR ROAD REGIONAL LANDFILL FACTS

Milestone dates:

- Mid-1930’s – landfilling started
- 1968 – RDN assumes operation of the landfill
- 1990 – RDN constructs fully lined Cell 2
- 1997 – landfill gas collection system installed
- 2009 – partnership with Cedar Road Bioenergy developed; currently 3.5 million m3 of gas collected producing 4600 Mw of electricity (enough to power about 500 homes)
- 2011 – final closure of western end of unlined Cell 1
- 2016 – North Berm completed providing the landfill seismic stability
- Fall 2017 – replace the scale and scale house (Oct.-Dec.) (The RDN apologizes for some traffic disruptions and delays this will cause.)
- Receives approximately 65,000 tonnes of material annually.
- Diverts approximately 15,000 tonnes of material.
- Landfills approximately 50,000 tonnes of material
- Average of 260 customers a day
- Collects in the order of 100,000m3 of leachate which is sent to Greater Nanaimo Pollution Control Center for treatment
- 35 groundwater monitoring wells and 7 surface water locations sampled on a quarterly/ biannual basis

CHURCH ROAD TRANSFER STATION FACTS

- 1991 – started operation
- 2020 – total retrofit of facility to LEED Gold Standard
- Processes approximately 24,000 tonnes of material annually
 - Diverts about 7,000 tonnes of material
 - Sends about 17,000 tonnes of material to the landfill
- Average of 260 customers per day



SOLID WASTE MANAGEMENT PLAN'S GUIDING PRINCIPLES

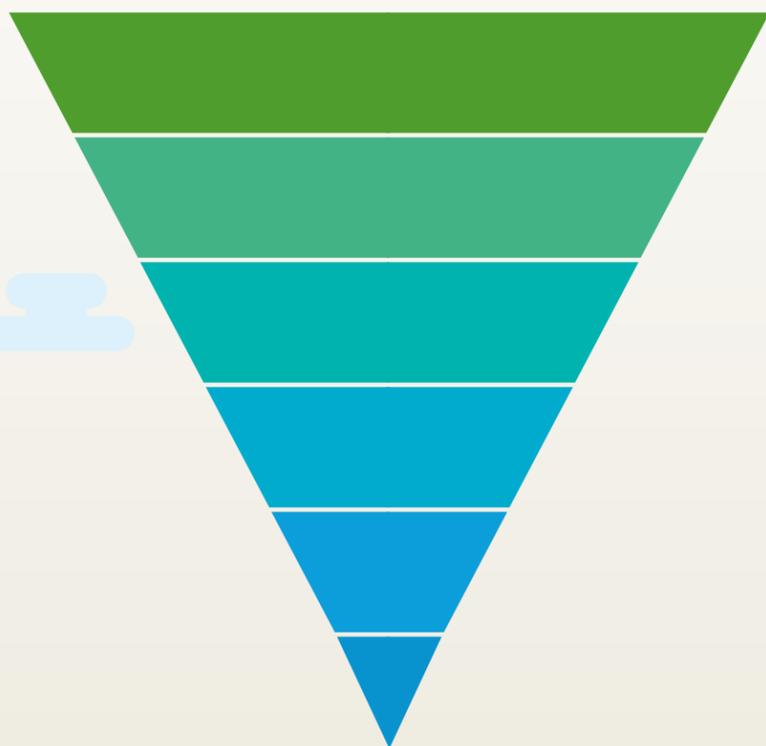
BACKGROUND INFORMATION

In British Columbia, regional districts are mandated by the Provincial Environmental Management Act to develop a Plan that is a long term vision of how each regional district would like to manage their solid waste, including waste diversion and disposal activities. This Plan's guiding principles are:

- 1) Promote the Zero Waste Hierarchy of highest and best uses and support a circular economy.
- 2) Maximize use of waste materials and manage residuals appropriately.
- 3) Support polluter and user-pay approaches and manage incentives to maximize behavior outcomes.
- 4) Prevent organics and recyclables from going in the garbage.
- 5) Collaborate with other regional districts wherever practical.
- 6) Develop collaborative partnerships with interested parties to achieve regional targets set in plans.
- 7) Level playing field within regions for both private and public solid waste management facilities

The future solid waste system will build on the existing framework of services and programs while improving the delivery of those services and reducing the amount of waste sent for disposal. The proposed programs, infrastructure and policies for the Plan are presented in accordance with the following waste management hierarchy.

ZW HIERARCHY OF HIGHEST & BEST USES



- Reduce, refuse & return
- End subsidies for wasting
- Product & packaging redesign
- Clean production & takebacks
- Reuse, repair, remanufacture
- Recycle, compost & digest
- Regulate (bans, biological energy recover, landfills with pre-processing)
- Not ok: incineration, bioreactor landfills

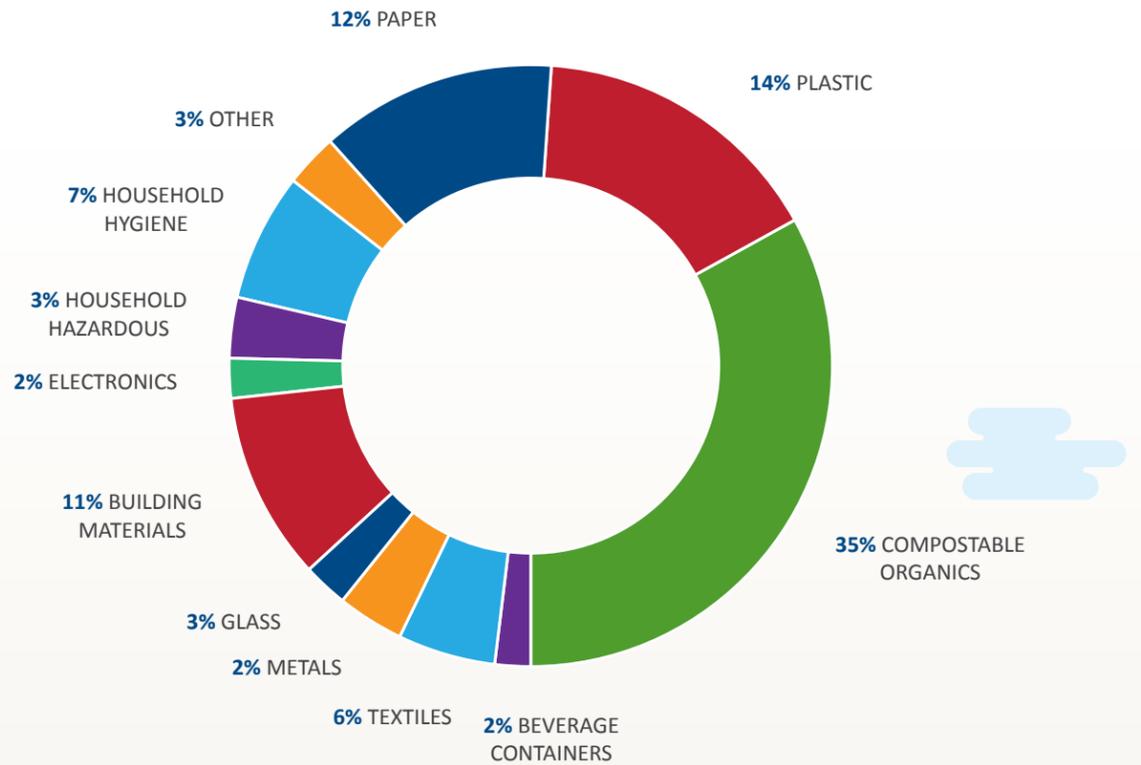


WASTE COMPOSITION

BACKGROUND INFORMATION

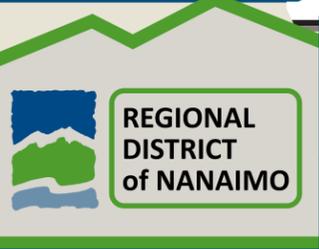
In 2012, the RDN commissioned a study of the composition of waste being landfilled in the Region. The study found compostable organics (food waste and compostable paper) and construction/demolition waste as the largest components of waste by weight being landfilled.

These materials were targeted for diversion from the landfill through the Green Bin Program, and disposal bans on Commercial Food Waste and Clean Wood Waste. The 2012 Waste Composition Study is a key tool in the current process to update and review the region's SWMP. The study's findings have been used to assess the effectiveness of Zero Waste programs in diverting landfill waste and opportunities for improvement.

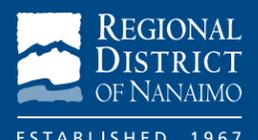


DETAILED DATA BY WASTE SECTOR

MATERIAL CATEGORY	RESIDENTIAL		COMMERCIAL		SELF-HAUL		TOTALS	
	WASTE STREAM PERCENTAGE	ESTIMATED DISPOSAL (2012)						
PAPER	1.2%	637	9.5%	5,049	1.8%	969	12.5%	6,655
PLASTIC	2.5%	1,313	8.3%	4,421	3.0%	1,599	13.8%	7,333
COMPOSTABLE ORGANICS	6.2%	3,301	26%	13,879	2.7%	1,453	34.9%	18,632



For more information: getinvolved.rdn.ca
 Email: zerowaste@rdn.bc.ca
 Regional District of Nanaimo, Solid Waste Services
 6300 Hammond Bay Rd, Nanaimo, BC, V9T 6N2



WASTE HAULER LICENSING

NEW ZERO WASTE PROGRAM

Introduce a regulation that requires waste haulers to be licensed in the RDN, responsible for ensuring their customers have a system in place for recycling and composting, including collecting and remitting a fee if not.

WHAT DOES THE RDN PLAN TO DO?

Licensing waste haulers provides the ability for the RDN to change the existing financial model to one where the waste industry is more profitable if they divert waste rather than dispose of it. The Waste Hauler Licensing regime is proposed to have the following elements:

1. Licensed haulers will be required to submit a disposal levy to the RDN for any waste that is collected and disposed of by landfilling or incineration at any facility within or outside the RDN. The levy will not apply to any waste that is diverted or recycled. The basis for this levy is:
 - a. To provide a direct incentive for waste services that encourage source separation by customers or that extracts recyclable material from the waste stream (e.g. materials recovery facility); and,
 - b. The generators of waste that ship waste out of the RDN for disposal avoid their portion of solid waste services costs that would otherwise be collected through tipping fees. Introduction of the levy ensures that all waste generators in the region pay their fair share of these costs.
2. Licensed Haulers will receive a discounted tipping fee at the RDN landfill and transfer station. The combined disposal levy and discounted tipping fee will be less than the tipping fee applied to all non-licensed customers. This fee differential, which favours the Licensed Haulers, will be set at a rate that encourages the flow of waste to industry before it is brought to RDN disposal facilities.
3. Licensed Haulers will be required to track waste disposal and diversion quantities as well as submit records and remit the disposal levy. Licensed Haulers will also be subject to auditing at the request of the RDN.
4. Licensed Haulers will be required to submit an annual licensing fee along with proof of a business license and insurance. The licensing fee will be set at an amount that is not a barrier to licensing but only encourages waste haulers in participating in the program.

DIVERSION

Estimated potential waste stream diversion: 10%

*In combination with Mandatory Waste Source Separation

COST

Projected Costs to Manage Waste Hauler Licensing	Yearly Estimated Budget
Total	\$469,000
Projected Tax Rate per \$100,000 Property Value	\$1.25

WHAT DOES THIS MEAN FOR YOU AND OUR REGION?

Introducing Waste Hauler Licensing would help ensure every business or multi-family building has a recycling and food waste composting program. This would not only help prevent waste from being hauled out of region to less expensive private landfills, it would also help ensure that we take responsibility for our own garbage by making sure we recycle or compost it locally. It could also offer an economic incentive for the private sector to provide more waste management services locally, improving convenience for recycling.

IMPLEMENTATION TIMELINE

2018 - Consultation on Waste Hauler Licensing Bylaw

2019 - Bylaw Development and Legal Counsel

2020 - Full Implementation of Waste Hauler Licensing Bylaw



ZERO WASTE STRATEGY

BACKGROUND INFORMATION

In 2002, the RDN committed to “Zero Waste” as its long-term waste reduction and diversion target. Zero Waste focuses on reducing the region’s environmental footprint by minimizing the amount of waste that must be landfilled through reduction, reuse, recycling, redesign, composting, and other actions.

The RDN was the first jurisdiction on Vancouver Island and one of several forward looking local governments in Canada and around the world to move beyond recycling and adopt a Zero Waste approach to eliminating waste.

To strength the RDN’s Zero Waste Strategy the updated Plan adopted the ultimate goal of Zero Waste, as defined by Zero Waste International Alliance:

“Zero Waste is a goal that is ethical, economical, efficient and visionary, to guide people in changing their lifestyles and practices to emulate sustainable natural cycles, where all discarded materials are designed to become resources for others to use.

Zero Waste means designing and managing products and processes to systematically avoid and eliminate the volume and toxicity of waste and materials, conserve and recover all resources, and not burn or bury them.

Implementing Zero Waste will eliminate all discharges to land, water or air that are a threat to planetary, human, animal or plant health.”



SETTING A TARGET **PROPOSED:** Set a target to reduce the amount of waste going to the landfill by 90% by the year 2027, equal to an average per person disposal of 109 kg per year.

In the previous plan, the community lent its support to Zero Waste as the ultimate waste reduction goal and reducing waste going to landfill by 70% as the milestone. Currently we are at 68% which is equal to landfilling an average of 347 kg per person per year. We know that 90% is a big number but we believe that with the combination of programs proposed in this draft plan and your continued support, we can all make this work.

PROGRESS ON THE ROAD TO ZERO WASTE

The RDN and its member municipalities, residents and businesses have led the way in reducing the amount of garbage that goes to landfill. In 1991, we introduced Canada's first user pay residential garbage collection system. Since then, the RDN and its partners have expanded curbside recycling programs, banned easily recycleable material from the landfill promoted composting throughout the region. The Zero Waste Strategy outlines how the RDN plans to continue reducing the quantity of waste disposed. **The Zero Waste Strategy is organized into two sections:**

Ongoing Programs: programs that were part of the 2004 Zero Waste Plan, were implemented and continue to operate, including programs identified in the annual budget for 2017:

- School Education Program
- Zero Waste Promotion and Education
- Illegal Dumping Program
- Yard Waste Collection
- Recycling at RDN Disposal Facilities
- Residential Curbside Garbage, Recycling and Organics
- Disposal Bans
- WSML Technical Assistance
- Construction Demolition Diversion

New Programs (Implementation 2018-2021): programs that have new diversion potential that will be implemented in 2018-2021 upon adoption of this Plan:

- Expanded Zero Waste Education
- Expanded Multi-Family Diversion
- Expanded Industrial, Commercial and Industrial Diversion
- Expanded Construction and Demolition Diversion
- Non-Stewarded Household Hazardous Waste
- Mandatory Waste Source Separation
- Waste Hauler Licensing

Appendix 17: Comments received during consultation

Area	Date	Comment	RDN Response
Open house - Parksville	09/19/17	Glass collection should be supported to encourage glass use (better for environment). Plastic collection encourages more plastic use/consumption?	Glass is recyclable but not through the curbside program. You can take glass back to a depot to be recycled.
Open house - Parksville	09/19/17	Recycling not included in taxes and should be as there is no choice but to pay for curbside.	We have received supportive comments for plans proposal and our current program which is user pay system.
Open house - Parksville	09/19/17	There should be a large item pick up.	There are large item pickups available through local companies. The RDN could provide the service but it would be a significant increase the utility fee. Would you be willing to pay for?
Open house - Parksville	09/19/17	Multi Family complexes, how do they pay into the zero waste programs?	Multifamily buildings just like all others, pay property tax, which is assessed based on the value of land and improvements. The current SWMP programs are funding partially through taxation and tipping fees.
Open house - Parksville	09/19/17	Why don't all restaurants and businesses have green bins?	The proposed plan is trying to do exactly that. If we make it financially attractive to divert, businesses will do it.
Open house - Parksville	09/19/17	How do we make it financially attractive to divert?	We can do this through the combination of source Separation and waste hauler licensing. Make diversion profitable for businesses. The more you divert, the less you have to pay because there is no disposal levy on diverted material. This will increase the competition for providing services bringing down costs and improving service provisions for customers. In the end, people will have more choices and lower prices when it comes to recycling.
Open house - Parksville	09/19/17	We need to reduce the amount of packaging we have. Consumer demand can influence manufacturers and suppliers. We contributed tonight by having bottled water. Having a water cooler and paper cups would have been a better option.	Thank you for that suggestion. We will make sure we do not have bottled water and use reusable cups at our other meetings.
Open house - Parksville	09/19/17	How does the RDN stack up worldwide? Compared to countries like Switzerland?	The RDN has done a remarkable job at diverting. Our waste per capita that is landfilled and diverted is some of the best in the world.

Open house - Parksville	09/19/17	Curbside Recycling is easy to contaminate and hide the wrong material.	That is why we do not accept recycling in single use bags. All recycling must be loose in a container or reusable bag so that contamination is easy to spot.
Open house - Parksville	09/19/17	How to get M-F composting and recycling?	Education, encourage waste haulers licensing & incentive. The more separated materials collected will usually increase the cost. So waste hauler licensing will help continue diverting waste.
Open house - Parksville	09/19/17	Differential fee for reduced waste set out?	We do not currently have this and it is not including in the proposed plan.
Open house - Parksville	09/19/17	Use/Promote Social media/sharing sites, freecycle etc. or curb free days as thrift stores are overloaded with "non-saleables"?	
Open House - Bowser	10/02/17	RDN should provide public garbage bins where illegal dumping occurs.	The RDN does not provide garbage bins at known illegal dumping sites because it would attract more people to dump there. Having garbage bins would also deter people from coming to the Landfill or transfer station to get of their waste and would lead to a massive cost, likely larger than illegal dumping clean up would.
Open House - Bowser	10/02/17	Why don't we have stagnant fees?	We do have a standalone mandatory fee for our curbside service. For the rest of the programs that we offer it would be extremely difficult to come up with a number that could be equally and fairly applied to everyone, from single family, multifamily and commercial buildings.
Open House - Bowser	10/02/17	Is there a profit made from the food waste program or the recycling program?	From recycling the RDN receives around one million dollars a year. That money is used to offset the utility fee and to help cover other costs of the program. It costs the RDN money to process the material collected as part of the food waste program. Diversion costs money but it does have economic benefits as well as environmental and social benefits.
Open House - Bowser	10/02/17	Where do compostables go?	Compostable/food waste collected at the curb go the Nanaimo Organic Waste. NOW did upgrades to the facility but there is a need for more as the current product still has a lot of plastic bits. There is currently a proposal to do \$3.5 million upgrade which will create a really great product.

Open House - Bowser	10/02/17	How does the curbside recycling work?	The provincial government regulated printed paper and packaging, making the producers responsible for the end of life of this material. The producers of this material came together to create MMBC, now RecycleBC, and partnered with groups (depots, local governments, private collectors) that were already collecting this material.
Open House - Bowser	10/02/17	What about medical patients? How do I get rid of all of my medical waste?	The plastic that is associated with medical waste is made of multiple kinds of plastic which is very hard to separate and recycle so that material should go into your garbage.
Open House - Bowser	10/02/17	If the City of Nanaimo covers the cost of extra garbage related to medical waste, the RDN should to.	This does come up from time to time and has gone to our Board a few times but at this time they have chosen to not cover the cost of extra garbage from medical waste.
Open House - Bowser	10/02/17	I have a lot of different things that I need to get rid of, are you suggesting that I find a separate location for each thing?	Right now you play the same and a hauler you might hire. So when they come to your home or if you drop material off at their facility the cost to you is very similar to bringing it to the landfill. In the future, if we are able to license waste haulers then we can give them fee differential when they drop off material that is free of recyclables. This will bring their costs down, bring down prices, increase diversion, increase the amount of services that are offered to residents and make recycling easier for residents as well.
Open House - Bowser	10/02/17	Has anyone been prosecuted for illegal dumping?	Yes
Open House - Bowser	10/02/17	Why not offer bulk pick up or free days?	Cost is very high and it encourages people to keep their waste until the free day leading to unsightly premises and a very busy and a chaotic landfill.
Open House - Bowser	10/02/17	Why does the RDN not provide services in Qualicum?	Qualicum provides garbage collection with their own staff. RDN provides recycling and green bin pick up.
Open House - Lantzville	10/05/17	Do you think you could reach 90% diversion target?	It is ambitious, but yes. Waste source separation and other proposed programs will motivate waste reduction.
Open House - Lantzville	10/05/17	are you allowed to put grass clipping mixed into your food waste	Yes, the City of Nanaimo curbside program will allow mixed yard waste with food waste at the curbside.
Open House - Lantzville	10/05/17	City of Nanaimo new Big Cans system, Will this increase the amount of garbage in our landfill?	It is possible, but we will see what happens and will learn from the City of Nanaimo.

Open House - Lantzville	10/05/17	Are zero waste programs different in Nanaimo?	No, City of Nanaimo only provides curbside service, the RDN does everything else solid waste related
Open House - Lantzville	10/05/17	How is recycling sorted?	Yellow bag and blue bin contents go to a facility in Vancouver shipped to facility in lower mainland and sorted by machine and people.
Open House - Nanoose	09/21/17	Waste System is very Complicated. Too many different places to take different things that we want to dispose of properly.	Use our curbside app. You can search for an item and it will tell you the closest place you can take it to. Most depots take a large variety of material.
Open House - Nanoose	09/21/17	How confident are we with the new diversion % are we double counting.	We use waste composition studies to determine what specific material is coming to the landfill. Our WSMLs report to us what material is diverted. 90% maybe not done by the RDN but can happen through private industry. Plan can drive that diversion through waste haulers. Not anticipating changes to residential curbside. Gains to diversion will come from manufacturers, ICI, etc.
Open House - Nanoose	09/21/17	Plan seems to target municipalities for gains? Will the plan make it easier for residents? Drop off areas at facilities so items can be diverted for re-use.	This was considered at RSWAC. Cost and space limitations the RDN would be competing with the private sector. Can be done to create convenience at a cost. At CRTS everything gets moved out and it costs. Prefer not to handle it at all. We charge for crossing the scale. Cost to create and operate a "share shed" not supported by RSWAC
Open House - Nanoose	09/21/17	Making alternative disposal options and locations easy to find get an "APP" Promote and ensure it is available on the website and not just mobile devices.	We have one called "RDN Curbside".
Open House - Nanoose	09/21/17	How do we intend to not have those who are recycling pay more? Achieve better diversion % on the back of the taxpayer	Tax or tip fee the Lion's share is paid by the waste generator, meaning it is a user pay. If waste flows through waste hauler it provides a business opportunity. Minimal tax impact but will put the burden on person/business where the waste is generated.
Open House - Nanoose	09/21/17	How will the Plan account for a longer landfill life?	Differing replacement cost can be calculated but plan does not account for the better diversion. If we are successful it extends the landfill 10-15 years in turn saving money.
Open House - Nanoose	09/21/17	How would we ensure waste from outside the RDN meets our requirements	There is no out of district waste accepted. Waste hauler licensing can influence behaviors beyond our borders. It will help bring material that is leaving our district to come back.

Open House - Nanoose	09/21/17	Is the residential sector the best it is going to get?	Can be better if we promote more diversion and create private sector competition.
Open House - Nanoose	09/21/17	What is the benefit to Nanoose residents	Community (RDN) diverts more, grows private sector economy, benefits environment. Mostly paid by generator vs taxes, paying for the RDN to provide increased services
Open House - Nanoose	09/21/17	Need to recognize generational differences in how we message. Apps vs Newsletters. But consumer society (younger people) may not link consuming with managing waste. Easier to purchase online which increases packaging.	This is something that we are aware of. Lack of turnout because 40% of Nanoose blocks bulk mail. Inability to email blast due to privacy.
Open House - Gabriola	10/11/17	Why is the RDN not picking up QB garbage?	This is just the way the program is set up. The waste still comes to the landfill.
Open House - Gabriola	10/11/17	Large property with waste in their yard, what do you do?	You would need to contact the MOE or bylaws for an unsightly premise.
Open House - Gabriola	10/11/17	What is the strategy to deal with hoarders?	Talk to your local representative and Bylaws to come to check out and if an unsightly premise then Bylaws will enforce.
Open House - Gabriola	10/11/17	For multifamily and commercial sector, if waste source separation says they have multiple bins, can dispose of waste themselves or do they need to hire a firm to do so?	Either way. Most hire a company to take away waste but they can choose how to deal their waste. We want to be as little invasive as possible.
Open House - Gabriola	10/11/17	Why is Waste going to Oregon?	2013 our fee went up so it was cheaper to send to the US.
Open House - Gabriola	10/11/17	How much does GIRO divert?	GIRO is part of all EPR products. With these they probably divert very small amount of waste compared to the rest of the entire region.
Open House - Gabriola	10/11/17	Does waste source separation mean subsidized waste for companies?	Not quite. We cover our cost still with incentive we just make less directly. The industry puts more money into recycling so it's an incentive not a subsidy.
Open House - Gabriola	10/11/17	Why is there nothing about telling the industry to produce less waste?	This is outside of our authority as a regional district.
Open House - Gabriola	10/11/17	Where does Styrofoam go?	Most depot take back for free recycling, not GIRO.
Open House - Gabriola	10/11/17	Does this plan change curbside?	No. these programs are in addition to curbside.

Open House - Gabriola	10/11/17	Are there proposal for energy generation, is that still going through?	No, there was opposition from the community.
Open House - Gabriola	10/11/17	Will this plan make fees go up for empty land?	There is no utility fee, but you still pay property tax.
Open House - Gabriola	10/11/17	Why doesn't the RDN do collection from commercial sector? Wouldn't it be cheaper?	Businesses pay taxes and provide service. Government consume tax and provide service. Labor is cost of doing business. Business are more flexible, it allows them to respond to market better for it.
Open House - Gabriola	10/11/17	Vancouver landfill has a store, RDN does not. Why not?	We looked at share shed, would cost around \$300,000 to operate and it will pull products away from for profit and nonprofit businesses.
Open House - Gabriola	10/11/17	Zero Waste education, what do you talk about?	Contract with the NRE to provide this service.
Open House - Gabriola	10/11/17	Can you stop plastic bags at stores?	No. Local Governments can't but we advocate for it.
Open House - Extension	10/16/17	Why are we going to 90% if we are so good?	Feedback from RSWAC, desire for higher levels of diversion.
Open House - Extension	10/16/17	Will multifamily diversion result in fining people that don't recycle?	No we don't want to fine people directly. To get to 90% diversion, it's not just household waste that needs to be diverted, it's all waste generated in the region.
Open House - Extension	10/16/17	Will City of Nanaimo be involved with stopping illegal dumping?	We are not sure what they do directly other than cleanups, but they likely do something.
Open House - Extension	10/16/17	Have people been prosecuted for illegal dumping?	Prosecution rate for illegal dumping is low but we try. It is difficult to prosecute illegal dumping as it is hard to prove
Open House - Extension	10/16/17	How much illegal dumping is construction waste?	A decent amount, but not just that, that there is also a lot of yard waste and material that can actually be recycling for free at the depot.
Open House - Extension	10/16/17	Why not charge on sheets of commercial construction material and that can be revenue used to bring cost of dumping down.	This is not something we have the authority to do that would be in the authority of the province.
Open House - Extension	10/16/17	So it's not big businesses dumping drywall its small business or DIY?	Honestly construction dumping is not a big issue.
Open House - Extension	10/16/17	Can you publicize your phone number so people that come across illegal dumping can call you?	We can have the RAPP line on our next newsletter, along with what info to take down to report.

Open House - Extension	10/16/17	How long does the RAPP line take?	They have the ability to come check out an illegal dump site faster than our Bylaws department would.
Open House - Extension	10/16/17	Who was on the advisory committee?	RSWAC members are community, industry, not for profit, first nations, local municipal partners, island health and MoE.
Open House - Extension	10/16/17	Can't make recycling harder/complicated for people that don't have time.	The proposed options in the plan will make actually make recycling easier and cheaper.
Open House - Extension	10/16/17	What do waste haulers think about licensing?	From what we have heard from the waste industry, they do not like the idea of being licensed, but they do support other parts of the waste hauler licensing.
Open House - Extension	10/16/17	Citizens are already doing a lot for recycling	Yes they are. That is why we have such a high diversion rate now.
Open House - Extension	10/16/17	Would licensing haulers stop curbside collection?	No, we are not planning to stop curbside pickup.
Open House - Extension	10/16/17	What types of products would get zero waste funding?	Only item that are recyclable but are not commercially viable, this like cigarette butts or textiles etc.
Open House - Extension	10/16/17	When you say multifamily, do you mean the City or the RDN?	The plan would apply to the entire region that includes the City of Nanaimo and all of the rest of the RDN.
Open House - Extension	10/16/17	How do you enforce mandatory source separation?	We would create a bylaw that says everyone has to have three bins. If they don't, they would be fined.
Open House - Extension	10/16/17	Is the waste hauler licensing anywhere else in the world?	Yes, Metro Vancouver, not all economic model
Open House - Extension	10/16/17	ICI management is for what?	Education and enforcement of old programs
Open House - Extension	10/16/17	Does everyone pay the same tax rate?	No, commercial rates are higher
Open House - Extension	10/16/17	We don't want a landfill in Area C !!	
Open House - Qualicum	10/23/17	What does 68% diversion include?	It's all waste in the community. Single family, multifamily and commercial.
Open House - Qualicum	10/23/17	Cooking oil, how do I dispose of it?	Don't know off hand but you can look on the RDN curbside app and use the "what goes where" feature to find out what to do with cooking oil.
Open House - Qualicum	10/23/17	What happens to hospital waste?	Most hospital waste is regular waste so it's taken by a commercial contractor. Bio medical waste used to be burned at each hospital and is now it is sent to Alberta for proper incineration.

Open House - Qualicum	10/23/17	I don't put weeds in green bin because the company I bought compost from had weeds in it.	That's a good idea. The process should kill the weed seed. Not sure why it didn't. We are looking to update the facility with a company that has built facilities like this all over the world.
Open House - Qualicum	10/23/17	What about PCB's?	We don't deal with many items if any with PCB's. Haven't been manufactures in 20+ years.
Open House - Qualicum	10/23/17	Do you include enviro cost of fuel?	No
Open House - Qualicum	10/23/17	Can we have them do something about the amount of fuel and enviro cost?	No, we can't make them, but we can make diversion more profitable.
Open House - Qualicum	10/23/17	Have you figured out how to deal with fabrics?	Yes and no. if we are able to consolidate them, it makes it profitable for some to recycle and avoid disposal levy. We want to put systems in place to make recycling easy & profitable.
Open House - Qualicum	10/23/17	Is it private companies that sell recyclable commodity?	No, private industry does. Curbside is done with stewardship group.
Open House - Qualicum	10/23/17	How do we get rid of plastics? What happens with those plastic bags?	Recycled
Open House - Qualicum	10/23/17	Then why do we have plastic in the Ocean then?	Doesn't all come from plastic bags. Comes from clothes and other places around the world that do not have the same collection systems as we do. We want better systems in place to keep these products in circulations.
Open House - Qualicum	10/23/17	How do paper bags work into conversations around plastic bags?	Depends on the different cycle analysis that you read. I am unsure of the right answer.
Open House - Qualicum	10/23/17	K-cups, paper cups & Yogurt cups. Why aren't manufacturers having to show how they recycling those items?	Regional Districts cannot force companies to do this. That is a provincial/Federal issue.
Open House - Qualicum	10/23/17	How do we know that the recycle fee on items goes to recycling the item?	The fees go to a not for Profit that submits an annual report to the MOE that has been audited by a third party.
Open House - Qualicum	10/23/17	Not many people here know about EPR or other thing you are talking about. How do we do this better?	We have looked at adult education, and we are hoping to include this in the plan.
Open House - Qualicum	10/23/17	Why don't we coordinate across provinces?	If we make our system better by changing the design, make changes for diversion. Overall we are working towards this, but changes are small.

Open House - Qualicum	10/23/17	How is waste measured?	By weight.
Open House - Qualicum	10/23/17	Asphalt shingles, are they recycled?	Mostly landfilled, but it can be recycled.
Open House - Qualicum	10/23/17	How much of our waste goes to the landfill?	12,000 tonnes of commercial waste goes to the US rest comes to us.
Open House - Qualicum	10/23/17	Who picks up from commercial facilities?	Whomever they contract with.
Open House - Qualicum	10/23/17	Who is in charge of administration with the landfill?	The province regulates and RDN administrators.
Open House - Qualicum	10/23/17	All you have talked about is commercial? Why do I need to pay the bill?	We grow economy, business grows, more services. Businesses also pay more taxes as diversion costs money.
Open House - Qualicum	10/23/17	We should include glass pickup in curbside	We looked at, it would be a separate truck at roughly \$13 a year added onto curbside utility fee for each account for pick up every few months. Committee didn't go for it.
Open House - Qualicum	10/23/17	Yard waste pick up, we should have it I would pay.	
Open House - Qualicum	10/23/17	I don't know if I can support this plan. I would rather pay \$20 for yard waste pick up rather than what you have presented.	
Open House - Nanaimo	10/04/17	MMBC has led to less material being collected. How does that work for multifamily?	We are not enforcing right now. There is no fine for not using. But when people pay for the service they use it, as we see in single family.
Open House - Nanaimo	10/04/17	Cowichan Valley program, they have their own recycling center. they differ, no landfill	True, and they have higher cost afterwards because they ship their waste to US.
Open House - Nanaimo	10/04/17	How do you break out costs when there is so much variation?	We do basic services & even out, not exact.
Open House - Nanaimo	10/04/17	Are you saying all Communities are the same in the RDN?	For this poster yes
Open House - Nanaimo	10/04/17	How much money do you get from MMBC	we get 1 million
Open House - Nanaimo	10/04/17	For the Contamination rate, we have to have low number otherwise they will stop giving us money and possible fine us. Is this True?	It's not likely they will stop taking material or fine us as long as we are working with them to reduce contamination

Open House - Nanaimo	10/04/17	Is there gas collection at the landfill for energy?	Yes
Open House - Nanaimo	10/04/17	If you reduce tip fee, how do costs and revenue change?	If we pay with taxation, cost are built into waste licensing tax rate. Tip fee reduction from revenue is accounted for.
Open House - Nanaimo	10/04/17	What is happening with illegal dumping?	Working on it. We fund clean ups, waving tipping fees for community clean up. We have less illegal dumping now than we used to. When there is a program change there is a bump in the amount of illegal dumping and then the levels return to normal.
Open House - Nanaimo	10/04/17	Automatic trucks, we could weigh how much material goes to curb? Why not do that?	From CON - legally, we are not allowed to weigh and change fee you pay. May consider CON to bill by participation. People will have bigger bins with automation so if they put their material out less then the will be billed less but would need council approval.
Open House - Nanaimo	10/04/17	can you make stores & business reduce their packaging?	No we cant, we don't have the authority to and its hard to make large companies change. We do advocate and EPR programs like MMBC work towards this kind of reduction.
Open House - Nanaimo	10/04/17	For glass & other material being recycled, is it actually?	EPR programs in BC are highly regulated and report to the MOE annually with an audited report.
Open House - Nanaimo	10/04/17	Can we force companies to use decomposable bags?	No we cant regulate products as Regional Districts.
Open House - Nanaimo	10/04/17	How do we work towards Zero Waste as residents?	Use your current programs for effectively. There are still blue box recyclables and food waste that goes into your garbage that shouldn't.
District of Lantzville	01/10/18	Are there any politicians in the advisory group?	No, all supported by public reps.
District of Lantzville	01/10/18	How will this extend the longevity of the landfill?	Add ~15 years.
District of Lantzville	01/10/18	What is the curbside collection operations plan?	Industry is moving to automatic systems to reduce injuries, but that leads to increases in contamination.
District of Lantzville	01/10/18	Narrow roadways may not work for garbage trucks that need to take up two lanes; also, our area residents may have issues with rolling bins up and down steep driveways	There may not be enough upside; we will produce something that works for the masses.
District of Lantzville Staff	01/10/18	Haulers will not want to be licenses	Haulers will save a lot with the introduction of levies.

District of Lantzville Staff	01/10/18	Longer term might not be as strategic for haulers, but better in the short term	The haulers will see a reduced cost immediately, and shift cost to the industry and away from us.
District of Lantzville Staff	01/10/18	How to pay for the differences with the new SWMP?	Bumping up tipping fees, but not high enough to give incentive for users to go to other areas; also taxation, new Zero Waste is \$4.10 plus ongoing \$3.04 per \$100,000 property assessment.
District of Lantzville Staff	01/10/18	When will the increases affect the District of Lantzville?	Currently we are wrapping up the consultation process; all in all, the majority of people agree with the increases in cost, even the waste industry mostly agrees.
District of Lantzville Staff	01/10/18	What would the levy [to licensed haulers] cost?	It could be the same across the board, or it could be per vehicle.
District of Lantzville Staff	01/10/18	Lantzville contracts to the RDN for collection. What would be the cost increases for hauling? When would the costs transfer over to curbside collection?	We are aiming to report to the board in March or April. The MoE may take 6 months to approve, then we will begin to introduce programs. You'll have another year or two to work in the new costs and develop bylaws; but these times are ambitious, it may actually take 3-4 years.
District of Lantzville Staff	01/10/18	What is happening with the NRE? What is the City of Nanaimo saying?	The City is saying they don't have the jurisdiction. The NRE needs to vacate by March, and they own an existing lot adjacent to their current property. They do not have money to build a new building, and I cannot share the exact costs.
District of Lantzville Staff	01/10/18	They don't have to share money evenly to other depots?	The NRE recycles a lot of materials, which are mostly handled by other depots. A very small percentage of materials are not handled by other depots. Should residential taxpayers be responsible to pay for commercial material? Maybe a recycling incentive for specific hard-to-recycle materials will make it more viable for business to recycle at a lower cost
District of Lantzville Staff	01/10/18	My issue is that they are singling out one single spot, when there are other organizations/contractors trying to get into the system	It is a silent minority conversation; not sure where it is going to land.
District of Lantzville Staff	01/10/18	My opinion is that the public has no idea on how the actual process goes. There is a lack of information, other contractors do recycle. If they get backing, other business is done.	We are aiming to make the model profitable for other businesses to compete, and they cannot compete with free; cost differentials won't work if they are getting major subsidies.

District of Lantzville Staff	01/10/18	The problems [missed pickups] before Christmas with the snow storm, what was the issue there?	Cut to the chase: money. Same day service comes with a big cost, and the only way to catch up is to have more staff and more trucks. If we want them to be more available, they need to pay more to the contractor. We can work on our communications. We try to pick up over the next two days, and if missed, they can place double the materials on their next pickup.
District of Lantzville Staff	01/10/18	Why do we have more issues with snow that other areas with more severe weather? Is it an issue with the contractor?	The snow is different, the drivers are different, and the infrastructure is different. Emcon does not have the ability to respond to the snow on the roads, and trucks cannot travel on unplowed roads. The add-a-day system is much cheaper than a standard everyday system, but with statutory holidays and weather, pickup can take a longer amount of time. We bend over backwards to waive tipping fees or arrange pickup. We have an app to give information on missed routes. Also, the past two winters have been more severe weather than the past 10 years.
District of Lantzville Staff	01/10/18	How are you consulting the public at large?	[Other meeting member replied he saw advertising and flyers]. We hosted a public meeting and got three attendees. We also have a survey on our Get Involved website. We are doing surveys at the landfills and transfer stations.
District of Lantzville Staff	01/10/18	We should look to Nova Scotia for their model.	I will look it up.
SD 69 (Parksville Qualicum)	01/16/18	What about tackling illegal dumping on private land (Island Timberlands)?	Forestry companies are responsive to illegal dumping pickups and volunteer groups.
SD 69 (Parksville Qualicum)	01/16/18	Regarding hauler and materials levies, would you impose the levy on haulers going to other sources?	To everybody; we do not have the costs available on this presentation's slides. If we impose the levy and decrease tipping fees, we can make it more competitive to dispose of materials here, and it decodes more profitable to divert materials. Price differential is not as much, for example take 1800GOTJUNK being able to have incentive to dismantle and recycle components of a couch, as opposed to just disposing it.
SD 69 (Parksville Qualicum)	01/16/18	RDN workers are unionized. Will these haulers be unionized?	It is up to them, changing economics will drive a new behavior.

SD 69 (Parksville Qualicum)	01/16/18	Myself and others and throwing soft plastic and bubble wrap in the garbage.	NRE takes bubble wrap.
SD 69 (Parksville Qualicum)	01/16/18	We've been struggling to put in ZW at our school. If it is not picked up every day, it attract rodents or other animals. If it were your problem, how would you deal with it? Is it a container or pickup frequency problem?	The bear problem is already there. I worked in the MoE for 30 years, and know if you want success, you remove the attractant. As soon as they are successful, they will come back; they won't come back if they aren't successful. It is a challenge, but you don't necessarily need to change pickup frequencies. Additionally, because of the organics ban, I now have less of an odor with my garbage.
SD 69 (Parksville Qualicum)	01/16/18	To implement this, we need to take garbage out of classrooms, put in the hallways, then separate materials and put into separate bins outside. Our weekly pickups would be massive, and would create three different pickups instead of one.	You are obviously far into the process of implementing zero waste and source separation programs. Implementing levies and incentives will make the waste haulers offer more viable systems for collecting materials, such as better containers. It makes the system more profitable for them to do it, and will take the industry a few years to respond.
SD 69 (Parksville Qualicum)	01/16/18	What are the incentives for the response in house?	I will get into the costs later. This plan is not built upon us providing additional funds to require recycling to happen, it is about driving the economic model to make it more profitable to divert materials.
SD 69 (Parksville Qualicum)	01/16/18	With carbon neutral programming, what is the direct benefit?	We do get funds to carbon neutral benefit, if we can expand more into the ICI sector, we as the RDN don't get benefits, but the ICI sector (e.g. schools) should get increased benefits.
SD 69 (Parksville Qualicum)	01/16/18	What about waste hauler licensing? Does this make the resident pay?	Yes. This plan leverages the industry to provide services, but that comes at a cost.
SD 69 (Parksville Qualicum)	01/16/18	So the resident subsidizes the industry? Is this the RDN only? Running figures for the RDN providing all the service?	It had no interest by RSWAC.
SD 69 (Parksville Qualicum)	01/16/18	What would it cost us if we had to close the dump and start a new one? Increasing the lifeline of the landfill would cost what? The new Campbell River landfill cost billions.	The easiest comparative is shipping the garbage down to another jurisdiction, and a per tonne cost. Compared to the cost of us siting and making a facility in the district, it would be tremendously more expensive than that. This will allow us to avoid having to do that.
SD 69 (Parksville Qualicum)	01/16/18	The constituents are still paying \$140 per year.	If we get more business, we get more diversion.

SD 69 (Parksville Qualicum)	01/16/18	The school is a non-profit, we cannot pass the cost on to anyone, and we get the same amount of dollars from the taxpayer. As a larger producer of waste, where can we find the money?	To what extent would we take public money, taxes to apply to incentive goes to ICI. It is possible. This is built on providing incentive for waste haulers to divert. Definitely we need to make a note that this is a major concern for yourself and others in your sector.
SD 69 (Parksville Qualicum)	01/16/18	Regarding the incentive, what about money to ICI programs?	This was tried 30 years ago.
SD 69 (Parksville Qualicum)	01/16/18	That's where school trustees come in.	Single bin goes to multiple bins.
SD 69 (Parksville Qualicum)	01/16/18	What about waste hauling, and what do we do about that?	Licensing will reduce the cost by about 20%. Competition will make the waste haulers compete for hauling, will increase diversion, and make better services for customers.
SD 69 (Parksville Qualicum)	01/16/18	What about a take-in, take-out program; you bring a lunch to school, bring garbage back home. Some schools have made it happen.	That's the sort of thing we would have better ability to introduce, seeing the money targeted to education, is much more likely than us cutting you a cheque.
SD 69 (Parksville Qualicum)	01/16/18	Is there a timeline?	So far all in all we have pretty good support, with some small things people want to see differently. What we have seen so far, things will not change in a significant way. If nothing changes we are hopefully to propose to the board in March, submit to the MoE, hope for 6 months turn around. Some might get worked into the 2019 budget. A summary of programs slide the implementation year, and mandatory waste source separation would be in 2020.
SD 69 (Parksville Qualicum)	01/16/18	What about Vancouver?	Vancouver has different powers with their programming. It would put us on par with the City. It's good for the industry, not much of a collective voice, not indifferent from what we have heard. The general sentiment says it is a realistic thing, to keep it out of the landfill.
SD 69 (Parksville Qualicum)	01/16/18	It is about how we will work together, we need to see some numbers for our end.	The competitive processes work, but like anything, it will be a balance of costs and services, and eliminate low cost disposal.
SD 69 (Parksville Qualicum)	01/16/18	How is the process with other councils?	We are going to do more consultation, and have already done many councils.

Horne Lake Strata	01/29/18	Re: HHW Currently we need to drive a long ways to dispose of a single item, how to make the materials more acceptable in different facilities? I do not want to be limited to drop off at a faraway facility.	One of the concerns with the items with labels removed and older items is that you have to be extremely cautious. The idea is to use contracted facilities so that people have the proper certifications to deal with the materials.
Horne Lake Strata	01/29/18	We want it to be simple and convenient.	Definitely. We want to get the material out of the homes and deal with it efficiently.
Horne Lake Strata	01/29/18	Where does the stuff end up?	There are a few facilities that currently accept HHW. If we get material at one of our facilities, we tell them to take it to TerraPure to make sure it is disposed of properly.
Horne Lake Strata	01/29/18	If this comes to our face, we really need to deal with it, and want a specialized program.	This will allow us to have contracted facilities and/or ability to get certified staff to attend to the sites, and will not result with having it in our waterways.
Horne Lake Strata	01/29/18	What comes to my mind is unmarked drywall. You will provide a container, and necessary wrapping, needed to deal with it and bring it to a centralized location.	You should be able to bring it here, but we can check in.
Horne Lake Strata	01/29/18	We are the guys with the back roads, and we do not want illegal dumping.	We are working on how to make it easy and get buy in. We are taking notes, which will inform the program.
Horne Lake Strata	01/29/18	Are we looking at having someone come in and going through all the garbage?	Maybe very far down the road. It will most likely look like someone spotting cardboard coming in a landfill load, and diverting that away.
Horne Lake Strata	01/29/18	Does the RDN collaborate with neighboring jurisdictions to stop illegal dumping and contamination of waste?	We collaborate with the neighboring districts. We are somewhat more advanced compared to the north or west because of more dense populations. We have chatted with them to get the support needed to follow through with the implementation of the program. What they are going to be offering is similar to what we have.
Horne Lake Strata	01/29/18	Comox is bringing some stuff down, transporting down to Nanaimo because they can't deal with it up there.	I am not sure of that, but we can get back to you. It could be local government or haulers finding cheaper disposal methods.
Horne Lake Strata	01/29/18	Are there currently contractors that pick up things like 6 yard bins of compost?	Yes, there are definitely haulers that do that. Most of the waste haulers provide these services. When this becomes the mandatory, the services are going to be more competitive and innovative.

Horne Lake Strata	01/29/18	Would the program consider doing pickup within curbside service within strata areas like Horne Lake?	We currently contract through Waste Connections, and service some single homes within a larger property; likely they would not collect from apartments and condos, but perhaps from a strata like yours.
Horne Lake Strata	01/29/18	We have separate dwellings with separate driveways. We do semiannual cleanups, and making more frequent but consolidated pickups.	It will make a more comprehensive commercial hauling ability. They can be more flexible with the pickups.
Horne Lake Strata	01/29/18	Your program for a buy in will be more likely to be the same if it is similar to the structure for single family pickup.	Yes that is a great point. By creating the model the hauler might be able to offer a similar service.
Horne Lake Strata	01/29/18	More costs to the buyer is less people wanting to support the program, dealing with all the bears and cougars, etc. People go to Horne Lake to have a more relaxing time, not be stressed out.	I completely understand what you are saying.
Horne Lake Strata	01/29/18	Is that what Alpine and DBL are doing currently?	In terms of what each facility does exactly, I don't know. There has been a bit of change in the how much material is being sent down to the US. The reduced tipping fees and disposal levies associated with being a licensed hauler would result is people getting a tipping fee, reporting how much garbage. Waste haulers are very innovative, we want to create a financial incentive to recycle more. Consolidated landfill load will cost way more than if you recycle and compost the other parts of that load.
Horne Lake Strata	01/29/18	It almost seems like that will be very hard to sort through and it will cause the haulers to need more facilities, we know the cost to the consumer is not going down, more time and money to divert all the material.	One of the things to keep in mind is the life of our landfill. The costs associated to having these programs. There is no way we are going to be able to site another landfill within the region.
Horne Lake Strata	01/29/18	One of the positive is the plastic bags are getting cut out.	When Recycle BC came aboard we can take more things to the depot and put more things into our blue bags. Everyone sees the positive things that would come out of the model.

Horne Lake Strata	01/29/18	So far we are looking at the landfill, dumping it on the ocean floor, blaming people on things that we have done ourselves.	Another side to this is the advocacy side, working with industry to reduce the packaging, making it to the point where we are doing more of a zero waste lifestyle, really tangible things we can do is like this; the end goal of this is to implement the program and see what the result off it is when the landfill closes in. There would be a lot more understanding of what is happening. As an RDN these are things that we can do.
Horne Lake Strata	01/29/18	Why doesn't the regional district have a free store in the landfill/ CRTS?	That was one of the initiatives that was put forward, we looked into the cost of doing that, the cost of employees, the cost of adjusting the layout, we do not want to compete with businesses that are built around the donating and circulation of the material, you are supporting the local economy and places that support taxes.
Horne Lake Strata	01/29/18	Why are you not looking at using an incinerator, for good quality things like textiles?	The advisory committee was dead set against using an incinerator. But again, we are taking notes and including them in the SWMP.
Horne Lake Strata	01/29/18	What about recycling the liquid waste from the landfill?	We have a water filtration system, methane collection system, and more.
Horne Lake Strata	01/29/18	Is this program based on anything that is successful?	We looked around and nothing is in place. Metro Vancouver is in the works of proposing the program. We want to use the program to incentivize haulers.
Horne Lake Strata	01/29/18	We think about our life at the lake, we have bear proof bins, it is a real nightmare, looking at specific materials, and we are plugged into the new world.	The hope is with the waste hauler licensing, the trickle down will make it easier for MF customers to recycling because it is more profitable for the haulers to implement.
Horne Lake Strata	01/29/18	We want to create the system for people to recycle, the problem for the plan is that there is no preparation for the plan, take it away and say where does it go, add 6 more bins, does it pass the responsibility to the residents or does it actually make it a, is it a simple build it or it will come.	We have a provincial program that keeps the material in BC, we are very lucky that these programs will fit into the existing infrastructure.
Horne Lake Strata	01/29/18	What our recyclables are easily matched to the blue bin program, the change will be the program. The solution will be the receiving facility, but we're worried about	We will look into odours and containers, the residents can find a solution that works best for your complex.

		the attractants towards bears and other critters.	
Horne Lake Strata	01/29/18	Can you break the cost for houses?	We are not at the stage of exactly about how we are going to fund this, but were discussing the options and the relative cost differences.
Horne Lake Strata	01/29/18	[Questions about how the costs have been broken down]	Our planner sat down with finance to figure it out, it is not something I know the answer to right now.
Horne Lake Strata	01/29/18	One of the things if funding by taxes per house value would be on the tax bill.	Yes, it is the total cost, these are the estimated costs for what we think. We can't just come up with the exact costs, creating a bylaw to ensure that the costs are enforceable.
Horne Lake Strata	01/29/18	Make Jimmy Pattison pay for the plastic bag	This is what the extended producer responsibility program is about, like the environmental fee for an electronic toothbrush going to the non-profit program.
Horne Lake Strata	01/29/18	The thing with the property tax, people with vacation rates would be paying for it twice; if it's a person creating garbage they are only creating it at one place.	We will have a conversation later about the funding strategy.
Horne Lake Strata	01/29/18	So this cost is for the utility fee, but the tipping fee and the waste hauling fee will also increase. We will have less garbage bins that will have to be picked up every week. The costs might equalize, and I think our people might be fine with it.	It does change the costs, and a lot of the time the costs even out because you have less garbage that you need to pay the tipping fee on. It is the changing tide and what people are used to.
Horne Lake Strata	01/29/18	What are the next steps?	All this information is consolidated, goes the advisory committee, goes to the board, and goes to the Ministry of Environment.
Horne Lake Strata	01/29/18	One of my largest outputs is newspaper, which to me is a burnable.	I think in that situation it would very hard for the local government to come forward to suggest the burning of the material. When Metro Vancouver was discussing a waste to energy facility they couldn't source a spot for it.
Horne Lake Strata	01/29/18	Also with waste water they are looking for the facilities to compost the material.	The current compost facility is Nanaimo Organic Waste in Duke Point.

Horne Lake Strata	01/29/18	Why bring it there after coming here?	The reason why they are transferred over, having multiple trucks makes sense to consolidate it here then bring it down, along with yard waste, providing. If you can support a local business take it across the street.
SD 68 (Nanaimo Ladysmith)	2/5/18	What is happening with China?	We are fairly insulated from the issues with the recycling program under Recycle BC.
SD 68 (Nanaimo Ladysmith)	2/5/18	Per capita disposal: why are our rates better?	Access to EPR programs and level of effort and consciousness in BC is a lot higher.
SD 68 (Nanaimo Ladysmith)	2/5/18	It's similar to going into the states and seeing indoor smoking, we can do better	Some say we should do better, some say we are doing enough already.
SD 68 (Nanaimo Ladysmith)	2/5/18	We still see a lot of illegal dumping up in the mountains.	We put a surcharge on mattresses, and in the next 6 months we see more dumping of mattresses.
SD 68 (Nanaimo Ladysmith)	2/5/18	Do you catch people?	More so at the MoE.
SD 68 (Nanaimo Ladysmith)	2/5/18	You're talking about the hauling of construction waste from Harewood School and Wellington School that went to Chilliwack and Port Alberni?	People working with budgets will choose the lowest cost options.
SD 68 (Nanaimo Ladysmith)	2/5/18	We have garbage, recycling, green bin and oil bins in place at the high schools.	Adding in competition hopefully you will see better services at lower cost.
SD 68 (Nanaimo Ladysmith)	2/5/18	Putting in the system, but effort needs to be in school education and compliance.	We will touch on education later, when levies and reduced tipping fees go in place, waste haulers will have more incentive to put education systems in place.
SD 68 (Nanaimo Ladysmith)	2/5/18	RDN and the City have different systems in place?	Accepted materials are the same, but the system change is the difference.
SD 68 (Nanaimo Ladysmith)	2/5/18	We are still separating the fibres and containers.	It actually all goes into one compartment in the trucks, mostly because we are not trying to confuse people, and letting them know one by one instead of appearing that we are changing the program.
SD 68 (Nanaimo Ladysmith)	2/5/18	Would Wellington school still pay the levy?	Yes they would either disposing in town or not.

SD 68 (Nanaimo Ladysmith)	2/5/18	How enforceable is this?	Enforceable if they are licensed haulers, and will become licensed if they can reduced tipping fees. For large companies it will not be worth it to not get licensed.
SD 68 (Nanaimo Ladysmith)	2/5/18	Where does the recycling go to? Some people say Duke Pt is expensive and bring to the place on the Malahat.	People think that recycling is cheap and creates money, but it isn't. It costs money. There are a few specific commodities but for the most part does not create money. The stewardship programs create a model to recycle the material, and also create jobs and processes through the programs. MoE did a study a few years ago at the GDP through recycling and jobs – higher diversion creates more wealth.
SD 68 (Nanaimo Ladysmith)	2/5/18	I think the plan is excellent, the social responsibility, we are ahead of the rest of the country.	Not about the government creating more services, it is about creating a model for businesses to divert more waste.
SD 68 (Nanaimo Ladysmith)	2/5/18	When you go to the grocery store, packaging is too confusing.	I don't think we will go back from a consumer society. We can educate to make some tweaks. If we can change the system to get the resources back into a circular economy to repurpose the TV. The problem would be if it goes back into the landfill.
SD 68 (Nanaimo Ladysmith)	2/5/18	Then there is the argument that as a taxpayer, my bill just went up 20%, the budget is always going 5, 7% up. How long can it go up before the resident does not support?	If cost is important, we are doing pretty darn well. We have had feedback from this community on having a high desire to divert waste.
SD 68 (Nanaimo Ladysmith)	2/5/18	I just read a couple articles about the cities programs. Not exactly popular.	It is hard to provide services for the masses.
SD 68 (Nanaimo Ladysmith)	2/5/18	The RDN launched the recycling program, then go financing to launch the green bin program, it that now paid off?	Yes, it is definitely paid off. There are a couple different models to fund the bins. You can charge the taxpayer, you can create a fund, etc.
SD 68 (Nanaimo Ladysmith)	2/5/18	When are you going to launch it?	It's been a long 4 years. We are pretty much getting to the end. We have overall positive response, saying that is reasonable. Hoping to take to the board in May. We haven't heard anything significant to change, although it could. After board approval take it to the MoE for approval. A couple things that need support: mandatory source separation, waste hauler licensing need province support to be implemented. Then after MoE another couple years for bylaws and implementation.

SD 68 (Nanaimo Ladysmith)	2/5/18	We will just have to follow up with the changes. The biggest challenge will be getting education.	What we want to do is capitalize on the industries innovation.
SD 68 (Nanaimo Ladysmith)	2/5/18	Haarsma is keeping the system in place here, and they are sorting out the system from their end.	It will be much more worth their while to keep the material well separated at the source. They want to get good material.
SD 68 (Nanaimo Ladysmith)	2/5/18	The cheapest part is the green bin bags.	Right now I'm paying more to dispose of compost than to landfill.
SD 68 (Nanaimo Ladysmith)	2/5/18	The roll off bins are what costs us the most money. We can educate within our system to make it more efficient.	It is fabulous. A bunch of stuff that is in the plan will not make radical overnight changes, but it will be over the ten years of the plan being in place.
SD 68 (Nanaimo Ladysmith)	2/5/18	At this point are you still hauling over materials to the mainland, what about Church Road.	Depends on the material. Metal goes to Schnitzer. Plastics to Duke Point.
SD 68 (Nanaimo Ladysmith)	2/5/18	Isn't the landfill filling up?	Right now we are at 2040. A few things are changing: increasing population, looking at every nook and cranny. Burm/buttruss along Cedar Road, to protect the landfill in the case of an earthquake added about ten years of capacity. Try to be more conservative with the time range. If we are successful with the 90% we would maybe add another 10 years to the landfill.
SD 68 (Nanaimo Ladysmith)	2/5/18	Landfill gas energy production?	It would be worthwhile to clean the gas up, but to generate electricity it would be difficult to make worthwhile. Anything you do has a cost. Thing is finding the balance.
SD 68 (Nanaimo Ladysmith)	2/5/18	Can you let me know if we are on the right track? [stakeholder has presentation slides printed out with history of RDN/City bylaws and how the district has responded; compliance with organics ban from the landfill; consistency with school green clubs; best if we can be proactive with complying with the system, instead of being reactive]	We already have the bans in place. If we increased enforcement, we wouldn't increase diversion, it would just increase shipping emissions to other locations. A lot of the times fines do not change the effort, they just change the industry cost model "they can't police our customers". They are competing for low cost disposal. The system doesn't work. It is not an effective way to change behavior, by beating people into submission. We are as good as it gets in the world. Even if it's a bylaw, they will call around. Because it doesn't work. So we need to change the rules and change the game – incenting behavior.

SD 68 (Nanaimo Ladysmith)	2/5/18	People are in business in the first place for profit.	Yes, so our plans are to address this by creating a model.
SD 68 (Nanaimo Ladysmith)	2/5/18	For us its kids rotate that through the system with the process in mind.	To give an example, one waste hauler set up an eco-bag dispenser near the waste drop off. So the resident brings their waste down, and gets a new bag. Increased participation in the organics systems. I don't know what all the solutions will be, but the waste industry will come up with innovations to get customers to comply because it is worth their while. If we get all the stuff that's in the plan, we will gradually increase enforcement as we incentivize the industry. There will be someone that comes along that doesn't give a crap – that's who will get the fines for not following the organics bans.
SD 68 (Nanaimo Ladysmith)	2/5/18	We have been trying to take part, now they have committed. Buying bins, compostable bags. Setting standards across the schools.	The difference is to make mandatory source separation. The path you are already going down is going to be enforceable in the future, you would just be ahead of the curve in being compliant. You might even see their costs fall if you make the system work. You might not see them drop but you should not see them drop.
SD 68 (Nanaimo Ladysmith)	2/5/18	The challenge for us will be the education. Now I understand the overall system and proposal.	Now that we can have the conversation it helps create more understanding for why waste hauler licensing is worth the cost.
SD 68 (Nanaimo Ladysmith)	2/5/18	We should be leaders, we already have a progressive mindset. I am shocked it's still not happening.	So if you see this play out: for McDonalds, the waste haulers might create a system where someone helps going through disposal at the source. Landfill is still the cheapest option and now we are setting up a system.
SD 68 (Nanaimo Ladysmith)	2/5/18	Yes there has to be a financial incentive. But we have to be sustainable.	You can only educate someone so much. Money is a big driver. So many benefits overall to the community, economy.
SD 68 (Nanaimo Ladysmith)	2/5/18	Out of sight, out of mind. We want to make it more efficient and circular. If you produce something you should be responsible for the disposal.	Yes, we want to bring things back into the system.
Landfill Staff A	2/14/18	What does differential tipping fees mean?	Different prices for C&D/HHW waste
Landfill Staff A	2/14/18	Is the education hub the NRE?	It would be similar

Landfill Staff A	2/14/18	What would the rate be for the disposal levy/ reduced tipping fee?	Not sure yet, I will need to ask Larry. There is a big process before we can get to the fee details.
Landfill Staff A	2/14/18	What haulers aren't separating?	Many haulers just go for max. Profit.
Landfill Staff A	2/14/18	Is a bylaw the only way it is going to work? Because they come in mixed all the time.	The way we are hoping this will work will be for the haulers to see that it will be cheaper to recycle, then make it easier for the ICI/MF to recycle. Bring costs into it to make it cheaper to recycle, then have an innovative system.
Landfill Staff A	2/14/18	They could end up transferring costs onto the residents.	But it would make it cheaper to recycle/compost, would make the cost only for the garbage
Landfill Staff A	2/14/18	Would have to pay for two more dumpsters, two more haulers.	It will take time to put in the systems. Landfill is always going to be the cheapest option.
Landfill Staff A	2/14/18	Why not a set up like Bings Creek at the landfill?	The model difference, the RDN does not want to compete with the businesses. Make it easier for people to recycle.
Landfill Staff A	2/14/18	People are lazy, will just throw glass in the garbage.	This will make many locations that have easy systems to recycle.
Landfill Staff A	2/14/18	Have more locations than the NRE.	Yes, ideally many locations close to people's homes. They are already close by.
Landfill Staff A	2/14/18	We need more locations for HHW.	Yes and that is one of the proposals in the plan.
Landfill Staff A	2/14/18	Will it just be financed through taxes?	Either through property taxes or tipping fees.
Landfill Staff A	2/14/18	The closer we get to 90 % reduction, the lower the tipping fees will be.	Yes, it could be. There will be lots of gradual changes.
Landfill Staff A	2/14/18	Is it something the public will be able to vote on? They don't want to pay if they are not using the service.	Not sure if it would go to voting. We have done a lot of public consultations, the reason we go over the different ways to pay, we would likely just do one way or the other. It's unlikely to go to referendum.
Landfill Staff A	2/14/18	Is there a sway towards taxation?	Not really. People are supportive of the costs and 90%, they want more programs. The only thing we haven't had people keen on was waste haulers not liking the licensing of haulers, do not want more regulation.
Landfill Staff A	2/14/18	What would that involve?	They would be required to report on how much they are disposing and diverting, and have the ability to audit them.

Landfill Staff A	2/14/18	How would you put that into the computer system?	One set levy for tonnage into the landfill. Metro Vancouver is doing it right now, going through consultation program so we can look at it. This would be one of the operational things that we would work with the supervisors and landfill staff to find the best way to do it.
Landfill Staff A	2/14/18	It will be really hard on the little guys.	Reduced tipping fee for only those that are licensed. Licensing requires ability to audit, report, etc.
Landfill Staff A	2/14/18	Loss of revenue, loss of jobs.	This plan will lead to a slow change, it's not like when material started going to the US overnight. The other thing to remember is that as this region grows, we will have increased diversion, but waste will still come to the landfill. Even if the landfill was full and we have to send material elsewhere, it would still need to be consolidated and then shipped meaning more transfer stations.
Landfill Staff A	2/14/18	How do eco fees work for tires?	Falls in the same EPR program, similar to bottles. Whoever produces the materials is responsible for the end of life. That pays for the recycling and collection of the product. It depends on the business model. The cost for the eco fee gets passed from the seller to the EPR program. Remittance. Every year the stewardship program writes an annual report with the costs, streams, etc. Are there people making money? Yes, for sure. But it comes from the initial fee payed on the product and the money is made by collectors, i.e. depots and recyclers. The organization itself is a not for profit and they are run by a board or directors that is not paid to be there.
Landfill Staff A	2/14/18	How to get to the survey.	Go to RDN homepage or to Get Involved site.
Landfill Staff B	2/14/18	What education programs are available?	NRE provides presentations to elementary and high schools, bills the RDN.
Landfill Staff B	2/14/18	How do you monitor waste hauler licensing?	They would register with us, which allows us to get regular reporting and auditing.
Landfill Staff B	2/14/18	Glass is not commercially viable.	It is, but required an EPR program to put through.

Landfill Staff B	2/14/18	What did the survey say?	We are still going through it. Most people support the program, support the 90%, and most support the cost. What we've seen is that if we want a higher diversion rate, it does cost money. The cheapest option is always going to be throwing materials in a hole. If anything, they wanted us to have more programs. The biggest haulers was the waste haulers not wanting to be regulated and licensed.
Landfill Staff B	2/14/18	My neighbor did the survey through one of these guys, but he said he still has to pay the garbage fees.	People can't opt in or opt out of the program. The City of Nanaimo can have ability to weigh garbage coming through the program. The hope is paying less for less waste. Possible changes but don't know anything definite. If the target is 90%, then we need to implement new programs.
Landfill Staff B	2/14/18	It is a long ways to go. Smaller it gets, the harder it gets.	Once we start the initial 'how to make this commercially viable' it will make sense to recycle more products.
Landfill Staff B	2/14/18	Why is Styrofoam recycling not at the landfill?	It's available at other depots. Industry around Styrofoam is changing, such as StyroGo. They can densify then ship out. We are trying to make a model so we can push businesses to recycle more. A lot of places will only recycle cardboard. A lot of schools in Nanaimo only have garbage bins in place. Trying to get multi bins in place for all bin locations.
Landfill Staff B	2/14/18	We have to come up with something better for disposal systems, under the cupboard, separate all over the place. If we had something nice, it would make it easier.	There are businesses in place to make diversion easier in the workplace and in the homes. We are trying to make the model have more incentive to make programs easier.
Landfill Staff B	2/14/18	Why are we (landfill) taking some recyclable products, but not others?	Not sure what drove taking some recyclables but not others. Overall, we don't want to compete with other business, however, if there is a lack of recycling of a certain product or if there has been a push by residents to have a certain item collected at the landfill, we might do that.
Landfill Staff B	2/14/18	What about Alpine?	If they brought it to the landfill, they would have to pay to dispose of it. If they divert it through the Recycle BC program, they would get money for it. If a local business is recycling something we don't
Landfill Staff B	2/14/18	Batteries are brought here?	That is an operational thing. I'm not sure of why some things and not others.

Landfill Staff B	2/14/18	So where is glass going?	Recycle BC produces an annual report. A lot of the materials are recycled locally because they have a system put in place.
Landfill Staff B	2/14/18	If we are sending people to the NRE with TVs, why not sending them there with glass?	Tell residents that they can send to a depot, and save money.
Landfill Staff B	2/14/18	Can we say don't throw it here?	That would be operational issue.
Landfill Staff B	2/14/18	Is the 90% in weight or volume?	In weight.
Landfill Staff B	2/14/18	There are a lot of things coming to the landfill that can be recycled.	The shift is slow. It becomes engrained into how we live. A lot of the EPR programs are still young and will slowly become second nature to us, just like recycling a pop can.
Landfill Staff B	2/14/18	Where does Styrofoam go?	To all the same locations. Actually you can now bring them to London Drugs. But this is residential only.
Landfill Staff B	2/14/18	About the NRE. What is going to happen?	We are not sure. When we know more we will definitely share it with you. There was a meeting yesterday. A lot of conversation happening, just not sure on what is going to happen.
Landfill Staff B	2/14/18	If a school is going to phone, we send the NRE. Why not something for more programs.	With the expanded education program we can definitely see more of that. Another option is for doing more education for adults.
CRTS Staff A	2/21/18	The new programs would include glass?	There are already EPR programs for non-depot and deposit glass containers, but not plate or window glass.
CRTS Staff A	2/21/18	Graph compared to other regions: the RD's creating the most waste are paying more for services?	The way we put out the costs: we don't really rely on taxation, so funding structure is different. The other areas have access to different markets, different services, and different funding structures.
CRTS Staff A	2/21/18	Are we going with taxation or tipping fees?	We are not sure yet. Taxation is more clearly cut and easier to manage.
CRTS Staff A	2/21/18	The feedback received from the survey, have they been supportive of the costs rising (\$10/person/year)?	Overall, yes, around 75%.
CRTS Staff A	2/21/18	90% is a big goal?	Yes, compared to other regions, and other areas around the world, we are really far ahead.

CRTS Staff A	2/21/18	What is happening with the NRE?	At the meeting last Tuesday, they changed their ask to receiving the zero waste funding in a pilot project, and said they would fund their building through membership fees.
CRTS Staff A	2/21/18	We get a lot of questions about HHW, could we get a factsheet/brochure on what depots are available?	We can look into getting factsheets from ReGeneration, etc.
CRTS Staff B	2/21/18	Why is glass not accepted at CRTS?	Because we do not want to compete with businesses that are part of EPR programs.
CRTS Staff B	2/21/18	We were asking in the survey about \$10/person/year	Yes, that is the cost per capita. We have broken up the possible funding structure in a couple different ways. The cost per capita isn't a perfect example, but it gives us a rough idea.
CRTS Staff B	2/21/18	What about glass collection at the curb? E.g. pink bin in Sooke	We can't commingle it with other materials because it doesn't work in the truck, sorting machines, etc. In the truck it leads to health and safety issues when dumped, and getting broken up means it can't get recycled. We looked into the feasibility of additional glass collection at the glass, and it would cost so much money to get the trucks out on the road. By having contracted drop off facilities for hard to recycle things like glass and hazardous waste.
District of Lantzville Council	2/26/18	The ICI sector has a large portion of the waste.	Yes. We are not granted tools to directly address diversion with this sector, and need to be granted the authorities from the MoE.
District of Lantzville Council	2/26/18	What efforts have been made to put this plans forward?	This plan has been worked on for 3-4 years and will soon be put forward to Regional Board decision.
District of Lantzville Council	2/26/18	What about multifamily diversion?	Same deal with ICI, we regularly get inquiries from MF residents on how to address this. Currently we cannot compel them, so they often go to the lowest cost option.
District of Lantzville Council	2/26/18	Please forward the presentation and the survey link.	(Done)
City of Parksville Council	3/5/18	I thought it was mandatory for businesses to separate waste?	No, it is not. We have landfill bans in place that are not actively enforced. We could be more aggressive in enforcing but it doesn't have a large effect on diversion. The short answer is no.

City of Parksville Council	3/5/18	Glass. We don't use a lot of plastic, but we use a lot of glass. Why can't we recycle it at curbside?	Glass packaging is covered by RBC. The plan proposed better industry services, and we foresee more collection sites. We would have to collect glass separately, and the costs would be ~\$13/person/year for quarterly pickup.
City of Parksville Council	3/5/18	Fluorescent or lightbulbs with poisonous gas?	They are recyclable under the EPR program light recycle.
City of Parksville Council	3/5/18	\$10 per household per year, has that been determined?	We are nearing the end of consultation. Then the report will go to the board for approval, then to the MoE. Once returned, we will decide on funding model.
City of Parksville Council	3/5/18	The recycling depot [Nanaimo Recycling Exchange] is great. Will they stay open?	You will need to ask them directly. They utilize the same EPR programs that other depots are part of.
City of Parksville Council	3/5/18	The statistics are very good, but some people don't follow with illegal dumping evidence.	I've been in the industry for 30 years with the MoE. Back in the day there was a dump site on every corner, and there was still illegal dumping. Now we have a big change in response to illegal dumping with citizen cleanups. It is unlikely for the RDN to increase direct services, but by creating the economic model, business will respond and there should be more options.
City of Parksville Council	3/5/18	Thank you for your information. The local bottle depot takes so many things, and I've learnt about the other services that are out there. As a previous elementary school teacher, we did an organics pilot project. It will be great to get industry on board. Please keep up the good work.	
Probus Nanoose Bay	3/16/18	Can you please clarify the acronyms used?	Yes
Probus Nanoose Bay	3/16/18	What is the app called?	RDN Curbside, for Apple and Android.
Probus Nanoose Bay	3/16/18	Why is the blue bin and yellow bag kept separate?	The yellow bag helps protect paper from getting wet and stops wind from blowing it away. You may get a yellow recycling sticker to adhere to any bin within the size and weight limits.

Probus Nanoose Bay	3/16/18	What is driving jurisdictions to get green bins?	Metro Van transitioned because their landfill is filling up. Waste audits show that 40-50% is food waste. Also there is the environmentally conscious element.
Probus Nanoose Bay	3/16/18	What happens to the organics?	It gets processed by Nanaimo Organic Waste, then sold through Milner.
Probus Nanoose Bay	3/16/18	What about a similar program to the Nanaimo Sort Toss and Roll?	Our contract ends in 2020. There is a chance to switch, or to have a mixture. We will be working on the contract.
Probus Nanoose Bay	3/16/18	Yard waste collection would be good.	This would be discussed for 2020.
Probus Nanoose Bay	3/16/18	Hills are a concern with the rolling carts.	Yes, there is a diversity of terrain that would be tricky in the RDN.
Probus Nanoose Bay	3/16/18	Would the yard waste be like the mainland?	NOW would likely not be able to process yard waste.
Probus Nanoose Bay	3/16/18	We are at 68%, what about other regions?	CVRD is around the same tonnages.
Probus Nanoose Bay	3/16/18	Stuff going to the landfill, I get the impression that recyclables are being landfilled.	It is easy to see material from small trucks, but difficult to audit material coming in large loads.
Probus Nanoose Bay	3/16/18	What about banning plastic bags?	There was a report to the Board in 2017 following a delegation. The RD does not have the authority, so the Province or Fed would need to enact.
Probus Nanoose Bay	3/16/18	Many place collect plastic bags to recycle, then it gets made into plastic lumber.	Yes, many places do collect them. We are fortunate to have the systems in place.
Probus Nanoose Bay	3/16/18	A survey announced plan to produce biofuel facility.	NOW is really great. The amount of funding for bio solids doesn't reflect the population base. The City of Edmonton gets everything sorted, but we don't have the population base for that type of program.
Probus Nanoose Bay	3/16/18	What about with the plastic bag bans, the other plastic sold in stores?	There is a push for Zero Waste stores with no packaging.
Probus Nanoose Bay	3/16/18	The NRE, why doesn't the RDN support it?	Part of the program plan is to give \$300,000 in the zero waste recycling program. I can give you my manager and councilor's information for more details.

Probus Nanoose Bay	3/16/18	Latest I heard the NRE has to shut down.	There are other depots that can be found in the RDN app.
Probus Nanoose Bay	3/16/18	I support the increase in tip fees.	Good to know.
Probus Nanoose Bay	3/16/18	Why not glass pickup at curbside?	It gets broken down in the truck, and is a danger to workers, then can't be sorting at the MRFs.
Probus Nanoose Bay	3/16/18	What is the workers comp. history?	We have weight limits. We contract out the services, but I can look it up for you.
Probus Nanoose Bay	3/16/18	I came from Montreal's system, can you explain the bins?	We have a 100 litre 50 lb. size limit. The green bin is for easy lifting, you can use a blue box, and the yellow bags are free.
Probus Nanoose Bay	3/16/18	\$500,000 home for taxation, in the RDN get more \$ due to higher evaluation.	In different areas there are different housing prices. We won't collect more than we need.
Probus Nanoose Bay	3/16/18	Are we creating less overall waste by weight?	It is hard to say, I don't have the stats on hand. I'd like to think there is less, but there is a lot of movement in the industry. There is an overall trend to a higher disposal society.
Probus Nanoose Bay	3/16/18	Do collection people do audits?	We did a 2012 waste composition study. Recycle BC does blue bin audits. The solid waste department does outreach on curbside. Recycle BC sends a letter if contamination is above 10%, and we are usually around 5%.
Probus Nanoose Bay	3/16/18	What is contaminating?	Mostly plastic bags. They don't weigh a lot, so we know there is a large volume.
Probus Nanoose Bay	3/16/18	Financing, a lot of the money is through ICI and MF.	That is why we are looking at tax rates, ICI pays a higher tax rate. Yes, it would affect single family, but multifamily and ICI pay more
Probus Nanoose Bay	3/16/18	MF don't recycle or compost?	Mandatory waste source separation program to get the system in place. Currently the basic system expansion is outside our authority.
Probus Nanoose Bay	3/16/18	Get condo green boxes.	Again, we don't have the authority but we are working towards it as it is presented in the plan.
Probus Nanoose Bay	3/16/18	You should research the authority.	

Probus Nanoose Bay	3/16/18	I appreciate you coming out to discuss the system. I came from Calgary to here, and we have a hard time learning but it's a good system. We are part of the subgroup here for garbage and waste.	
Town of Qualicum Beach Council	3/19/18	How many people were not supportive?	About 20%
Town of Qualicum Beach Council	3/19/18	What can the municipalities do to assist you and get involved?	For us to license and make mandatory separation, we need BC to grant the authority. It would be great to get municipality help to grant similar bylaws.
Town of Qualicum Beach Council	3/19/18	Great work. What is happening with methane gas?	Is collected by BC Bio and put back onto the grid.
Town of Qualicum Beach Council	3/19/18	What about curbside glass collection?	The short answer is no. Glass recycling is covered by Recycle BC. If collected on curbside, it would need to pick up by a separate cost, with higher rates associated.
City of Nanaimo Council	3/26/18	With \$36-37 per household in the RDN, how does that affect current user fees?	Those costs are across the board and would affect the City of Nanaimo differently. We're looking at a \$20 increase from 15 to 35.
City of Nanaimo Council	3/26/18	Apartments sorting at the source. Currently some are sorted, some are not.	Great comment. There are two ways the program would roll out. One is for commingled collection then sorting by the hauler. The other is for multiple bins at cheaper rates. This would be along with diverting and education.
City of Nanaimo Council	3/26/18	The existing programs, are some contracted out or all done by the RDN?	Some contracted out, including the NRE for education, and a contractor for illegal dumping cleanups.
City of Nanaimo Council	3/26/18	\$300,000 would go to the NRE. Would yard waste still continue?	That is a board decision. The board was clear on the \$300,000.
City of Nanaimo Council	3/26/18	Why would it cost \$470,000 for hauler program?	At the landfill, our costs are about \$75 per tonne. We collect \$125 per tonne on our tipping fees. We need to source the differential in \$ to landfill. Landfill is cheap. If we leverage the whole industry, then we see more convenience from more services. We are

			benefit in the community, environment and economy.
City of Nanaimo Council	3/26/18	Is the \$470,000 a loss in revenue?	Yes, largely, but also admin fees.
City of Nanaimo Council	3/26/18	So we are subsidizing private industry? Why would they divert?	The source separation and licensing in conjunction with the disposal levy.
City of Nanaimo Council	3/26/18	We will be making money, somewhat like a speculation tax?	Everything being disposed will have a levy.
City of Nanaimo Council	3/26/18	Why the fees?	A lower net cost from the disposal levy and the reduced tipping fee. Cost is less important to business than profit.
City of Nanaimo Council	3/26/18	Garbage is garbage. With the garbage I'd rather it ship down to the states than our landfill?	
City of Nanaimo Council	3/26/18	Why aren't we banning Styrofoam?	Local government does not have the authority to ban the selling of materials.
City of Nanaimo Council	3/26/18	With the hauling fee, there is opposition to this. A loss of revenue. What are we looking at for diversion? Why would we want to extend the life of the landfill? What about Nanaimo Organics Waste materials, looking at cradle to grave processing.	A lot of material coming into NOW is contaminated with plastic bags.
City of Nanaimo Council	3/26/18	Are our recyclables getting landfilled?	As Jan said earlier, almost everything is recyclable. Over 30 years the recyclables have been a commodity, it's just finding the market.
City of Nanaimo Council	3/26/18	Styrofoam - the material is changing from chips [foam peanuts] to plastic bags filled with air. Styrofoam is changing to cardboard forms. Our community wants the entire item to be recycled, not high graded and put in the dump.	

City of Nanaimo Council	3/26/18	We have good diversion because of the programs available to us, curbside but also the one stop drop off depot.	
VIHA	4/9/18	There is already source separation at VIHA facilities in the RDN.	So it would just make the voluntary program to be mandatory.
VIHA	4/9/18	(re: waste hauler licensing) Does that mean that you will be closing your doors to the landfill to the public?	No it just means small haulers will pay a bit more. What will end up happening, is, if you have a couch you need to get rid of, you would go to the landfill and drop it off. If I give 1800 Got Junk a reduced tip fee and disposal levy, they can dispose of it for cheaper, but also have more incentive to divert as many materials as possible.
VIHA	4/9/18	With the disposal levy, they will just pass the cost onto us (as customer) anyways. That really isn't incentivizing them to divert.	In the short term, perhaps. But what will end up happening is you will start to see a change, as their disposal costs are less, they will turn that over as they bid on your contract, so normal competitive processes will prevail. They should be selling you more and better services, and in the end your disposal processes will drop. We are fairly confident that the money will drive the industry to respond in ways that are more profitable for them.
VIHA	4/9/18	When you are in Nanaimo, where else are you going to take it?	A lot of it is going down to landfills in the US on a barge.
VIHA	4/9/18	Does anyone talk about creating a carbon footprint tax? With an incentive to keep it local.	Yes, there is the carbon tax that should drive behavior. Businesses tend to make decisions on maximizing their profit. That is why we want to change what we are doing. If we were to see a change in the CAD dollar, we would see it change again. Right now we are limited in our ability to enforce. Enforcement is important, but it is only one tool. Usually you get better results if you introduce incentives. We could fine every truck coming into the landfill. It still relies on the generator. We want to incentivize the industry to work with their customers to make it easier to use source separation. How? Make it worth their while.
VIHA	4/9/18	There are some logistical challenges, for sure. When I've been involved with rolling out programs, adding multiple bins means they have to give up parking spaces, add additional staff. A challenge in Ladysmith is keeping the bin clean. Even though we are lining the bins,	Why would your hauler want to keep your bin clean, or do it for you? It is cheaper for them to do it. Two ways, either making it easier to you separate, or take everything together and then separate it. They will make decisions based on cost. At McDonalds, it's cheaper for the business to hire someone

		there's gunk at the bottom, then hauled out to the parking lot.	
VIHA	4/9/18	I see it as the hauler doesn't really want to incentivize it. I think the problem is with the packaging, and is a higher level of government that needs to make the changes.	Yes, you are right. Packaging is going to be difficult to put in bans, but it will likely be putting in more stewardship programs. But what we see is the programs. 42% of the food coming out is organics.
VIHA	4/9/18	I don't see the how it's better for me. Whether the haulers make more money or not, I don't care. I care about my budget and what I can do.	You are right, disposal at the landfill is the cheapest option. Diversion is not cheap, it costs more. But as a society, if we want diversion, we have to make changes to help us get there. We already have one of the highest diversion rates and lowest per capital disposals so we have to be innovative to help us get to 90%.
VIHA	4/9/18	We are good and proud environmental stewards. We are all trying to do everything you are suggesting. It will not be cheaper. I will need to increase my budget to make this work.	Yes, absolutely.
VIHA	4/9/18	I see it being a big impact for multifamily buildings.	It will have less impact on institutions that are already separating, and more impact on ones that are not currently separating.
VIHA	4/9/18	Questions about the cost breakdown per family.	It will be hard to normalize it across the industry, what's presented as an estimate of what it will cost per \$100,000 land assessment.
VIHA	4/9/18	Suppose that this diversion plan is successful, how long would it increase the life of the landfill.	About a decade, but considering that it is at 20 years now that is actually a pretty big amount.
VIHA	4/9/18	What are the other options?	Part of the plan is looking at life beyond the landfill. We could be at partnering with our neighbors, export, etc. Time will tell. We will need some disposal capacity for the foreseeable future. I don't foresee getting to zero waste in my lifetime, and changing from a consumer society. I think that is unlikely. If we have limitations on that, my thought is the more we can make it a more effective system to get materials back into the stream, which is where I see the potential. It is more about how can we build better systems.

VIHA	4/9/18	Wondering about when the cost of the landfill increases, will that make things be dumped in the bushes.	When I started 30 years ago, there was a free landfill on every corner. I believe there was more illegal dumping then, though it is subjective. The difference we see now, at least in our community, is the amount of individuals and community groups want to report and clean up the material. Let's say we put a surcharge on mattresses, then we might see some short term bump in dumping of mattresses.
VIHA	4/9/18	I'm not sure that taxation is the appropriate source of funding the services. Why as a homeowner should I pay more taxes to pay for services that are going to the multifamily homes and commercial?	Every commercial business is taxed as well, and at a higher rate. And multifamily buildings are paying through their tax assessments, which is then brought down to the rental price or to other fees. Let's look at this: I could start collecting commercial Styrofoam, and would pay for the services, hire more staff, etc. Or, I could make it so the hauler puts in the programs for diversion. We need to incentivize the collection and diversion.
VIHA	4/9/18	Now what about the materials that are being sent to china, we should put energy into creating recycling plants here.	Merlin has plastics processing plants here, now the product stewardship programs are making it so they are mandated to collect and recycle it as locally as possible. What we will see happen, is from the national sword and societal changes in china, is we are going to see more local processing of materials over time.
VIHA	4/9/18	Yes, we need to process more materials locally. Especially wood and organics.	The efficiency of the EPR programs are remarkably high, and then distributed throughout the world. Then the manufacturers of new goods are getting raw goods to make the electronics. Now with the EPR electronics program, now this materials is being taken apart and then being sent around the world, and going back into the stream. A lot of wood locally is being used for fuel. Metal, ferrous and non-ferrous, is being used again. Recovery is a multi-million dollar business.
VIHA	4/9/18	Diversion is going to have to expand if we are aiming for 90% diversion.	Yes, you are absolutely right. Diversion costs money, and if diversion is increasing, then we need to put more money into the processing and these programs. When we put money in, then we get businesses thriving. To get the curbside plastic container that makes it so we can get the container back into another product and a number of businesses involved along the way.

VIHA	4/9/18	In the health care industry, we have so much more of a problem finding markets. They will refuse things such as a saline bottle, highly recyclable number two plastic, because it is medical.	Yes, this is true, and hopefully as local recycling markets are developed, there will be a greater opportunity to recycle this material.
VIHA	4/9/18	Merlin is not taking as many plastics as they were before.	And as long as there is low cost disposal, things will keep being landfilled. If we can make a better upside for recycling things like your saline bottles, then it is more likely going to happen. The change might not happen overnight, but might be 10, 20 or 30 years. People are going to look for low cost disposal to get a competitive edge.
Comox Strathcona Waste Management Board	4/19/18	<p>The RDN has long been the poster child for waste diversion and kudos to the RDN team for this achievement. How did you manage the ICI sector that shipped waste to the US when the CDN dollar was at par with the US dollar?</p> <p>Do you see the tide change in the MOE regarding the potential of flow control to manage this issue?</p>	<p>In 2013, a 1/3 of our commercial waste was shipped to the US which had a huge impact on the budget. Because of the cost of fuel has increase and change in the US dollar (the primary driver), a substantial amount of that waste has returned back to the RDN. If there Canadian dollar were to ever go back to par with the US dollar again, it is very plausible for that majority of the commercial waste to be shipped across the border again as there is significant cost advantage in doing so.</p> <p>Hard to gauge, the MOE is aware of the RDN solid waste management plan. The Metro Vancouver currently has a request to license haulers, which is similar tool to what the RDN is proposing with some notable differences. This is a far better opportunity with this proposed strategy with a tool, a combination of regulatory and economic tool, to achieve the same goal rather than the flow control approach that Metro Vancouver tried to pass (and failed to pass).</p>

Comox Strathcona Waste Management Board	4/19/18	Do you have anything in place with the commercial and multifamily dwellings to encourage them to recycle?	Yes, we have commercial bans at the landfill but this does not work. We have handed out only a handful of fines, and for only the most outrageous cases. The plan as it currently stands, is entirely punitive and the haulers just make it a cost of doing business. Therefore, it is not an effective tool. This is why we have come up with this waste hauler licensing plan to motivate and to drive positive behavior, which in turn will drive diversion. We are making it more economically beneficial for businesses to divert. We want to compel every business to have separate bins and a waste industry to be motivated to encourage their customer to separate rather than placing it all in one bin, and hence, greater diversion.
Comox Strathcona Waste Management Board	4/19/18	<p>Does your staff or contractor run the program and operate the landfill?</p> <p>What is your cost per tonne?</p> <p>Total budget with curbside?</p> <p>Survey sample size appears small; when you say the people supported it, was it a percentage of the people survey and extrapolated it (over the size of the population of the RDN)? Or was it a percentage of the people surveyed?</p> <p>Why are you opposed to exporting waste? Especially if it doesn't cost you anything.</p>	<p>The transfer station and landfill are operated by RDN staff. The curbside collection is a contracted service. Our disposal cost, if we were to operate like a commercial landfill, is approximately \$75 per tonne. Our tipping fee is \$125 per tonne. The differential is used to fund the solid waste program. \$16 - 18 million; \$3-4 residential curbside, \$1 in taxation</p> <p>The number for the percentage was based on the number of people surveyed. We had 500,000 opportunities for dialogue and exchange. The conversations were very positive in support of the goals and the plan.</p> <p>I am not opposed to exporting waste. Our community has demonstrated a strong desire to divert waste, whether it is done locally or across the border. Given that the waste being shipped across the border, a facility that does not separate materials, the community has a strong opposition to that.</p> <p>People who generate waste within the RDN should pay the cost of the RDN solid waste program. If you are shipping out the waste to avoid the cost of the service, they should still pay their share of program.</p>
Comox Strathcona Waste Management Board	4/19/18	The RDN has the population of 4X the size of the Comox Regional District. When you send waste to the US, do you get to claim that waste as diversion?	No.

Comox Strathcona Waste Management Board	4/19/18	Regarding your solid waste management plan, is an organic ban and WTE included in your plan?	We already have an organics ban in place but it is not as effective as we like it to be. No, WTE is not part of the plan. We have explored the two options, WTE and maximize source separation. Our community and our advisory committee were very supportive of the latter. We also looked at the cost and WTE was deemed too costly and beyond our ability to finance.
Comox Strathcona Waste Management Board	4/19/18	What is the financial incentive do you give your haulers to separate?	We currently charge \$125 per tonne. We are proposing \$75 per tonne for licensed haulers which is a significant reduction. We are also proposing a \$25 disposal levy for anything they send to disposal, landfill or WTE. We want to give them a price advantage so waste flows to them. Even if their net cost falls, they are most profitable to divert than to dispose. We want to incent the industry to pull the recyclables out prior to final disposal.
Comox Strathcona Waste Management Board	4/19/18	What do you do with construction materials? Why are you so opposed to shipping something out of country where it may be incinerated? Sound like the residents have been fed propaganda.	We landfill the material. The differential tipping fee are very effective to drive source separation, therefore, we do not have a lot of construction material. The community provided feedback that we have the responsibility to look after their own waste at home. As far as the WTE, there is no difference whether it is local or distant. There is very strong opposition to WTE from the community. There is opportunity to explore it had we exhausted all options. We went to great lengths to provide the community to provide all the options to present all views.
Waste Haulers meeting	11/29/17	Why we are only interested in industry or would municipal haulers need to be licensed as well.	If a city collects waste they could qualify for waste hauler licensing. Those specific details have not been worked out yet. Either way, our collection infrastructure needs to be paid for so any short fall that comes from providing discounts would need to be made up by taxation. Downside of this, is that it's not the people that are receiving this service that would be paying for it, everyone would. I personally think that all costs associated with curbside service should be borne by those that are receiving this service
Waste Haulers meeting	11/29/17	How would it be determined who needs a license?	Anyone that collects waste for profit within the RDN would need a license.

Waste Haulers meeting	11/29/17	The idea that government (municipal partners) should be treated different I don't personally agree with	Licensing is meant to increase diversion. Curbside already has really good diversion. It's unlikely that the free differential would translate to higher diversion rates from curbside customers. If there is a desire from municipalities to participate in this then the funding shortfall would come from taxation
Waste Haulers meeting	11/29/17	Processing prospective, we are seeing a lot of changes from bans for things that could be recycled but now they can't. Will you be working with processors to deal with materials that can be longer be recycled?	I prefer deferential fees over bans. Creating an economic incentive not to landfill. So for a ban, you can't bring it to the landfill at all whereas an economic benefit encourages haulers to continue to keep recyclables from landfill. We will work with industry to get higher diversion. I suspect that when we have more local processing, we may not have these issues with recyclables not being recycled.
Waste Haulers meeting	11/29/17	TQB has little waste. Probably half of what the RDN average is. What incentive is there to enforce separation at the curb? How do we get more compliance with the green bin? Something like we won't pick up your waste if you don't separate your waste.	When we looked at our services we looked at all parts of our program, including how to improve diversion at the curbside, the advice from our committee was not enforcement because we have good participation but an increase in education. For commercial, we do not have the authority to require people separate material. We do have the ability to fine haulers. Based on our bans, we can basically fine all trucks that come into our facility but I can count on one hand how many fines we have actually given out. Industry representative on our committee do not want us to give out fines. People that get fines just add it to the cost of doing business, it doesn't change their behavior. We want to encourage a behavior of diversion.
Waste Haulers meeting	11/29/17	You can do enforcement without punishment as well.	
Waste Haulers meeting	11/29/17	Who would be considered a hauler?	If you are a business and you are hauling waste for a profit, you would need to be licensed. It's not intended to be punitive, it's intended to have more material go to industry. Most businesses don't create a whole lot of waste so it likely wouldn't be worth their while to be licensed.
Waste Haulers meeting	11/29/17	Funding for nonprofits businesses. Would it be an expansion of existing funding?	300,000 for a nonprofit for a pilot project to fund non-commercial viable material.

Waste Haulers meeting	11/29/17	What is problem with non-profit funding? Don't understand the logic of need for level playing field. It's not level now because NRE shoulders the weight of zero waste. Public funding needed to level the playing field.	
Waste Haulers meeting	11/29/17	NRE is collecting material that is commercial viable, that collection could be done by industry	
Waste Haulers meeting	11/29/17	The commercial variable material the NRE collection is a revenue stream for the depot. It helps offset the cost of zero waste recycling. Should the residents be funding all zero waste, versus just parts of it?	
Waste Haulers meeting	11/29/17	If NRE keeps getting funding for material that we recycled, we are not going to advance our investment because NRE gets gov't funding to compete with us.	The 300,000 provision in the plan for zero waste is very specific with a specific dollar amount attached to it. If you additional comments, if you like it or you don't, please write it down and we are taking notes as well.
Waste Haulers meeting	11/29/17	NRE has commercial contractors dropping of material which is a commercial revenue stream because they can drop it off for free. NRE should only be for local residents, not businesses.	
Waste Haulers meeting	11/29/17	Where would NRE get funding for zero waste if they don't use the cardboard from commercial facilities to offset the cost of recycling the Styrofoam they bring in.	
Waste Haulers meeting	11/29/17	If waste hauler licensing gets approved how often would the license need to be renewed and would there be a licensing fee?	Details would be worked out at the time of bylaw development but it would most likely be an annual renewal process with remittance of a licensing fee. Given that the model proposes a significant disposal cost savings to Licensed Haulers, the annual fee would need to be set at a value that is not so high to discourage participants but also not so low as it is ineffective in encouraging the flow of waste to the industry to fully realize the waste diversion potential.

Waste Haulers meeting	11/29/17	Who approves license:	The RDN would approve it. It's like driver's license, if you meet the requirement you get the license.
Waste Haulers meeting	11/29/17	So it's not at the RDN's discretion? How would you appeal if it gets rejected	The SWMP sets out a dispute resolution process. Essentially disputes under the Plan are referred to the Regional Board. If disputes are not resolved at this level the aggrieved party can pursue judicial review.
Waste Haulers meeting	11/29/17	Would our business be at risk if the RDN did not issue us a License?	The Licensing is not intended to be exclusive. It would operate similar to a BC driver's license in that anyone that meets the conditions for licensing would be granted a license and there is no "decision" process. Conditions of license would likely be having valid insurance, reporting of waste sent for disposal, RDN's right to compel auditing of records of waste sent for disposal, a reduced landfill tipping fee and remission of a disposal levy for waste sent for disposal to a facility within or outside of the RDN. Anyone meeting the conditions of license would be granted a license.
Waste Haulers meeting	11/29/17	If your truck hauls recycling or organics do you need license?	No, only for waste going to a landfill or incinerator
Waste Haulers meeting	11/29/17	Some recycled can end up being incinerated, how would someone selling the material know its end market?	Our licensing and disposal level could be variable depending on where the end market lands on the waste hierarchy. Our committee really does not support waste incinerating. We would have a committee to oversee the implementation of plan and this would give us the opportunity to work out the details of this plan.
Waste Haulers meeting	11/29/17	Plan should include turning waste into fuel.	The committee did want to overlook source separation for incineration. The plan does not include turning collected material into fuel.
Waste Haulers meeting	11/29/17	What about wood going to Harmac to be used as fuel, would that receive a disposal levy?	Traditional fuel sources would not be captured, but things like plastic bottle used for fuel would be captured. These are not traditional fuel sources and they can be recycled higher on the waste hierarchy.
Waste Haulers meeting	11/29/17	Would language related to traditional fuel sources not receiving a levy be included in the plan?	We have not included this in the plan so far but we can add details so that it is not misunderstood.

Waste Haulers meeting	11/29/17	<p>We have been recycling for years and we are doing what we can. Licensing haulers won't help. And now you are challenging us and we already do great. We have set up facilities in reaction to you bans to send waste to other facilities and now you want to charge on that waste.</p> <p>The facility we set up when you applied your ban is consolidating waste and sending it to another landfill.</p>	If your waste is going to another facility and not to a landfill we will not charge you a disposal levy.
Waste Haulers meeting	11/29/17	<p>How are you going to stay on top of what can and can't recycled? How will we be penalized if clamshells can't be recycled anymore?</p>	This is not going to come from more enforcement. This is around an economic model.
Waste Haulers meeting	11/29/17	<p>But how do you sell these recyclables. There are no markets for them? You have a really clouded vision of what the industry looks like. We can't market this material anymore so think that this material is recyclable and you will charge us a levy.</p>	<p>If you can't market it, it comes to the landfill. What this plan will do is lower your cost for disposal even if nothing changes because the tip fee, even with the disposal levy will be less than the current tip fee. When fees were \$40, everything came to landfill. When fees went up, cardboard stopped coming to landfill because it was cheaper to recycle now. Everything that is recycled right now is because tip fees are high so all commodities had a dollar value for when it becomes cheaper to recycled than landfill.</p>
Waste Haulers meeting	11/29/17	<p>Would you be fighting this battle (source separation regulation and licensing haulers) if it wasn't your landfill?</p>	<p>Yes, because as a local government we want diversion and we want a polluter's pay system. People that generate waste must pay the lion's share for managing that waste.</p>

Waste Haulers meeting	11/29/17	When would Waste Hauler Licensing be introduced?	The RDN is currently consulting on the draft SWMP and the consultation should be complete in the first quarter of 2018. The board will consider approval of the final plan. If the concept of Waste Hauler Licensing is adopted, then the Minister of Environment would approve the Plan. If the Minister approves Waste Hauler Licensing, the RDN will proceed with the development of a draft Bylaw in consultation with the waste industry and community stakeholders. The Bylaw is where the actual details of the program will be fleshed out. The Bylaw requires both Regional Board and Minister of Environment approval before it goes into effect. The plan projects 2019 for implementation of Waste Hauler Licensing Bylaw along with the Mandatory Waste Source Separation Bylaw.
Waste Haulers meeting	11/29/17	If everyone qualifies for licensing then why not just reduce the tip fee and the RDN landfill will get everyone's waste.	We want to have waste licensing and source separation because we want higher diversion, not because we want everyone's waste. If just reduce the tip fee we would get more waste not more diversion. The intent is to give industry a price advantage so that waste flows through the waste industry before coming to RDN disposal facilities. One third of waste received at RDN facilities comes directly from small generators. Providing industry a price advantage, this waste is more likely to flow to the waste industry rather than directly to disposal facilities. By applying a "disposal levy" on waste sent for disposal provides incentive to industry to put more effort into diversion. The intention is to use this economic model to encourage the waste industry to grow and innovate around waste diversion. This is expected to result in better services to residents of the region.
Waste Haulers meeting	11/29/17	Why do you think markets will get better? From everything that I have seen the markets are going to get worse. We under scrutiny to create a better product and more source separation.	Exactly, we want to have generators but more effort into separating their waste. We also want service providers to help people separate more waste. The economics of this plan will help residents because industry would provide more services if they want residents to recycle more and source separate better.

Waste Haulers meeting	11/29/17	I think the waste plan looks great, everyone wants more recycling. I'm against more regulations and more audits. Your landfill is killing my tires, and I will pay a higher tip fee to not have to deal with it. Put in a commercial scale at your facilities. We are already going through the garbage and pulling stuff out. I don't need more regulation and rules, I need support.	We don't envision that the licensing will create more administrative burden, likely similar to what most of you already do for waste stream licensing. As for the audit, again this is something that we will work out later, in the bylaw, but I doubt the RDN would be doing the audit and instead, if there is believed to be a need for an audit, you would need to get a third party.
Waste Haulers meeting	11/29/17	NRE has no plastics that I can't move. I have markets for all my material. You do have package and sort them in a particular way but there are markets for it.	
Waste Haulers meeting	11/29/17	There are markets for plastics but most companies don't have the money to put forward to get the value out of those materials properly.	This plan wants to lower your cost by reducing tip fee. If nothing else changes, this plan lowers your tip fees.
Waste Haulers meeting	11/29/17	The plan will give you a revenue shortfall because you are reducing the tip fee and you are saying that will not increase taxation	We are increasing taxes. Recycling cost more than landfilling. If diversion is important, someone needs to pay for it. Higher diversion costs money, we can pay for it or we can leverage industry to do it. We want more material to flow through the industry and have more recyclable material come out of the waste stream. The industry will make more money off of 3 bins that are source separated versus having one bin with everything mixed. The waste industry does more business now with recycling than it did before. If businesses grow, there are more jobs for residents, more profit for industry, and more service for residents. The RDN could provide services, but we consume taxes where as the industry pays taxes. It makes more sense for industry to provide these services and grow your businesses.
Waste Haulers meeting	11/29/17	What would the fees be?	Exact fees will be determined at the time of bylaw development. However, it's meant to encourage efforts around diversion in place of seeking out low cost disposal. For example, we can set the Base landfill tipping fee to \$125, a licensed hauler rate would be \$75 and disposal levy would be \$25

Waste Haulers meeting	11/29/17	My taxes already went up because of new services. Increasing taxes is fine for me but for my neighbor that is on a fixed income, it's not okay.	
Waste Haulers meeting	11/29/17	Customers will not use the service just because they have the bins. Residents already don't.	We want people to use the bins. How do we get them to do that, make it cheaper for industry to recycle than to landfill so there is a greater economic incentive to provide more services to residents to encourage them to use their bins.
Waste Haulers meeting	11/29/17	If we push residents to use multiple bins, they will get the service from someone else that won't make them use the bins.	The plan is to ensure that all people have these bins and that everyone is providing the same service. Source separation regulation will ensure that everyone has to have a bin
Waste Haulers meeting	11/29/17	The waste source separation regulation will make it so that no one can come in and offer a service less than having those 3 bins so material is separated so wouldn't this regulation make industries jobs easier?	
Waste Haulers meeting	11/29/17	In a perfect world, source separation regulation would make the lives of industry easier. However you are overlooking a number of things such as subsidies, cost of labor and level of services provided, contamination rates which are difficult to deal with.	A really simple example of how a business provided more services to deal with contamination rate and low green bin user rates was installing compostable bags near the organic rate and they found that by having bags more people are using the service.
Waste Haulers meeting	11/29/17	We also offer to set up compostable bag units but the effectiveness depends on the kind of multifamily building you have. You can still get a lot of contamination. I don't know if having more bins is the right answer because multifamily still has really high contamination. More bins mean a higher cross contamination. You think that this is going to solve the problem but it won't. Having so many bins isn't going to work. This regulation is forcing us to do something but we are already doing it and you just	Although in this presentation we are using an example of 3 bins, the plan does explicitly say this, it's just an example. The material can be source separated or separated afterward collection. It accomplishes the same thing, so three bins isn't necessary.

		aren't paying attention. We have evolved a lot.	
Waste Haulers meeting	11/29/17	Would disposal levy be considered for other public infrastructure? Your plan says that if the private sector does not provide a material recovery facility that the public sector would consider it.	Yes the plan says that we could invest in a material recovery facility if industry does not provide one. However this is very unlikely. In theory if we did have an RDN facility for material recovery then all of the same regulations would apply. It is not likely that we would have a facility because of the cost associated and the industry members on our committee do not want us to. We can't afford to build the facility.
Waste Haulers meeting	11/29/17	If the RDN can't afford a material recovery facility then why not remove that language from the plan?	It's not the advice we got from our committee. To deal with contamination it's easier to source separate rather than MRF because you go in with one pile of garbage and end up with 6 piles of garbage.
Waste Haulers meeting	11/29/17	The source separation for multifamily regulation, is it regulation on hauler or building?	It's on building
Waste Haulers meeting	11/29/17	Won't the regulation make it easier for the hauler rather than harder? The building has to source separate and if they don't, they get penalized?	
Waste Haulers meeting	11/29/17	The source separation could make it easier for the hauler but the RDN is not going to have enforcement. Residents assume much is recyclable when it is not. We need the RDN for enforcement to make sure residents are putting stuff where it belongs.	
Waste Haulers meeting	11/29/17	NRE provides education for all. A company can come to us and we will go and education their residents.	

Waste Haulers meeting	11/29/17	Just because people have these bins they will not use them because it's more work for them.	Similar to how the RDN got single family homes to participate in the green bins program. Start slow, get the education out there and show them how to make it easier. The green bin program has great participation, and low contamination. We need the regulation in place to get the behavior we want, and we need industry on our side help ensure that source separation happens.
Waste Haulers meeting	11/29/17	Funding for nonprofits businesses. Would it be an expansion of existing funding?	If you have thoughts on how to make our education better, please let us know. There is money earmarked for education. We know that people are reading out material because of the feedback we get after it reaches homes.
Waste Haulers meeting	11/29/17	How do we engage people that aren't already in recycling? Those people that are contacting you are the ones that are already engaged in recycling the process.	

Appendix 18: Direct comments and feedback

Method	Comment/Feedback	Response
Evaluation forms from CWMA meeting on April 28, 2017	New initiatives i.e. Preferred options, really stand out	
Evaluation forms from CWMA meeting on April 28, 2017	New programs really stand out	
Evaluation forms from CWMA meeting on April 28, 2017	preferred options and finances look very interesting	
Email	<p>I was surveyed by one of your representatives at the landfill the other day and he was obviously looking for a specific answer to his questions. Looking at your website, I now see that your public consultation is a formality. I understand that your goal is zero waste. The reality is the cost vs. Benefit seems negligible to me. Your representative would not or could not explore the financial implications of this zero waste policy. As a resident of Nanoose Bay, with already constrained and limited services, I personally am tired of increased property taxes with no real direct benefit to my area. Please, do not reply with arguments about the greater commons; I work hard and work harder to make financial and environmental considerations that have impact locally and globally. Recognize the very real public, but biased, consultation you do has a very direct effect on the benefits and increased taxes in my area. I am very disappointed.</p>	<p>Darren, thank you for taking the time to write. I truly do wish more people would reach out and express their thoughts.</p> <p>Zero Waste, and the 90% diversion goal was very strongly advocated by the public Advisory Committee that guided development of the Solid Waste Management Plan. Staff's roll has been to provide the Committee accurate information on implications and costs of all the options that were considered. The Advisory Committee selected what ended up in the Draft Plan.</p> <p>The intent is to reach a balance of interests of the community in managing our waste over the next 10 years. We want to hear from the broader public where the Plan hits or misses the mark.</p> <p>I would be happy to discuss the financial implications, or any other aspects of the Plan with you. Regardless, thank you for taking the time to write and doing some research on our website. We will be including your feedback in reporting out the results of the consultation to our Regional Board.</p>
Verbal response	We have the cleanest transfer station in the world.	
Verbal response	Requested transfer station in Area H	
email	Against the plans to start a garbage incinerator plant in Nanaimo to replace the recycling depot.	

<p>Email</p>	<p>Several weeks ago I received a postcard from the RDN promoting a number of community consultation meetings on Solid Waste. I ended up attending the Qualicum Beach event on October 23 with only about 15 other people.</p> <p>For me the meeting was a huge disappointment. I thought any formal presentation would lead into an open discussion of the current state of managing solid waste and then a wide-ranging session to explore new ideas for reducing, reusing or recycling waste or just generally improving the efficiency of dealing with solid waste.</p> <p>We discovered that the meeting was about considering and potentially giving public blessing to a proposal to dramatically increase waste handling fees primarily to residential ratepayers in order to help improve the economics of disposing of waste from the construction, development and industrial community.</p> <p>Please don't get me wrong. This issue probably needs to be considered. This was just not the right way of promoting the meeting.</p>	
<p>email</p>	<p>It is my opinion that Canada needs to get with it and start burning our garbage like other civilized countries.</p> <p>Also that we start a ban on all helium balloons that only land in our oceans.</p> <p>It is my belief that these two things would make a huge difference.</p>	<p>The RDN worked with an advisory committee to create the solid waste management plan and the proposed options. The Advisory committee proposed to adopt a zero waste hierarchy that specifically states that incineration is not an appropriate waste management option, so this options is not presented in the plan as a way to reach our proposed 90% diversion.</p>

Email	<p>Hi there, Who should I be in contact with to discuss the absence of the green bin at all apartments in the RDN? I have lived in two apartment buildings in Nanaimo and neither had a compost pickup. I am extremely tired of contributing this food "waste" unnecessarily to the landfills. I know we are beyond this as individual residences have pick up of this "waste". I think it is a large opportunity missed to collect compostable material from apartments in the city,</p>	<p>As a Regional District we are currently updating our Solid Waste Management Plan for how we manage waste as a region over the next ten years. If you haven't already please visit www.getinvolved.rdn.ca/swmp all of our current information on our updated plan is there as well as a Q&A section that answers a few other residents questions regarding multi-family collection http://www.getinvolved.rdn.ca/swmp?fb_page_type=question</p> <p>There are a number of apartment and condo buildings in both the City of Nanaimo and the rest of the Regional District of Nanaimo that have food waste collection however, at this point it is not a mandatory requirement. We do encourage residents living in apartments and/or condo buildings to contact their building managers and bring forward your interest in food waste there, for most buildings the cost of adding on food waste collection is neutral as most of the volume comes out of garbage collection, the RDN and City of Nanaimo put together a guide that we could be happy to share with you if this something you are interested in.</p>
Email	<p>If the City of Nanaimo and the RDN do not assist the Nanaimo Recycling Centre's expansion then how can we expect to make it to a 90% diversion rate, especially since the space-intensive foam products can occupy up to 25% of a landfill's space?</p>	<p>Thank you for your question. I will notify you as soon as I have the information regarding Zero Waste Recycling uploaded to the site. But as some background, the following motion was brought forward from the Regional Solid Waste Advisory Committee:</p> <p>The Regional Solid Waste Advisory Committee recommends that the Board fund a non-profit enterprise to act as a research/recycling hub for recycling items currently not commercially marketable. The research/recycling hub would develop methods, markets and collaborations for items not currently easily recyclable, investigate barriers to recycling these items, and develop recycling programs that would ultimately benefit the Regional District of Nanaimo as a whole. Funding for the research/recycling hub would be set at \$300,000 annually over a 5 year pilot project.</p> <p>As part of our consultation process we will be seeking the public's feedback on this option as well as a number of other options selected by the Regional Solid Waste Advisory Committee.</p>

<p>Email</p>	<p>I attended this evening's event and made a nuisance of myself. Hopefully more than that, too.</p> <p>I like the direction the RDN is headed.</p> <p>What was missing from all the boards (from what I saw) is what the RDN will do to replace the truly one-stop centre for household and yard and small business wastes once the Nanaimo Recycling Exchange is gone? It is clear to me that the plan is to have all wastes handled by companies. What company will do the work of the NRE? How will they be paid to do this? Or will the RDN open its own collection centres? This part is very unclear to me.</p> <p>I also wanted to ask this evening (but ran out of time) is why the RDN does not support residents composting their food wastes at home with digesters and other soil-making devices? Trucks are very costly. Could those funds not be better spent on keeping the soil at home?</p>	<p>First off, my apologies for not getting back to you (and ultimately not being at the Public Meeting in person!) sooner, I am just settling back into the office from some medical leave the last few weeks.</p> <p>Great questions! And as always we appreciate the feedback. If I have missed any of your questions please let me know but please see my responses below:</p> <p>The Regional Solid Waste Advisory Committee did vote and support to include the Zero Waste Recycling Program into the Updated Solid Waste Management Plan after the Stage 2 Draft. I have included the text from the full report on Page 31 of the draft (http://www.getinvolved.rdn.ca/4006/documents/7983) This option would provide a subsidy that would go out to RFP region wide. The RDN's plan does encourage open competition of businesses and not-for profits to handle waste, recycling and compost throughout the region. Should NRE shut down it is likely that existing or new enterprises would take over part or all of their operations but that is difficult to determine at this stage.</p> <p>Currently, the RDN Curbside program is set up that one truck on each route collects two streams (i.e. recycling and food waste or garbage and food waste depending on the collection week). We continue to support residents that use home composting however, feedback from most residents has supported or preferred use of the curbside collection system for food waste. As we continue to monitor the SWMP we can certainly look at the costing/funding of at home digesters or other systems vs. curbside collection of food waste in the future.</p>
<p>Email</p>	<p>You need to be able to handle glass and cans if you want to get to zero.</p>	<p>Thanks for reaching out. Although you can't recycle glass through your curbside, you can recycle glass at a number of locations throughout the region that take back glass for free. Please visit www.rdn.bc.ca/curbside to find the closest location to you.</p>

Appendix 19 – List of Stakeholders Contacted for Stage 3 Consultations.

Stakeholder Type	Organization Name
Business Association	Better Business Bureau
	Downtown Nanaimo Business Improvement Association
	Downtown Parksville Business Association
	Greater Nanaimo Chamber of Commerce
	Parksville Chamber of Commerce
	Qualicum Beach Downtown Business association
	Qualicum Chamber of Commerce
	Lighthouse Country Business Association
	Lighthouse Landing Estates
First Nations	Qualicum First Nation
	Snaw-Naw-As First Nation
	Snuneymuxw First Nation
Hospitality Industry	BC Ferries
	Beach Acres Resort
	Best Western Dorchester Hotel
	Coast Bastion Inn
	Days Inn Nanaimo Harbourview
	Howard Johnson Harbourside Hotel
	Inn on Long Lake
	Ocean Trails Resort
	Qualicum Bay Resort
	Qualicum Beach Inn
	Quality Resort Bayside

	Sand Pebbles Inn
	Seaview Beach Resort
	Shady Shores Beach Resort/Log House
	Tigh-Na-Mara Seaside Spa Resort & Conference Centre
	Wheatsheaf Inn
Industry Association	BC Hotel Association
	British Columbia Restaurant and Food Service Association
	Canadian Home Builders Association - Central Vancouver Island
	Vancouver Island Construction Association
	Vancouver Island Strata Owners Association
Municipal Partner	City of Nanaimo
	City of Parksville
	District of Lantzville
	North Cedar Improvement District
	Town of Qualicum Beach
Neighbouring Regional District	Alberni-Clayoquot Regional District
	Comox Valley Regional District
	Cowichan Valley Regional District
Resident Association	Arrowsmith Naturalists Club
	Arrowsmith Parks and Land Use Council
	Arrowsmith Watersheds Coalition Society
	Bradley Street Neighbourhood Association
	Brechin Hill Community Association
	Caring About Townsite Society
	Chartwell Residents Association
	Chase River Community Association

College Park Neighbourhood Association
Coombs Famers Institute
Corcan & Meadowood Residents Association
Departure Bay Neighbourhood Association
Eaglecrest Residents Association
Fairwinds Community Association
French Creek Residents Association
Friends of French Creek Conservation Society
Harewood Neighbourhood Association
Horne Lake Strata Association
Hospital Area Neighbourhood Alliance
Lost Lake Area Residents Association
Mapleguard Ratepayers Association
Mid Island Sustainable Stewardship Initiative
Mid Vancouver Island Habitat Enhancement Society
Mount Arrowsmith Biosphere Reserve Foundation
Nanaimo - Cedar Farmers Institute
Nanaimo Old City Association
Nanose Naturalists
Neighbours of Nob Hill
Newcastle Neighbourhood Association
Northwest Nanose Residents Association
Oceanside Coalition for Strong Communities
Oceanside Development and Construction Association
Parksville Residents Association
Parkwood Neighbourhood Association
Protection Island Ratepayers' Association
Qualicum Beach Residents Association
Qualicum Institute
Rocky Point Residents Association
Shorewood and San Pareil Owners and Residents Association
South End Community Association
South Wellington and Area Community Association
Stephenson Point Neighbourhood Association
VIU Solutions

	Wellington Community Association
	Western Neighbourhood Association
	Westwood Lake Neighbourhood Group
	Dover Community Association
	Qualicum Bay Lions Club
	Spider Lake Community Association
	Deep Bay Improvement District
	Deep Bay Harbour Authority
	Dashwood Residents Group
	Bow Horne Bay Community Club
	Nanoose Probus Club
School/Institution	NRGH Home Dialysis Program & Nanaimo Kidney Care Clinic
	School District 68
	School District 69
	Vancouver Island Health Authority
	Vancouver Island University
Service Organization	Nanaimo North Rotary
	Rotary Club of Lantzville
	Rotary Club of Nanaimo Daybreak
Waste industry	1800 Got Junk
	Haarsma
	DBL disposal services
	Milner group
	Alpine disposal
	Waste Connections of Canada
	Emterra
	Contain a way services
	Sun Coast Waste Services
	Regional Recycling

	Carl's metal salvage
	GIRO
	Parksville Bottle depot
	Nanaimo Organic Waste
	Earthbank Resources Systems
	Cascades Recovery Inc
	Coast Environmental Services
	Nanaimo Recycling Exchange
	Waste Management
	Waste Management Association of BC
	Vancouver Island Recycling and Waste Industry Coalition
	Super Save (pay and save)
	CWMA
	Hankins Environmental
	Productcare
	DJC Service

Appendix 20

June 9, 2017 letter from VIRWIC



Vancouver Island Recycling and Waste Industry Coalition (VIRWIC)

To: Association of Vancouver Island and Coastal Communities and all Vancouver Island Regional Districts

RE: Request to Ban Clean Wood Waste

The Vancouver Island Recycling and Waste Industry Coalition (VIRWIC) is a newly formed group with a key purpose to work with local governments and other stakeholders to develop fair and effective recycling and waste management policy. We want local government to meet its recycling and solid waste objectives, the public to receive high quality service at a reasonable cost and industry to have a stable investment environment.

More information about VIRWIC can be found at www.virwic.ca

We request that all Regional Districts ban clean wood waste from disposal as Metro Vancouver has done - <http://www.metrovancouver.org/services/solid-waste/business-institutions/clean-wood-disposal-ban/Pages/default.aspx>

The key benefits to banning clean wood waste from disposal are clear:

1. Banning this high-volume material supports the waste diversion goals of all Regional Districts.
2. Recycling clean wood saves significant landfill space
3. There is a net reduction of Green House Gas (GHGs) emissions if wood waste is recycled/energy recovery versus landfilled
4. There would be limited additional activity required in the commercial, industrial and C&D streams as the incentive to sort wood waste is already encouraged.
5. Strengthens the existing wood recycling networks allowing for further small business investment and job creation.

If you have questions, please do not hesitate to contact us at virwic@shaw.ca .

Sincerely,

A handwritten signature in black ink, appearing to be "Dan Lazaro", written in a cursive style.

Dan Lazaro
VIRWIC Co-chair

Appendix 21

January 16, 2018 letter from VIRWIC

Subject: FW: Closure of Nanaimo Recycling Exchange and transition of service for residents

Attachments: NRE Closure Managing the Transition

Subject: Re: Depot Services in the RD Nanaimo

Chair Veenhof and RDN Board Members –

Please find attached from the Vancouver Island Recycling and Waste Industry Coalition (VIRWIC) a letter listing the private depot companies in the RDN, and our presentation we requested to be on the RDN agenda.

We respectfully request:

1. The RDN to recognize the request for consultation with all effected recycling businesses (e.g. non-profits, Salvation Army, Re-store, Value Village, private depots) and develop a comprehensive “value for money” zero waste depot plan that serves the entire region, as part of the RDN’s Solid Waste Management Plan.
2. We request the RDN and the City to reconsider joint funding a new facility and instead relocate the NRE to an existing RDN facility or facilities at either Cedar Landfill or Church Rd.

Regards,
VIRWIC Administration

Appendix 22 – Letter of Support from Comox Valley Regional District

Office of the Chair

600 Comox Road, Courtenay, BC V9N 3P6
Tel: 250-334-6000 Fax: 250-334-4358
Toll free: 1-800-331-6007
www.comoxvalleyrd.ca



File: 5360-30

May 1, 2018

Sent via email only: rcu@rdn.bc.ca

Board Chair and Directors
Regional District of Nanaimo
6300 Hammond Bay Road
Nanaimo, BC V9T 6N2

Dear Chair Veenhof and Directors:

Re: Regional District of Nanaimo - Solid Waste Management Plan (SWMP) Consultation

Thank you for the opportunity to comment on the Regional District of Nanaimo's SWMP and for the information presented by Larry Gardner at our April 19, 2018 board meeting.

I am pleased to advise that the Comox Valley Regional District (Comox Strathcona Waste Management) Board (CSWM Board) adopted the following resolution at its meeting on April 19, 2018:

THAT the Comox Strathcona Waste Management Board provide a letter of support to the Regional District of Nanaimo in support of their Solid Waste Management Plan update, affirming that the regional solid waste boards should have autonomy over their waste management affairs.

The CSWM Board supports the Regional District of Nanaimo's proposed updates to their Solid Waste Management Plan. CSWM staff do not anticipate a significant impact on the solid waste service and will take steps to monitor possible waste leakage coming from the Regional District of Nanaimo as a result of planned surcharges for non-compliant loads.

As noted in the resolution above, the CSWM Board also affirms its position that regional solid waste boards should have autonomy over their waste management affairs to develop local solutions and innovative methods to meet their unique challenges.

Sincerely,

A handwritten signature in black ink, appearing to read 'Bruce Jolliffe', is written over the printed name.

Bruce Jolliffe
Chair

Appendix I – Public Advisory Committee

**REGIONAL DISTRICT OF NANAIMO
REGIONAL SOLID WASTE ADVISORY COMMITTEE MEETING
THURSDAY, May 16, 2013
4:00 PM to 6:00 PM**

(RDN Chambers)
A G E N D A

- 1. CALL TO ORDER**
- 2. INTRODUCTIONS**
- 3. RSWAC TERMS OF REFERENCE (S. Horsburgh)**
- 4. RDN SOLID WASTE MANAGEMENT SYSTEM OVERVIEW (C. McIver)**
- 5. SOLID WASTE PLAN REVIEW PROCESS**
 - **Three stages**
 - **Workplan**
 - **Stage 1 Technical Report**
- 6. SITE TOUR/NEXT MEETING**
- 7. OTHER**
- 8. ADJOURNMENT**

Distribution:

George Holme, Chair	Meeting Chair, Director Electoral Area E
Howard Houle	Director Electoral Area B
Jim Kipp	City of Nanaimo
Ted Greves	City of Nanaimo
Wally Wells	Business Community - North
Dr. Jim McTaggart-Cowan	Environment Community
Frank Van Eynde	General Public - North
Jeremy Jones	General Public - South
Michael Recalma	Qualicum First Nation
Ed Walsh	Waste Management – Private Sector
Jan Hastings	Waste Management – Non Profit Sector
Gary Franssen	City of Nanaimo
Al Metcalf	City of Parksville
Al Cameron	Town of Qualicum Beach
Fred Spears	District of Lantzville
Al Leuschen	Ministry of Environment
Karen Muttersbach	Environment Canada
Shaun Malakoe	Central VI Health Unit
Dennis Trudeau	GM Transportation & Solid Waste Services, RDN
Carey McIver	Manager of Solid Waste, RDN
Sharon Horsburgh	Senior Zero Waste Coordinator, RDN
Jeff Ainge	Zero Waste Program Coordinator, RDN
Maude Mackey	Zero Waste Compliance Officer, RDN
Helmut Blanken	Superintendent Engineering and Disposal Operations, RDN
Maggie Warren	Superintendent of Scale & Transfer Svcs

For information only:

Joe Stanhope, Alec McPherson, Maureen Young, Julian Fell, Bill Veenhof, Mark Brown, Fred Manson, Paul Thorkelsson

**REGIONAL DISTRICT OF NANAIMO
REGIONAL SOLID WASTE ADVISORY COMMITTEE MEETING
HELD ON THURSDAY, MAY 16, 2013
BOARD CHAMBERS**

Present:

George Holme, Chair	Director Electoral Area E
Jim Kipp	City of Nanaimo
Ted Greves	City of Nanaimo
Wally Wells	Business Community - North
Dr. Jim McTaggart-Cowan	Environment Community
Frank Van Eynde	General Public - North
Michael Recalma	Qualicum First Nation
Ed Walsh	Waste Management – Private Sector
Jan Hastings	Waste Management – Non Profit Sector
Gary Franssen	City of Nanaimo
Al Cameron	Town of Qualicum Beach
Fred Spears	District of Lantzville
Al Leuschen	Ministry of Environment

Also in Attendance:

Paul Thorkelsson	CAO, RDN
Dennis Trudeau	GM Transportation & Solid Waste Services, RDN
Carey McIver	Manager of Solid Waste, RDN
Sharon Horsburgh	Senior Zero Waste Coordinator, RDN
Jeff Ainge	Zero Waste Program Coordinator, RDN
Maude Mackey	Zero Waste Compliance Officer, RDN
Maggie Warren	Superintendent of Scale & Transfer Services
Alec McPherson	Director Electoral Area A

Regrets:

Jeremy Jones	General Public – North
Al Metcalf	City of Parksville
Howard Houle	Director Electoral Area B

CALL TO ORDER

The Chairperson called the meeting to order at 4:05 pm.

INTRODUCTIONS

The Chairperson asked each participant to briefly introduce themselves as well as their reasons for participating on the Committee.

RSWAC TERMS OF REFERENCE

Sharon Horsburgh, presented an overview of the Regional Solid Waste Advisory Committee Terms of Reference including the purpose, roles and responsibilities, membership criteria and term. (Powerpoint presentation attached to minutes).

RDN SOLID WASTE MANAGEMENT SYSTEM OVERVIEW: Zero Waste to Residuals

Carey McIver presented background information on: the RDN Solid Waste System, the Zero Waste Plan and the Residual Management Plan as well as issues and opportunities. (Powerpoint presentation attached to minutes).

SOLID WASTE PLAN REVIEW PROCESS

Sharon Horsburgh gave a presentation of the Solid Waste Management Plan Review process, which includes three stages over the next three years. Stage One will evaluate the existing system, Stage Two will identify strategy options for future planning and Stage Three will involve consultation and plan adoption if required. The draft Stage One Technical Report is being prepared by Maura Walker & Associates and will be made available at the RSWAC site tour meeting on June 20th 2013.

Jan Hastings questioned the role of the committee and asked if the committee would be reviewing the Stage 1 technical report?

Sharon Horsburgh replied that a draft copy of the Stage One report will be distributed at the June 20th meeting. Each Committee member will be given a copy to review over the summer and then at the October meeting, the RSWAC members will have an opportunity to provide feedback to staff.

Wally Wells questioned the timing of Metro Vancouver's Request for Proposals with regards to potential site identification for New Waste-to-Energy Capacity.

Carey McIver advised that Metro Vancouver is ahead of us with respect to seeking out options for future disposal capacity, as the RDN has sufficient disposal capacity for the next twenty years at the Regional Landfill.

Dennis Trudeau added that the Board has a keen interest in Waste-to-Energy. Staff has conducted studies on new and emerging technologies and the RDN will be paying close attention to Metro Vancouver's process.

SITE TOUR/NEXT MEETING

Sharon Horsburgh advised that the June 20 meeting would include conducting a tour of Church Road Transfer Station, Porter Wood Recycling Ltd., Parksville Bottle & Recycling Depot Ltd., Nanaimo Recycling Exchange, BFI Canada Inc. (Springhill Road & 10th Avenue), Regional Landfill and ICC. The time would be from 11am-6pm. A meeting tour invitation will be e-mailed to all RSWAC members.

ADJOURNMENT

The meeting was adjourned at 5:30 pm. The next meeting of the Regional Solid Waste Advisory Committee is tentatively scheduled for the June 20, 2013 tour.

CHAIRPERSON

**REGIONAL DISTRICT OF NANAIMO
REGIONAL SOLID WASTE ADVISORY COMMITTEE MEETING**

**(RDN Chambers)
THURSDAY, September 12, 2013
4:00 PM to 6:00 PM**

A G E N D A

- 1. CALL TO ORDER**
- 2. APPROVAL OF AGENDA & MINUTES FROM MAY 16, 2013 MEETING**
- 3. EXISTING SYSTEM REPORT/SUMMARY-PRESENTATION
(S. Horsburgh / M. Walker)**
- 4. DISCUSSION/RSWAC INPUT**
- 5. NEXT STEPS (C. McIver / D. Trudeau)**
- 6. OTHER**
 - **METRO VANCOUVER WASTE TO ENERGY FACILITY SITING PROCESS**
 - **DISPOSAL OF ODS OZONE DEPLETING CFC REMOVAL (ATTACHMENT)**

Distribution:

George Holme, Chair	Meeting Chair, Director Electoral Area E
Howard Houle	Director Electoral Area B
Jim Kipp	City of Nanaimo
Ted Greves	City of Nanaimo
Wally Wells	Business Community - North
Dr. Jim McTaggart-Cowan	Environment Community
Frank Van Eynde	General Public - North
Jeremy Jones	General Public - South
Michael Recalma	Qualicum First Nation
Chief David Bob	Nanoose First Nation
Chief Douglas White III	Snuneymuxw First Nation
Ed Walsh	Waste Management – Private Sector
Jan Hastings	Waste Management – Non Profit Sector
Gary Franssen	City of Nanaimo
Al Metcalf	City of Parksville
Al Cameron	Town of Qualicum Beach
Fred Spears	District of Lantzville
Al Leuschen	Ministry of Environment
Karen Muttersbach	Environment Canada
Shaun Malakoe	Central VI Health Unit
Dennis Trudeau	GM Transportation & Solid Waste Services, RDN
Carey McIver	Manager of Solid Waste, RDN
Sharon Horsburgh	Senior Zero Waste Coordinator, RDN
Jeff Ainge	Zero Waste Program Coordinator, RDN
Maude Mackey	Zero Waste Compliance Officer, RDN
Helmut Blanken	Superintendent Engineering and Disposal Operations, RDN
Maggie Warren	Superintendent of Scale & Transfer Svcs

For information only:

Joe Stanhope, Alec McPherson, Maureen Young, Julian Fell, Bill Veenhof, Mark Brown, Fred Manson, Paul Thorkelsson

**REGIONAL DISTRICT OF NANAIMO
REGIONAL SOLID WASTE ADVISORY COMMITTEE MEETING
HELD ON THURSDAY, SEPTEMBER 12, 2013
BOARD CHAMBERS**

Present:

George Holme, Chair	Director Electoral Area E
Howard Houle	Director Electoral Area B
Jim Kipp	City of Nanaimo
Ted Greves	City of Nanaimo
Wally Wells	Business Community - North
Dr. Jim McTaggart-Cowan	Environment Community
Frank Van Eynde	General Public - North
Michael Recalma	Qualicum First Nation
Jeremy Jones	General Public – North
Ed Walsh	Waste Management – Private Sector
Jan Hastings	Waste Management – Non Profit Sector
Gary Franssen	City of Nanaimo
Al Cameron	Town of Qualicum Beach
Fred Spears	District of Lantzville
Al Leuschen	Ministry of Environment
Alec McPherson	Director Electoral Area A

Also in Attendance:

Dennis Trudeau	GM Transportation & Solid Waste Services, RDN
Carey McIver	Manager of Solid Waste, RDN
Daniel Pearce	Manager, Transit Operations
Sharon Horsburgh	Senior Zero Waste Coordinator, RDN
Jeff Ainge	Zero Waste Program Coordinator, RDN
Maude Mackey	Zero Waste Compliance Officer, RDN
Maggie Warren	Superintendent of Scale & Transfer Services
Maura Walker	Maura Walker & Associates
Dave Willie	Town of Qualicum Beach

Regrets:

Karen Mattersbuch	Environment Canada
Al Metcalf	City of Parksville
Chief David Bob	Nanoose First Nation
Chief Douglas White III	Snuneymuxw First Nation

CALL TO ORDER

The Chairperson called the meeting to order at 4:07 pm.

MINUTES

MOVED F. Van Eynde, SECONDED G. Holme, that the minutes of Regional Solid Waste Advisory Committee regular meeting of May 16, 2013 be approved.

CARRIED

EXISTING SYSTEM REPORT

Maura Walker presented the Draft Stage One Report to provide the Board with an overview of the existing solid waste management system, which described the key programs, policies and infrastructure along with base line performance data. Maura reviewed the trends in waste generation and how the RDN is the lowest generator of waste in the province. Maura Walker reviewed the waste composition data and talked about the key policy drivers to help Zero Waste and its diversion target. These programs include curbside organics collection yard waste management, recycling depots, future stewardship programs and BC's current Extended Producer Responsibility (EPR) Programs. The programs, policies, services and infrastructure in the RDN are indicative of an advanced solid waste system.

DISCUSSION/RSWAC INPUT

Howard Houle started the discussion with enquiring about the garbage collection and in regards to one can every two weeks if there have been any stats done on how many extra cans are put out? Jeff Ainge replied that we sell around 10,000 extra tags a year, and that's been a reasonably static number and it does go up but the number of homes has also gone up. **Gary Franssen** commented that the City of Nanaimo does an annual curbside survey on all routes over a two week period, and that the one can limit services the needs. 92-94% of households only put out the one can per 2 week.

Howard Houle questioned on the multi-family pick-ups done by commercial haulers, are there any requirements to have the material sorted before it gets delivered to the dump? **Carey McIver** commented that Sharon Horsburgh had worked on the project to create a data base to determine whether there is recycling in place because we have banned paper and plastics and 94% had the services, so the haulers ensured that if they were providing garbage collection they were also providing recycling. There is no individual penalty to each unit, tag limit where multi-family can throw out as much as they want and there is no individual penalty to each unit.

Jim McTaggart-Cowan questioned if the RDN had asked residents what the problems were and if we had considered a different approach providing recycling service to multi-family units, something similar to individual family complex's? **Maura Walker** commented in researching and reading information on the multi-family sector, there is a lack of control due to anonymity and also a lack of direct interface with the resident and service provider. With single family dwellings there was a social pressure to participate and that they have blue bins or green bins and there is a social marketing benefit.

Carey McIver commented that a large number of multi-family units are ground level town homes. We know that 94% of the units have access to the service. There is less than 20% of the housing stock. Going forward it can be noted that Multi-family dwellings participation is a potential issue to follow up on as part of the SWMP review process.

Jim McTaggart-Cowan enquired about the yard waste collection, and historically has the RDN monitored the number of vehicles going in to the facilities? How many vehicles are actually bringing yard waste to RDN facilities, what is the average distance those vehicles are driving, the concern is that this system is not assisting with other environmental issues, what are you tracking as far as greenhouse gases, and the emissions as this approach is forcing people to drive to drop the yard waste off?

Carey McIver replied that we do track all facilities. In the waste composite, 2% of waste stream is yard waste and 7000-8000 tons gets diverted and then majority goes to International Composting Corp. (ICC) and it all gets weighed. We know how much was diverted and how many vehicles dropped off. The issue with yard waste is not diversion of yard waste, going forward the issue with yard waste is do single family customers want to pay for the convenience of having it picked up at the curb. **Gary Franssen** commented on the multi-family situation, that it is ownership of the problem and ownership of the cost. If you've got a property managed and not owner occupied, there is a dramatic difference. He also commented on the issue of yard waste collection and transportation that you also need to cover the alternatives which would generate a lot of greenhouse gases.

Carey McIver commented in regards to the emissions concern, that if we want to do a pilot for a couple of weeks we could ask scale house staff to monitor the distances. A lot of the long distances are from areas that there is no ban on burning.

Ed Walsh commented with recycling at multi-family units, there are economic incentives where the property management or owner of the facility would promote the recycling because it's economically more viable and the education of the resident to describe what is the best practice is needed. As a hauler contamination is significant for them and agrees that education to residents is important. Ed mentioned that he will bring a presentation from Monique Booth, CVRD, on apartment recycling to the RDN staff to review.

Jim Kipp questioned Page 27 in the report. How much recycling are we receiving from multi-family and how much is separated when it arrives at the facilities, and how do we educate?

Carey McIver commented on commercial loads coming to the landfill with banned material, the commercial hauler would have picked up from different businesses, so it's not easy, but bans on commercial cardboard, etc. As far as the educating, Carey stated that when we did the multi-family database the RDN's role was to provide consistent information to the residents.

Maura Walker noted that residential Printed Paper and Packaging (PPP) will be handled by Multi-Material British Columbia (MMBC) beginning May 2014. MMBC is a stewardship organization that is going to set up a new recycling system for all residents across BC and it will work with all local governments and local businesses to improve the recycling collection services. There is so much inconsistency all over the province that one way to improve is to develop one system for everyone across BC. Provincial ads, media TV and commercials will be operated by MMBC.

Jan Hastings inquired about WSML Licensing and questioned whether it had encouraged or discouraged private sector involvement in CD or do the WSML procedures have to be looked at all? And is there any feedback from the organizations that have licenses whether it is too costly to implement or is any part of that system is a barrier?

Sharon Horsburgh replied that based on the number of licenses (12) issued there is a vibrant recycling industry that through high grading and source separating materials. Neighboring jurisdictions provide have similar bylaws so the regulation creates a level playing field. Without that infrastructure, we would not have the diversion rates we have today. Without the recycling infrastructure we would not have the diversion rates we have today. With combination of bans this regulatory framework has been the driver behind the private sector infrastructure. The WSML bylaw is designed to create a level playing field

which protects the economic interests of local businesses and the enforcement mechanisms ensure a high standard of operation.

Ed Walsh commented that he didn't find the WSML licensing too restrictive but gives them a level of comfort. Having a proper licensed disposal site gives them the ability to compete against other haulers.

Jim McTaggart-Cowan commented on the collection depots and that when the program started the purpose was to have the collection depots located where people naturally were going i.e. shopping centers. Given that there are a number of EPR programs why is the RDN not picking up EPR materials at the CRTS and the Landfill?

Carey McIver replied that once there was an EPR program we banned the material from disposal. When products are under a stewardship program we would not accept it at the RDN facilities. Some local governments that have more room at their facilities and will take EPCOR materials. The RDN decided when those programs were available that we would no long accept those for disposal and direct stewardship materials to private facilities.

ADJOURNMENT

The meeting was adjourned at 5:30 pm.

CHAIRPERSON

**REGIONAL DISTRICT OF NANAIMO
REGIONAL SOLID WASTE ADVISORY COMMITTEE MEETING**

**(RDN Board Chambers) THURSDAY, December 11, 2014
5:00 PM to 7:30 PM
(Dinner to be served)**

A G E N D A

- 1. CALL TO ORDER**
- 2. SOLID WASTE MANAGEMENT PLAN (SWMP) PROCESS & EVALUATION OF OPTIONS (L.GARDNER)**
- 3. SWMP CONSULTATION PLAN (M. WALKER)**
- 4. PRIORITIZING THE ISSUES (S. HORSBURGH)**
 - **Table Top Exercise To Prioritize The Issues**
- 5. OTHER**
- 6. ADJOURNMENT**

Distribution:

To Be Announced	Chair, RDN Director	Michael Recalma	Qualicum First Nation
Frank Van Eynde	Member at Large	Chief & Council	Nanoose First Nation
Jeremy Jones	Business Representative	Chief & Council	Snuneymuxw First Nation
Ed Walsh	Waste Management Industry	Al Metcalf	City of Parksville
Wally Wells	Business Representative	Al Cameron	Town of Qualicum Beach
Jan Hastings	Non Profit Representative	Fred Spears	District of Lantzville
Jim McTaggart-Cowan	Member at Large	Charlotte Davis	City of Nanaimo
Kevin Arnold	Waste Management Industry	Al Leuschen	Ministry of Environment
John Finnie	Member at Large	Karen Muttersbach	Environment Canada
Craig Evans	Member at Large	Glenn Gibson	Island Health
Ellen Ross	Member at Large		
Brian Dietrich	Member at Large		
Gerald Johnson	Member at Large		
Michele Green	Member at Large		
Amanda Ticknor	Member at Large		
Rod Mayo	Institutional Waste Generator		
Larry Gardner	Manager, Solid Waste Services, RDN		
Sharon Horsburgh	Senior Solid Waste Planner, RDN		
Daniel Pearce	A/GM Transportation & Solid Waste Services, RDN		
Rebecca Graves	Recording Secretary, RDN		

For information only:

Regional Board Members

CAO's: Paul Thorkelsson (RDN), Twyla Graff (District of Lantzville), Fred Manson (City of Parksville), Daniel Sailland (Town of Qualicum)

**REGIONAL DISTRICT OF NANAIMO
REGIONAL SOLID WASTE ADVISORY COMMITTEE MEETING
HELD ON THURSDAY, DECEMBER 11, 2014
BOARD CHAMBERS**

Present:

Joe Stanhope	Chair, RDN Director	Michael Recalma	Qualicum First Nation
Frank Van Eynde	Member at Large	Al Cameron	Town of Qualicum Beach
Jan Hastings	Non Profit Representative	Charlotte Davis	City of Nanaimo
Jim McTaggart-Cowan	Member at Large	Glenn Gibson	Island Heath
Kevin Arnold	Waste Management Industry	Rod Mayo	Institutional Waste Generator
John Finnie	Member at Large	Brian Dietrich	Member at Large
Craig Evans	Member at Large	Gerald Johnson	Member at Large
Ellen Ross	Member at Large	Michele Green	Member at Large
		Amanda Ticknor	Member at Large

Also in Attendance:

Larry Gardner	Manager of Solid Waste, RDN
Sharon Horsburgh	Senior Solid Waste Planner, RDN
Daniel Pearce	A/GM Transportation & Solid Waste Services, RDN
Rebecca Graves	Recording Secretary, RDN
Paul Thorkelsson	CAO, RDN

Regrets:

Chief & Council	Nanoose First Nation
Chief & Council	Snuneymuxw First Nation
Jeremy Jones	Business Representative
Wally Wells	Business Representative
Ed Walsh	Waste Management Industry
Fred Spears	District of Lantzville
Al Leuschen	Ministry of Environment
Karen Muttersbach	Environment Canada
Al Metcalf	City of Parksville

CALL TO ORDER

The Chairperson called the meeting to order at 5:25 pm.

INTRODUCTIONS

L. Gardner welcomed the committee members and round table introductions were done by individual committee members.

MINUTES

MOVED F. Van Eyde, SECONDED J. McTaggart-Cowan, that the minutes from the meeting of the Regional Solid Waste Advisory Committee regular meeting held October 8, 2014, be adopted.

CARRIED

SOLID WASTE MANAGEMENT PLAN (SWMP) PROCESS & EVALUATION OF OPTIONS (L. Gardner)

L. Gardner gave a brief presentation which included an overview of the process and evaluation of options.

SWMP CONSULTATION PLAN (M. Walker & Associates)

M. Walker gave a presentation on the consultation process for Solid Waste Management Plans and its three stages. Stage 1 includes an assessment of the existing system, Stage 2 develops and evaluates options and strategies for the future and Stage 3 to obtain community feedback on preferred options and then finalize plan.

The consultation plan components include a public and technical advisory committee(s), public and stakeholder consultation, First Nations consultation and Municipal consultation.

G. Johnson asked what the committee members should do if they are approached by residents and Rate Payers Associations that may request a presentation? Who should they ask?

L. Gardner commented that we do encourage committee members to talk to the community and inform them on the discussions that take place at these meetings but any press enquiries should be directed to RDN staff and if any presentations are requested to inform RDN staff.

F. Van Enyde questioned if the Residents Association's want a presentation can we make them aware of what we are doing? Would we consider doing that or at least could the directors receive copies of the meeting minutes so they are aware of what is discussed?

L. Gardner commented that we would be willing to provide presentations to community groups that are interested. The RDN will be but conducting extensive consultation as this is a regulatory requirement of the Plan review process.

J. Hastings enquired on the process of developing the plan for our consultation and communications plan if that would happen tonight or if at least a better understanding on how we would approach the plan?

M. Walker commented that we would at least come up with a consultation framework.

J. McTaggart-Cowan questioned how do we control the online survey so there isn't a particular group flooding the comments?

M. Walker clarified that the on line survey is only meant to test the waters and is a piece of information to help inform the process.

C. Evans commented that at this stage he recommends having more preliminary meetings with associations or community groups and reach out and engage the public as soon as possible.

J. Hastings remarked that people are really interested and should be educated first before making decisions. Does not believe we should have our first collaboration before we are selecting options.

A. Ticknor questioned in regards to Stage 1 is the survey available to view on line?

M. Walker replied that the survey is available for comments and that the draft newsletter will be sent out to homes and will be available on-line.

C. Evans reiterated that in Stage 2 he feels it would be beneficial to have the information displays and public service announcements to the public and have the dialogue start rather than in Stage 3.

J. McTaggart-Cowan mentioned that he believes it is the role of the committee members to bring that communication to various groups and present the information back to the group.

J. Finnie agreed that public meetings tend to bring people in and have them be heard. By the time you get to Stage 3, a lot of people in the public will be saying you've already made the decisions.

M. Walker commented that there is room for all ideas and the general public does want to be educated. Part of the committee's role is to represent the voice of the community and we need to bring that out.

PRIORITIZING THE ISSUES (S. Horsburgh)

S. Horsburgh gave an overview of the presentation which included putting the SWMP review in context, today's reality and underlying challenge, strategic planning approach to decision making, prioritizing the issues exercise and the next steps involved. Stage 2 of the plan review will involve five key elements which include issue identification, public interests, internal and external stakeholders, key messaging, media and evaluation.

J. McTaggart-Cowan questioned the waste success over the years of 2004 – 2012, what is the gross total in all the categories?

S. Horsburgh answered that the total waste diversion was broken down into categories based on WSMML reporting and landfill data. The data is included as an appendix in the Stage 1 report. The 2012 Waste Composition Study helps us to understand where the greatest diversion has been achieved.

L. Gardner replied that what was provided was a composition study of what was and is in the waste stream, but what wasn't presented is the waste generation prediction for the future. Future predictions and any information needed can be compiled together and presented at next meeting.

S. Horsburgh invited the committee to do a table top exercise to prioritize the issues that are marked on the posters and a review would follow.

A. Ticknor questioned if the table top exercise would be available online to further comment?

S. Horsburgh replied we can look at that it could be made available.

J. Hastings questioned when this plan was developed, and the landfill bans were implemented was it anticipated that increased diversion would result in shrinking landfill revenue? If so, what is the thinking that can guide future budget planning?

L. Gardner referred to some of the earlier discussion and work that has seen waste being exported off island because of increasing tipping fees in the region.

J. Finnie commented that when he was involved with Solid Waste, there was some discussion about what might happen if and when waste diversion programs started impacting tipping fees, i.e. the implication being that a reduction in the quantity of waste going to landfill may require an increase in tip fees to maintain the infrastructure. This could drive even more waste away from the landfill to illegal dumping and/or other facilities (like out of province) and further exacerbate the problem. Without additional revenue, this arrangement becomes unsustainable.

OTHER

L. Gardner noted that M. Walker will provide a recommended consultation framework and it will be available electronically. The plan is to have that framework available to adopt at our next meeting.

L. Gardner also mentioned that the RDN will provide a report to the Board early in the New Year regarding potential to reduce tipping fees to stabilize our revenue. This will be done while the management plan is being worked on.

G. Gibson questioned if the capacity at the Regional Landfill is able to accept an increased in percent of waste?

L. Gardner replied that we are not trying to attract garbage flow into the landfill but rather trying to adjust the fee to help to stabilize the industry.

J. Hastings asked what is the time frame attached to this recommendation?

L. Gardner commented that it would be up to the Board.

C. Evans enquired why not leave the tipping fee the same and ask the haulers to haul it away and pocket the difference rather than landfill the waste?

L. Gardner replied if we can stabilize it then we can make rational decisions for the future because it has implications to affect what we've achieved to date and also the loss of tonnage has an economic impact on local jobs vs jobs elsewhere. One concern is that there is such a disparity in fees, if we wait a year to figure things out there maybe no opportunity to change things back.

J. McTaggart-Cowan commented on lower the fees for industry but not for the public. If you reduce in one category you need to reduce for others.

A. Cameron questioned in regards to the commercial haulers, would you take other haulers from other areas if the tipping fee is reduced?

L. Gardner replied that our bylaw doesn't allow us accept material from out of district. But in terms of reduction, for commercial waste haulers, we are contemplating a reduced tipping fee for large generators.

D. Pearce commented that it's important to state that we don't encourage more garbage to the landfill but determining where we are going with zero waste.

ADJOURNMENT

The meeting was adjourned at 7:40pm.

Alec McPherson

CHAIRPERSON

**REGIONAL DISTRICT OF NANAIMO
REGIONAL SOLID WASTE ADVISORY COMMITTEE MEETING**

**THURSDAY, FEBRUARY 19, 2015, 5:00 PM - 7:30 PM
RDN Board Chambers
(Dinner to be served)**

A G E N D A

PAGES

CALL TO ORDER

DELEGATIONS

MINUTES

2-6 Minutes of the Regional Solid Waste Advisory Committee meeting held December 11, 2014.

BUSINESS ARISING FROM THE MINUTES

COMMUNICATIONS/CORRESPONDENCE

UNFINISHED BUSINESS

REPORTS

Future Population and Demographics (P. Thompson)

Finalize Consultation Plan (L. Gardner)

Stage One Review & Update (S. Horsburgh)

Finalize the Issues (S. Horsburgh)

-Meeting Schedule

Region Wide Newsletter & Survey Questions (S. Horsburgh)

Future Waste Generation Projections (L. Gardner)

ADDENDUM

BUSINESS ARISING FROM DELEGATIONS OR COMMUNICATIONS

NEW BUSINESS

ADJOURNMENT

Distribution:

Alec McPherson	Chair, RDN Director	Michael Recalma	Qualicum First Nation
Frank Van Eynde	Member at Large	Chief & Council	Nanoose First Nation
Jeremy Jones	Business Representative	Chief & Council	Snuneymuxw First Nation
Ed Walsh	Waste Management Industry	Al Metcalf	City of Parksville
Wally Wells	Business Representative	Al Cameron	Town of Qualicum Beach
Jan Hastings	Non Profit Representative	Fred Spears	District of Lantzville
Jim McTaggart-Cowan	Member at Large	Charlotte Davis	City of Nanaimo
John Finnie	Member at Large	Al Leuschen	Ministry of Environment
Craig Evans	Member at Large	Karen Muttersbach	Environment Canada
Ellen Ross	Member at Large	Glenn Gibson	Island Health
Brian Dietrich	Member at Large		
Gerald Johnson	Member at Large		
Michele Green	Member at Large		
Amanda Ticknor	Member at Large		
Rod Mayo	Institutional Waste Generator		

Larry Gardner	Manager, Solid Waste Services, RDN
Sharon Horsburgh	Senior Solid Waste Planner, RDN
Daniel Pearce	A/GM Transportation & Solid Waste Services, RDN
Rebecca Graves	Recording Secretary, RDN

For information only:

Regional Board Members: CAO's: Paul Thorkelsson (RDN), Twyla Graff (District of Lantzville), Marc Lefebvre (City of Parksville), Teunis Westbroek (Town of Qualicum),

**REGIONAL DISTRICT OF NANAIMO
REGIONAL SOLID WASTE ADVISORY COMMITTEE MEETING
HELD ON THURSDAY, FEBRUARY 19, 2015
BOARD CHAMBERS**

Present:

Alec McPherson	Chair, RDN Director	Michael Recalma	Qualicum First Nation
Frank Van Eynde	Member at Large	Al Cameron	Town of Qualicum Beach
Jan Hastings	Non Profit Representative	Charlotte Davis	City of Nanaimo
Wally Wells	Business Representative	Glenn Gibson	Island Heath
Gerald Johnson	Member at Large	Michele Green	Member at Large
John Finnie	Member at Large	Amanda Ticknor	Member at Large
Craig Evans	Member at Large	Ellen Ross	Member at Large

Also in Attendance:

Larry Gardner	Manager of Solid Waste, RDN
Sharon Horsburgh	Senior Solid Waste Planner, RDN
Daniel Pearce	A/GM Transportation & Solid Waste Services, RDN
Rebecca Graves	Recording Secretary, RDN
Paul Thorkelsson	CAO, RDN
Teunis Westbroek	Mayor, Town of Qualicum
Paul Thompson	Manager, Long Range Planning, RDN

Regrets:

Chief & Council	Nanoose First Nation
Chief & Council	Snuneymuxw First Nation
Jeremy Jones	Business Representative
Rod Mayo	Institutional Waste Generator
Ed Walsh	Waste Management Industry
Fred Spears	District of Lantzville
Al Leuschen	Ministry of Environment
Karen Muttersbach	Environment Canada
Al Metcalf	City of Parksville
Jim McTaggart-Cowan	Member at Large
Brian Dietrich	Member at Large

CALL TO ORDER

The Chairperson called the meeting to order at 5:20 pm.

MINUTES

MOVED F. Van Eyde, SECONDED G. Johnson, that the minutes from the meeting of the Regional Solid Waste Advisory Committee regular meeting held December 11, 2014, be amended and adopted as per discussion.

CARRIED

REPORTS

Future Population and Demographics (P. Thompson)

P. Thompson presented the Future Population and Demographics presentation for the RDN. Other areas were referenced which included City of Parksville, Town of Qualicum, City of Nanaimo and 7 Electoral areas. The presentation included population growth, profile, distribution and housing comparisons within the RDN and City of Nanaimo. The projected stats are compiled from Census Canada and BC Stats.

F. Van Eynde questioned if there were any studies done for survival rates for the 40-50 year olds?

C. Davies asked if there was any information of the number of households that are receiving collection services from other municipalities?

G. Johnson questioned if there any statistics available to come up with assessed value by housing type?

P. Thompson commented that he could look into this and get back to Committee.

C. Evans questioned if there is any historical data that goes back 35 years that could show what occurred and then translate what the diversion rates were.

P. Thompson replied that it would be difficult to obtain those records as BC Stats do not date back that far.

Finalize Consultation Plan (L. Gardner)

L. Gardner informed the Committee that following the presentation by Maura Walker in December 2014, the Consultation and Communications Plan has been revised and submitted to the Ministry of Environment for comment. This Plan is our commitment to do consultation and how we will move forward.

MOVED G. Johnson, SECONDED J. Finnie, that the Consultation Plan be adopted.

The motion was amended to include a request by the Committee that public consultation should occur in Stage 2 as well as Stage 3.

CARRIED

Stage One Review & Update (S. Horsburgh)

S. Horsburgh gave an overview of the Stage One Report and discussed how it was presented at several public forums which included a Hauler's and Recycling Roundtable meeting, RDN Board Members Workshop, Zero Waste Community Workshop and two RSWAC meetings. Current system includes key programs, policies and infrastructure. A discussion occurred in regards to the Stage 1 process and to review issues and opportunities moving forward. The next step is to present the Stage One report and issues to the Select Committee and then to the RDN Board for approval.

Finalize the Issues (S. Horsburgh)

S. Horsburgh discussed the Issues and Work plan document that Committee members had received. The document outlines the issues captured from the results of the findings in the Stage One Existing System report and stakeholder meetings. The work plan reflects the issues identified to date.

Region Wide Newsletter & Survey Questions (S. Horsburgh)

S. Horsburgh gave a demonstration of the web based Solid Waste Management Plan survey and invited feedback on the newsletter & survey questions.

Future Waste Generation Projections (L. Gardner)

L. Gardner briefly outlined the presentation on why future waste generation projections were important. Forecasting future waste generation is effected by a number of variables such as regional growth, stewardship programs, waste export and consumerism.

ADJOURNMENT

MOVED J. Hastings that the meeting be adjourned.

CARRIED



CHAIRPERSON

**REGIONAL DISTRICT OF NANAIMO
REGIONAL SOLID WASTE ADVISORY COMMITTEE MEETING**

**THURSDAY, APRIL 16, 2015, 5:00 PM - 7:30 PM
RDN Board Chambers**

A G E N D A

PAGES

CALL TO ORDER

DELEGATIONS

MINUTES

3-5 Minutes of the Regional Solid Waste Advisory Committee meeting held February 19, 2015.

BUSINESS ARISING FROM THE MINUTES

Update on Consultation (S. Horsburgh)

COMMUNICATIONS/CORRESPONDENCE

UNFINISHED BUSINESS

REPORTS

6-12 2 R's - Reduce, Reuse & EPR (M. Larson) (to be circulated)

13-21 3rd R - Recycling & End Uses (S. Horsburgh) (to be circulated)

Residential Curbside Collection Program Overview (C. Davies/J. Ainge)
(presentation)

ADDENDUM

SOLID WASTE MANAGEMENT SELECT COMMITTEE MEETING MINUTES

22-23 Minutes of the Solid Waste Management Select Committee meeting held Wednesday, March 11, 2015 (for information).

24-25 Minutes of the Solid Waste Management Select Committee meeting held Thursday, April 2, 2015 (for information).

BUSINESS ARISING FROM DELEGATIONS OR COMMUNICATIONS

NEW BUSINESS

Update from Regional Solid Waste Management Select Committee. (L. Gardner)

ADJOURNMENT

Distribution:

Alec McPherson	Chair, RDN Director	Michael Recalma	Qualicum First Nation
Jim Kipp	Deputy Chair		
Frank Van Eynde	Member at Large	Chief & Council	Nanoose First Nation
Jeremy Jones	Business Representative	Chief & Council	Snuneymuxw First Nation
Ed Walsh	Waste Management Industry	Al Metcalf	City of Parksville
Wally Wells	Business Representative	Al Cameron	Town of Qualicum Beach
Jan Hastings	Non Profit Representative	Fred Spears	District of Lantzville
Jim McTaggart-Cowan	Member at Large	Charlotte Davis	City of Nanaimo
John Finnie	Member at Large	Al Leuschen	Ministry of Environment
Craig Evans	Member at Large	Karen Muttersbach	Environment Canada
Ellen Ross	Member at Large	Glenn Gibson	Island Health
Brian Dietrich	Member at Large		
Gerald Johnson	Member at Large		
Michele Green	Member at Large		
Amanda Ticknor	Member at Large		
Rod Mayo	Institutional Waste Generator		
Larry Gardner	Manager, Solid Waste Services, RDN		
Sharon Horsburgh	Senior Solid Waste Planner, RDN		
Daniel Pearce	A/GM Transportation & Solid Waste Services, RDN		
Jeff Ainge	Zero Waste Coordinator, RDN		
Shelleen Schultz	Recording Secretary, RDN		

For information only:

Regional Board Members: CAO's: Paul Thorkelsson (RDN), Twyla Graff (District of Lantzville), Fred Manson (City of Parksville), Daniel Sailland (Town of Qualicum Beach), Ted Swabey (City of Nanaimo)

**REGIONAL DISTRICT OF NANAIMO
REGIONAL SOLID WASTE ADVISORY COMMITTEE MEETING
HELD ON THURSDAY, APRIL 16, 2015
BOARD CHAMBERS**

Present:

Alec McPherson	Chair, RDN Director	Amanda Ticknor	Member at Large
Fred Spears	District of Lantzville	Al Cameron	Town of Qualicum Beach
Jan Hastings	Non Profit Representative		
Charlotte Davis	City of Nanaimo		
Gerald Johnson	Member at Large		
John Finnie	Member at Large		
Craig Evans	Member at Large		
Jim McTaggart-Cowan	Member at Large		

Also in Attendance:

Larry Gardner	Manager of Solid Waste, RDN
Sharon Horsburgh	Senior Solid Waste Planner, RDN
Shelleen Schultz	Recording Secretary, RDN
Gary Fairbank	Waste Management Industry
Rod Leclerc	City of Nanaimo
Dave Ross	Waste Management Industry

Regrets:

Chief & Council	Nanoose First Nation
Chief & Council	Snunemuxw First Nation
Jeremy Jones	Business Representative
Rod Mayo	Institutional Waste Generator
Ed Walsh	Waste Management Industry
Al Leuschen	Ministry of Environment
Karen Muttersbach	Environment Canada
Al Metcalf	City of Parksville
Brian Dietrich	Member at Large
Frank Van Eynde	Member at Large
Wally Wells	Business Representative
Michael Recalma	Qualicum First Nation
Glenn Gibson	Island Heath
Michele Green	Member at Large
Ellen Ross	Member at Large

CALL TO ORDER

The Chairperson called the meeting to order at 5:12 pm.

MINUTES

Minutes of the Regional Solid Waste Advisory Committee meeting held on February 19, 2015 could not be motioned as there was no quorum.

BUSINESS ARISING FROM THE MINUTES

An update on the Solid Waste Management Plan Public Consultation activities was presented by S. Horsburgh. The activities underway and plans moving forward for the summer include:

- Revised consultation plan submitted to the MoE for comment
- Region-wide Solid Waste newsletter mailed
- Conducted Solid Waste survey
- Developed Static Displays
- Finalizing schedule of events to attend over the summer

REPORTS

L. Gardner presented a timeline review outlining, spring, summer and fall guidelines for the Consultation moving forward.

2 R's – Reduce, Reuse & EPR

M. Larson presented the report in a PowerPoint presentation on the Current Status of Reduce, Reuse & EPR in the RDN including the challenges and what the future role of the RDN in Reduce, Reuse & RPR will be.

3rd R – Recycling and end uses

S. Horsburgh presented a PowerPoint presentation outlining the Policy Framework and Current Status of Recycling in the RDN. The underlying policy that has contributed to the RDN's high diversion rate is the **"Zero Waste" policy** – *which continuously strives to reduce the amount of waste requiring disposal. Key policy drivers are as follows:*

- The RDN's material bans –treat garbage as a resource once a stable, alternative use is identified;
-Low hanging fruit: mattresses, organics, textiles, EPR materials
- High disposal fees
- Organics diversion strategy & construction/demolition (C&D) waste

Considerations for the future was also discussed as RDN's programs, policies, services and infrastructure indicative of an advanced solid waste management system such as EPR – new opportunities for private sector & residents.

- RDN not involved in delivering service to commercial sector - past success has been from policy and regulation
- Waste composition Study indicates more can be done within the current system to divert waste
- what can we do better?
- Societal impact of consumerism makes reducing the per capita waste a challenge how do we address this?
- Waste composition Study indicates more can be done within the current system to divert waste
- what can we do better?

Residential Curbside Collection Program Overview

C. Davies and J. Ainge presented a PowerPoint presentation outlining the Past, Present and future of curbside collection including City of Nanaimo and RDN curbside collection milestones, diversion through curbside budgets, MMBC, communication, challenges, future influences, achievements and looking ahead.

A timeline overview was also presented that covered options to consider moving forward:

Spring

- Feb – projected waste generation
- April - reduce, reuse, recycle and curbside
- May – resource recovery (presentation by NextUse); introduction on residual management
- June – WTE (presentation by Morrison Hershfield);Regulatory

Summer

- research options
- increased consultation/feedback

Fall

- review of research and feedback
- develop preferred options and system
- communications/consult/feedback
- revise preferred options and system
- Stage 2 Report

Group Exercise (L. Gardner/S. Horsburgh)

L. Gardner introduced a group activity to sit and discuss ways to improve the 3r's. Permission was also requested from the members to allow the 2 members of the public to participate and this was agreed upon by the members.

J. Hastings/J. Finnie requested ignoring the 3 group split up as the attendance was small. G. Johnson and A. McPherson agreed to proceed with the exercise as one united group.

A. McPherson provided an update on the AVICC. This committee focuses on Solid Waste issues and includes representatives from Vancouver Island regional districts. The next meeting will be held at the RDN. J. Kipp and myself have been appointed as representatives from the RDN. There may be representatives from Metro Vancouver in attendance.

L. Gardner was to update on the Regional Solid Waste Management Select committee, however due to time constraints this will be touched on at the next meeting.

J. Ainge commented that due to time constraints the group did not get to touch on the curbside aspect of the exercise which will be completed at the next meeting, however if anyone had any ideas regarding curbside collection they would like to share please feel free to approach the solid waste department.

ADJOURNMENT

Meeting adjourned at 7:50pm



CHAIRPERSON

**REGIONAL DISTRICT OF NANAIMO
REGIONAL SOLID WASTE ADVISORY COMMITTEE MEETING**

**THURSDAY, MAY 14, 2015, 5:00 PM - 7:30 PM
RDN Board Chambers**

A G E N D A

PAGES

CALL TO ORDER

DELEGATIONS

Jan Hastings, Nanaimo Recycling Exchange.

MINUTES

- 3-5 Minutes of the Regional Solid Waste Advisory Committee meeting held February 19, 2015.
- 6-8 Minutes of the Regional Solid Waste Advisory Committee meeting held April 16, 2015.

BUSINESS ARISING FROM THE MINUTES

COMMUNICATIONS/CORRESPONDENCE

UNFINISHED BUSINESS

- 9-9 Option Identification Exercise Table from April 16, 2015 RSWAC meeting. (to be circulated)

REPORTS

Local Governments Authority. (L. Gardner – to be circulated at meeting)

Table Top Exercise on Future Options

- The 2 R's – Reduce & Reuse
- The 3rd R – Recycling & End Uses
- Curbside Recycling

ADDENDUM

SOLID WASTE MANAGEMENT SELECT COMMITTEE MEETING MINUTES

- 10-27 Landfill Tip Fee Analysis Report (to be circulated)
- 28-30 Authority under the RDN's Solid Waste Management Plan to regulate Municipal Solid Waste. (to be circulated)
- 31-33 Disposal Facility Future Cost Projections. (to be circulated)

BUSINESS ARISING FROM DELEGATIONS OR COMMUNICATIONS

NEW BUSINESS

ADJOURNMENT

Distribution:

Alec McPherson	Chair, RDN Director	Michael Recalma	Qualicum First Nation
Jim Kipp	Deputy Chair	Chief & Council	Nanoose First Nation
Frank Van Eynde	Member at Large	Chief & Council	Snuneymuxw First Nation
Jeremy Jones	Business Representative	Al Metcalf	City of Parksville
Ed Walsh	Waste Management Industry	Al Cameron	Town of Qualicum Beach
Wally Wells	Business Representative	Fred Spears	District of Lantzville
Jan Hastings	Non Profit Representative	Charlotte Davis	City of Nanaimo
Jim McTaggart-Cowan	Member at Large	Al Leuschen	Ministry of Environment
John Finnie	Member at Large	Karen Muttersbach	Environment Canada
Craig Evans	Member at Large	Glenn Gibson	Island Health
Ellen Ross	Member at Large		
Gerald Johnson	Member at Large		
Michele Green	Member at Large		
Amanda Ticknor	Member at Large		
Rod Mayo	Institutional Waste Generator		

Larry Gardner	Manager, Solid Waste Services, RDN
Sharon Horsburgh	Senior Solid Waste Planner, RDN
Daniel Pearce	A/GM Transportation & Solid Waste Services, RDN
Jeff Ainge	Zero Waste Coordinator, RDN
Rebecca Graves	Recording Secretary, RDN

For information only:

Regional Board Members: CAO's: Paul Thorkelsson (RDN), Twyla Graff (District of Lantzville), Fred Manson (City of Parksville), Daniel Sailland (Town of Qualicum Beach), Ted Swabey (City of Nanaimo)

**REGIONAL DISTRICT OF NANAIMO
REGIONAL SOLID WASTE ADVISORY COMMITTEE MEETING
HELD ON THURSDAY, MAY 14, 2015
BOARD CHAMBERS**

Present:

Alec McPherson	Chair, RDN Director
Jim Kipp	RDN Director, Deputy Chair
Fred Spears	District of Lantzville
Jan Hastings	Non Profit Representative
Charlotte Davis	City of Nanaimo
Gerald Johnson	Member at Large
John Finnie	Member at Large
Craig Evans	Member at Large
Jim McTaggart-Cowan	Member at Large
Wally Wells	Business Representative
Michele Green	Member at Large
Ellen Ross	Member at Large
Al Cameron	Town of Qualicum Beach

Also in Attendance:

Larry Gardner	Manager of Solid Waste, RDN
Sharon Horsburgh	Senior Solid Waste Planner, RDN
Rebecca Graves	Recording Secretary, RDN
Daniel Pearce	A/GM, Transportation & Solid Waste Services
Ben Geselbracht	Zero Waste Nanaimo
Bill McKay	City of Nanaimo
Ron Bolin	Public Attendee

Regrets:

Chief & Council	Nanoose First Nation
Chief & Council	Snuneymuxw First Nation
Jeremy Jones	Business Representative
Rod Mayo	Institutional Waste Generator
Ed Walsh	Waste Management Industry
Al Leuschen	Ministry of Environment
Karen Muttersbach	Environment Canada
Al Metcalf	City of Parksville
Frank Van Eynde	Member at Large
Michael Recalma	Qualicum First Nation
Glenn Gibson	Island Heath
Amanda Ticknor	Member at Large

CALL TO ORDER

The Chairperson called the meeting to order at 5:08 pm.

DELEGATES

Jan Hastings, Nanaimo Recycling Exchange re. 4 R's of Recycling Presentation.

Jan Hastings provided a presentation on the 4 R's of Recycling which outlined the history of recycling in Nanaimo, various recycling depots, the business of recycling and the future resource recycling.

MINUTES

MOVED W. Wells, SECONDED C. Evans, that the minutes from the meeting of the Regional Solid Waste Advisory Committee regular meeting held February 19, 2015, be adopted.

CARRIED

MOVED J. McTaggart, SECONDED G. Johnson, that the minutes from the meeting of the Regional Solid Waste Advisory Committee regular meeting held April 16, 2015, be adopted.

CARRIED

BUSINESS ARISING FROM THE MINUTES

COMMUNICATIONS/CORRESPONDENCE

UNFINISHED BUSINESS

The Option Identification Exercise Table from April 16, 2015 was circulated.

REPORTS

Local Governments Authority

L. Gardner introduced the Regional District Bylaw Authority to Manage Consumer Products staff report which gave an overview of the Regional District's ability to regulate consumer products.

Table Top Exercise on Future Options

The Committee broke off into groups to continue discussing future options regarding:

- The 2 R's – Reduce & Reuse
- The 3rd R – Recycling & End Uses
- Curbside Recycling

[6:55pm Director McPherson left the meeting.]

ADDENDUM

SOLID WASTE MANAGEMENT SELECT COMMITTEE MEETING MINUTES

NEW BUSINESS

C. Evans announced that Zero Waste Nanaimo has formed and now have regular meetings and invited members of the committee to attend.

ADJOURNMENT

Meeting adjourned at 7:30pm



CHAIRPERSON

**REGIONAL DISTRICT OF NANAIMO
REGIONAL SOLID WASTE ADVISORY COMMITTEE MEETING**

**THURSDAY, MAY 28, 2015, 5:00 PM - 7:30 PM
RDN Board Chambers**

A G E N D A

PAGES

CALL TO ORDER

DELEGATIONS

Russ Black, Next Use. Re. Overview of Mixed Waste Recycling Facilities.

MINUTES

3-4 Minutes of the Regional Solid Waste Advisory Committee meeting held May 14, 2015.

BUSINESS ARISING FROM THE MINUTES

COMMUNICATIONS/CORRESPONDENCE

UNFINISHED BUSINESS

REPORTS

5-13 An Overview of Multi-Material Recycling Facilities.
(S. Horsburgh – to be circulated)

Presentation – Brief overview of current MRF technology and ownership in the RDN. (S. Horsburgh)

Table Top Group Exercise.

What is the future of MRF technology in the RDN context?

ADDENDUM

SOLID WASTE MANAGEMENT SELECT COMMITTEE MEETING MINUTES

BUSINESS ARISING FROM DELEGATIONS OR COMMUNICATIONS

NEW BUSINESS

ADJOURNMENT

Distribution:

Alec McPherson	Chair, RDN Director	Michael Recalma	Qualicum First Nation
Jim Kipp	Deputy Chair	Chief & Council	Nanoose First Nation
Frank Van Eynde	Member at Large	Chief & Council	Snuneymuxw First Nation
Jeremy Jones	Business Representative	Al Metcalf	City of Parksville
Ed Walsh	Waste Management Industry	Al Cameron	Town of Qualicum Beach
Wally Wells	Business Representative	Fred Spears	District of Lantzville
Jan Hastings	Non Profit Representative	Charlotte Davis	City of Nanaimo
Jim McTaggart-Cowan	Member at Large	Al Leuschen	Ministry of Environment
John Finnie	Member at Large	Karen Muttersbach	Environment Canada
Craig Evans	Member at Large	Glenn Gibson	Island Health
Ellen Ross	Member at Large		
Gerald Johnson	Member at Large		
Michele Green	Member at Large		
Amanda Ticknor	Member at Large		
Rod Mayo	Institutional Waste Generator		

Solid Waste Select Management Committee Members:

Joe Stanhope	Jim Kipp	Bill McKay	Bill Yoachim
Howard Houle	Marc Lefebvre	Teunis Westbroek	Maureen Young

RDN Staff:

Larry Gardner	Manager, Solid Waste Services, RDN
Sharon Horsburgh	Senior Solid Waste Planner, RDN
Daniel Pearce	A/GM Transportation & Solid Waste Services, RDN
Rebecca Graves	Recording Secretary, RDN

For information only:

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**REGIONAL DISTRICT OF NANAIMO
REGIONAL SOLID WASTE ADVISORY COMMITTEE MEETING
HELD ON THURSDAY, MAY 28, 2015
BOARD CHAMBERS**

Present:

Alec McPherson	Chair, RDN Director
Jim Kipp	RDN Director, Deputy Chair
Larissa Coser	Community Representative
Craig Evans	Member at Large
John Finnie	Member at Large
Michele Green	Member at Large
Derek Haarsma	Business Representative
Jan Hastings	Non Profit Representative
Gerald Johnson	Member at Large
Jim McTaggart-Cowan	Member at Large
Amanda Ticknor	Member at Large
Frank Van Eynde	Member at Large
Wally Wells	Business Representative
Stewart Young Jr.	Business Representative
Al Cameron	Town of Qualicum Beach

Also in Attendance:

Larry Gardner	Manager of Solid Waste, RDN
Rebecca Graves	Recording Secretary, RDN
Sharon Horsburgh	Senior Solid Waste Planner, RDN
Meghan Larson	Special Projects Assistant, RDN
Daniel Pearce	A/GM, Transportation & Solid Waste Services, RDN
Julien Fell	RDN Director
Bill McKay	RDN Director
Maureen Young	RDN Director

Regrets:

Ellen Ross	Member at Large
Ed Walsh	Waste Management Industry
Chief & Council	Nanoose First Nation
Chief & Council	Snuneymuxw First Nation
Glenn Gibson	Island Health
Charlotte Davis	City of Nanaimo
Al Leuschen	Ministry of Environment
Al Metcalf	City of Parksville
Karen Muttersbach	Environment Canada
Michael Recalma	Qualicum First Nation
Fred Spears	District of Lantzville

CALL TO ORDER

The Chairperson called the meeting to order at 5:05 PM.

Chairperson McPherson stated that due to resignations of committee members there were now four new members on the committee. Introductions were made.

DELEGATES

Russ Black, Next Use. Re. Overview of Mixed Waste Recycling Facilities.

R. Black provided a presentation of Mixed Waste Recycling Facilities in the United States. Next Use has introduced a proposal to build a \$30 million facility in Coquitlam that would use similar technologies to separate waste into categories.

MINUTES

MOVED F. Van Eynde, SECONDED G. Johnson, that the minutes from the meeting of the Regional Solid Waste Advisory Committee regular meeting held May 14, 2015, be amended and adopted as per discussion.

CARRIED

BUSINESS ARISING FROM THE MINUTES

As per discussion, minutes from May 14, 2015 were amended to include J. Kipp in attendance.

J. Hastings commented that she feels the collective conversation isn't being captured in the minutes and would like more detail.

COMMUNICATIONS/CORRESPONDENCE

UNFINISHED BUSINESS

REPORTS

An Overview of Multi-Material Recycling Facilities. (S. Horsburgh)

S. Horsburgh presented a brief overview of current Multi Material Recycling facilities technology and ownership in the Regional District of Nanaimo. There are currently three MRF's in Nanaimo: Progressive Waste, Emterra and Cascades, that are privately owned. There is a trend by some jurisdictions to transition from multi or two-stream recycling to commingled/single stream. Reducing collection costs and providing more convenience is influencing MRF design. Commingled or single stream recycling means putting all of your recyclables – paper, plastics and recyclable containers into the same container, tote, box, bag or cart - without sorting

C. Evans enquired if we have any information on the announcement of a multi material facility being built by Green by Nature here in Nanaimo..? S. Horsburgh commented at this time we have not been notified that a facility of this magnitude has not been proposed in the Region. In addition, such a facility would require a Waste Stream Management License from the RDN. The RDN will confirm if there has been such an announcement recently.

Table Top Group Exercise.

L. Gardner introduced the table top group exercise and the Committee broke off into groups to discuss the topic "What is the future of MRF technology in the RDN context?"

Exercise topics that were discussed during the exercise included;

- the process of what happens before we use MRF technology,
- reduction of incentives at home,
- issues with materials being mixed at the source,
- create more ownership around the community,
- benefits of MRF to the community and RDN,
- potential partnerships between private and public,
- how would it effect the 3 MRF's in Nanaimo,
- reduce our collection vehicles,
- a role for a MRF as a prescreen at the Landfill,
- community based approach for ownership,
- higher level of source separation at the Landfill,
- an addition of a free store at RDN Facilities.

J. Kipp commented that his group discussed possibly developing a new philosophy with our SWMP and define what is being accomplished with our solid waste. Is the goal of our SWMP to be economical, socially and culturally involved and to be concerned with our environment? There is a need for a new definition of garbage and the philosophy behind what we want to accomplish.

J. Hastings would like to see research conducted on models that are operational in the United States that were referred to by Next Use.

C. Evans requested that we ask the players of the mentioned \$25 million MRF coming to Nanaimo to attend a committee meeting.

D. Pearce replied that we could make a request to Green by Nature to provide either a formal written response or they could attend as a delegation regarding any plans they may have for future development.

ADDENDUM

SOLID WASTE MANAGEMENT SELECT COMMITTEE MEETING MINUTES

NEW BUSINESS

ADJOURNMENT

MOVED J. McTaggart-Cowan, SECONDED F. Van Eynde, that this meeting be adjourned.

TIME: 7:30 PM



CHAIRPERSON

**REGIONAL DISTRICT OF NANAIMO
REGIONAL SOLID WASTE ADVISORY COMMITTEE MEETING**

**THURSDAY, JUNE 18, 2015, 5:00 PM - 7:30 PM
RDN Board Chambers**

A G E N D A

PAGES

CALL TO ORDER

DELEGATIONS

MINUTES

3-4 Minutes of the Regional Solid Waste Advisory Committee meeting held May 28, 2015.

BUSINESS ARISING FROM THE MINUTES

COMMUNICATIONS/CORRESPONDENCE

UNFINISHED BUSINESS

REPORTS

New and Emerging Technologies, Konrad Fichtner from Morrison Hershfield.
(presentation)

Group Exercise

What is the future role of emerging technologies in the RDN?

ADDENDUM

SOLID WASTE MANAGEMENT SELECT COMMITTEE MEETING MINUTES

BUSINESS ARISING FROM DELEGATIONS OR COMMUNICATIONS

NEW BUSINESS

ADJOURNMENT

Distribution:

Alec McPherson	Chair, RDN Director	Michael Recalma	Qualicum First Nation
Jim Kipp	Deputy Chair	Chief & Council	Nanoose First Nation
Frank Van Eynde	Member at Large	Chief & Council	Snuneymuxw First Nation
Derek Haarsma	Business Representative	Al Metcalf	City of Parksville
Ed Walsh	Waste Management Industry	Al Cameron	Town of Qualicum Beach
Wally Wells	Business Representative	Fred Spears	District of Lantzville
Jan Hastings	Non Profit Representative	Charlotte Davis	City of Nanaimo
Jim McTaggart-Cowan	Member at Large	Al Leuschen	Ministry of Environment
John Finnie	Member at Large	Karen Muttersbach	Environment Canada
Craig Evans	Member at Large	Glenn Gibson	Island Health
Ellen Ross	Member at Large		
Gerald Johnson	Member at Large		
Michele Green	Member at Large		
Amanda Ticknor	Member at Large		
Michael Tripp	Business Representative		
Stewart Young Jr.	Business Representative		
Larissa Coser	Community Representative		

Solid Waste Select Management Committee Members:

Joe Stanhope	Jim Kipp	Bill McKay	Bill Yoachim
Howard Houle	Marc Lefebvre	Teunis Westbroek	Maureen Young

RDN Staff:

Larry Gardner	Manager, Solid Waste Services, RDN
Sharon Horsburgh	Senior Solid Waste Planner, RDN
Dennis Trudeau	GM Transportation & Solid Waste Services, RDN
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Regional Board Members: CAO's: Paul Thorkelsson (RDN), Twyla Graff (District of Lantzville), Fred Manson (City of Parksville), Daniel Sailland (Town of Qualicum Beach), Ted Swabey (City of Nanaimo)

**REGIONAL DISTRICT OF NANAIMO
REGIONAL SOLID WASTE ADVISORY COMMITTEE MEETING
HELD ON THURSDAY, JUNE 18, 2015
BOARD CHAMBERS**

Present:

Alec McPherson	Chair, RDN Director
Jim Kipp	RDN Director, Deputy Chair
Larissa Coser	Community Representative
Craig Evans	Member at Large
John Finnie	Member at Large
Michele Green	Member at Large
Jan Hastings	Non Profit Representative
Gerald Johnson	Member at Large
Jim McTaggart-Cowan	Member at Large
Derek Haarsma	Business Representative
Michael Tripp	Business Representative
Wally Wells	Business Representative
Al Cameron	Town of Qualicum Beach
Fred Spears	District of Lantzville

Also in Attendance:

Larry Gardner	Manager of Solid Waste, RDN
Rebecca Graves	Recording Secretary, RDN
Sharon Horsburgh	Senior Solid Waste Planner, RDN
Meghan Larson	Special Projects Assistant, RDN
Dennis Trudeau	GM, Transportation & Solid Waste Services, RDN
Julien Fell	RDN Director
Bob Rogers	RDN Director
Maureen Young	RDN Director
Dave Ross	Public Attendee

Regrets:

Ed Walsh	Waste Management Industry
Stewart Young Jr.	Business Representative
Ellen Ross	Member at Large
Amanda Ticknor	Member at Large
Frank Van Eynde	Member at Large
Chief & Council	Nanoose First Nation
Chief & Council	Snuneymuxw First Nation
Glenn Gibson	Island Heath
Charlotte Davis	City of Nanaimo
Al Leuschen	Ministry of Environment
Karen Muttersbach	Environment Canada
Michael Recalma	Qualicum First Nation

CALL TO ORDER

The Chairperson called the meeting to order at 5:10 PM.

DELEGATES

MINUTES

MOVED G. Johnson, SECONDED J. McTaggart-Cowan, that the minutes from the meeting of the Regional Solid Waste Advisory Committee regular meeting held May 28, 2015, be adopted.

CARRIED

BUSINESS ARISING FROM THE MINUTES

J. Hastings commented that under the 'Reduce Options' exercise the group would like to see something done in regards to packaging. In the SWMP guidelines, it reads that "in addition RDN activities will be complimented by Federal and Provincial reduction initiatives in packaging" and questioned if we can ask for a report on what those initiatives might be?

L. Gardner replied that the SWMP guidelines were written in 1994 before the Extended Producer Responsibility program was introduced. The program at that time saw the introduction of the deposit container refund system. A report will be provided to the Committee on what currently exists with the EPR programs in BC.

J. McTaggart-Cowan mentioned in 1988 a federal initiative on packaging was created and suggested that the provincial government to do something about packaging to put pressure back on the industry.

G. Johnson suggested that local government through the RSWAC could create a list of local issues and invite industry to a meeting where the problems/issues could be presented and industry could be asked to follow up with solutions.

J. Hastings commented on the ability of the Committee to add agenda items.

COMMUNICATIONS/CORRESPONDENCE

UNFINISHED BUSINESS

REPORTS

Konrad Fichtner, Morrison Hershfield. - New and Emerging Technologies.

K. Fichtner provided a presentation on new and emerging technologies for recovering energy. Two types of technologies to recover energy from waste are biological systems and thermal systems. Biological systems include anaerobic digestion and landfill gas recovery. Thermal Systems include mass burn combustion, incineration gasification, and pyrolysis.

G. Johnson asked what techniques are used to stabilize fly ash?

K. Fichtner replied that a chemical process can be used that will bind the metals and the most common is using Portland cement.

J. Hastings enquired that in order to operate efficiently you need recyclables and if you took contaminated recyclables out, would that change?

K. Fichtner commented that there is still enough heating value in the residual waste stream from products that can't be recycled. It is conceivable that if enough of the materials were taken out then there wouldn't be enough left over.

L. Coser questioned how the fly ash was managed and if all landfills accept the ash?

K. Fichtner replied that in Canada the ash is landfilled, used for road base and daily landfill cover.

C. Evans enquired about the working relationship between Metro Vancouver and Morrison Hershfield in regards to Metro's waste to energy proposal?

K. Fichtner answered that Morrison Hershfield have provided studies for Metro Vancouver in the past but at this point there is no working relationship.

C. Evans questioned the scientific study that was done for the Durham W-E project and the potential impacts on the drinking water and the agricultural land within 10 kms?

K. Fichtner commented that the study was conducted by another firm and he could follow-up and provide that health assessment for review.

G. Johnson asked what the life expectancy would be of a brand new thermal plant?

K. Fichtner remarked that it could be 25-50 years and that first generation equipment the average being 20-25 years with constant upgrading and good maintenance.

G. Johnson commented that he would like to see an analysis on the value of energy compared to what could be saved in energy if recycled.

J. Finnie remarked that any of the mentioned technologies including new emerging technologies will have residuals that will need some form of disposal capacity and that cost needs to be factored in.

Group Exercise.

L. Gardner introduced the table top group exercise:

- What are the RDN's current options for residual management?
- What are the preferred options for the RDN to investigate for managing residuals?
- What benefits do you see in working with other regional districts for residual waste management?

Some of the points relayed back by the Committee included:

- optimize the landfill life and waste export
- consideration of emerging technologies
- restricting out of region waste
- investigate break the bag options
- investigate waste to energy further
- zero waste plan
- organic diversion and recycling programs
- partnerships with co-generation wood waste

- continue to look at new technologies and approaches to manufacturing that is acceptable to the whole community
- EPR programs need to approach design of packaging
- Collaborating with other regions on Vancouver Island to export off island

ADDENDUM

SOLID WASTE MANAGEMENT SELECT COMMITTEE MEETING MINUTES

NEW BUSINESS

Next RSWAC meeting will be July 9, 2015.

ADJOURNMENT

MOVED G. Johnson, SECONDED J. McTaggart-Cowan, that this meeting be adjourned.

TIME: 7:30 PM



CHAIRPERSON

**REGIONAL DISTRICT OF NANAIMO
REGIONAL SOLID WASTE ADVISORY COMMITTEE MEETING**

**THURSDAY, July 9, 2015, 5:00 PM - 7:30 PM
RDN Board Chambers**

A G E N D A

PAGES

CALL TO ORDER

DELEGATIONS

MINUTES

3-6 Minutes of the Regional Solid Waste Advisory Committee meeting held June18, 2015.

BUSINESS ARISING FROM THE MINUTES

COMMUNICATIONS/CORRESPONDENCE

UNFINISHED BUSINESS

REPORTS

Overview of Zero Waste Plan (S. Horsburgh – presentation)
Overview of Regulatory Authorities (L. Gardner – report & presentation)

SWMP Review Survey

GROUP EXERCISE

Approval of the SWMP can provide the RDN additional authorities. Which regulatory authorities should be considered for inclusion in the SWMP? How might additional authorities improve diversion?

ADDENDUM

SOLID WASTE MANAGEMENT SELECT COMMITTEE MEETING MINUTES

BUSINESS ARISING FROM DELEGATIONS OR COMMUNICATIONS

NEW BUSINESS

ADJOURNMENT

Distribution:

Alec McPherson	Chair, RDN Director	Michael Recalma	Qualicum First Nation
Jim Kipp	Deputy Chair	Chief & Council	Nanoose First Nation
Frank Van Eynde	Member at Large	Chief & Council	Snuneymuxw First Nation
Derek Haarsma	Business Representative	Al Cameron	Town of Qualicum Beach
Ed Walsh	Waste Management Industry	Fred Spears	District of Lantzville
Wally Wells	Business Representative	Charlotte Davis	City of Nanaimo
Jan Hastings	Non Profit Representative	Al Leuschen	Ministry of Environment
Jim McTaggart-Cowan	Member at Large	Karen Muttersbach	Environment Canada
John Finnie	Member at Large	Glenn Gibson	Island Health
Craig Evans	Member at Large		
Ellen Ross	Member at Large		
Gerald Johnson	Member at Large		
Michele Green	Member at Large		
Amanda Ticknor	Member at Large		
Michael Tripp	Business Representative		
Stewart Young Jr.	Business Representative		
Larissa Coser	Community Representative		

RDN Staff:

Larry Gardner	Manager, Solid Waste Services, RDN
Sharon Horsburgh	Senior Solid Waste Planner, RDN
Dennis Trudeau	GM Transportation & Solid Waste Services, RDN
Rebecca Graves	Recording Secretary, RDN
Meghan Larson	Special Projects Coordinator

For information only:

Regional Board Members: CAO's: Paul Thorkelsson (RDN), Jim Dias (District of Lantzville), Fred Manson (City of Parksville), Daniel Sailland (Town of Qualicum Beach), Ted Swabey (City of Nanaimo)

**REGIONAL DISTRICT OF NANAIMO
REGIONAL SOLID WASTE ADVISORY COMMITTEE MEETING
HELD ON THURSDAY, JULY 9, 2015
BOARD CHAMBERS**

Present:

Alec McPherson	Chair, RDN Director
Craig Evans	Member at Large
John Finnie	Member at Large
Michele Green	Member at Large
Gerald Johnson	Member at Large
Jim McTaggart-Cowan	Member at Large
Ellen Ross	Member at Large
Amanda Ticknor	Member at Large
Larissa Coser	Community Representative
Derek Haarsma	Business Representative
Jan Hastings	Non Profit Representative
Michael Tripp	Business Representative
Wally Wells	Business Representative
Stewart Young Jr.	Business Representative
Charlotte Davis	City of Nanaimo

Also in Attendance:

Larry Gardner	Manager of Solid Waste, RDN
Rebecca Graves	Recording Secretary, RDN
Sharon Horsburgh	Senior Solid Waste Planner, RDN
Meghan Larson	Special Projects Coordinator, RDN
Dennis Trudeau	GM, Transportation & Solid Waste Services, RDN

Regrets:

Al Cameron	Town of Qualicum Beach
Chief & Council	Nanoose First Nation
Chief & Council	Snuneymuxw First Nation
Glenn Gibson	Island Heath
Jim Kipp	RDN Director, Deputy Chair
Al Leuschen	Ministry of Environment
Karen Muttersbach	Environment Canada
Michael Recalma	Qualicum First Nation
Fred Spears	District of Lantzville
Ed Walsh	Waste Management Industry
Frank Van Eynde	Member at Large

CALL TO ORDER

The Chairperson called the meeting to order at 5:07 PM.

DELEGATES

MINUTES

MOVED J. McTaggart-Cowan, SECONDED G. Johnson, that the minutes from the meeting of the Regional Solid Waste Advisory Committee regular meeting held June 18, 2015, be adopted.

CARRIED

BUSINESS ARISING FROM THE MINUTES

J. Hastings commented that in the second paragraph where it reads that “in addition RDN activities will be completed by Federal and Provincial reduction initiatives in packaging” this should read “complimented”.

COMMUNICATIONS/CORRESPONDENCE

UNFINISHED BUSINESS

REPORTS

Overview of Zero Waste Plan. (S. Horsburgh)

S. Horsburgh provided a presentation on the *Overview of the Zero Waste Program* which included the Zero Waste Plan, performance objectives and future opportunities. The 2004 Zero Waste Plan includes WSML, landfill disposal bans and residential food organics collection. The WSML provides a regulatory framework that has enabled private sector investment to establish recycling and composting facilities and provide alternatives to landfilling. Creating the disposal ban has given the private sector the ability to divert material from the waste stream as there are viable markets for the recyclables. The WSML Bylaw helps to protect the environment, encourages private sector investment in the region, sets high standards in the operation of recycling facilities and common regulatory framework that creates a level playing field. The current SWMP advocates collaboration with the Province and Federal government to improve EPR programs.

J. McTaggart-Cowan questioned who is being educated and is there any discussion with retailers regarding reducing packaging?

S. Horsburgh responded that the RDN has a variety of communication tools to educate the residential sector and with the business sector the RDN focuses on restaurants with respect to the commercial food waste diversion program. As the haulers provide collection service to the ICI sector they provide education based on their service levels. Packaging discussions occur at the provincial level and regional districts have an influence in developing policies at that level.

J. Hastings remarked that having the haulers as educator's seemed unfair.

S. Horsburgh commented that for the residential curbside program the RDN takes the leading role in educating and for the commercial sector we provide education in conjunction with the haulers.

C. Evans asked if glass is an EPR material?

S. Horsburgh replied that glass is accepted at recycling depots and deposit glass is under deposit refund. Having the landfill take glass as a convenience could be considered under the plan review.

L. Coser commented that she feels it is important for goal setting to have a definition around zero waste so that the Committee could give feedback.

L. Coser also enquired about the organics in commercial areas and how many restaurants and facilities are involved in this program and what is the target?

S. Horsburgh commented that we could review the diversion rate for the commercial sector and conduct an audit to see how many businesses in the ICI sector subscribe to an organics service. We have the data but it required constant updating due to high turn over of businesses and staff in the retail and restaurant sector.

L. Gardner commented that diversion goals could be improved and the committee has put forward good recommendations and input for waste reduction. RDN staff will look at how to improve programs and will bring forward to the committee some of the ideas.

A. Ticknor enquired of the \$100,000 spent on illegal dumping does that number just include clean up or if signage etc. was included?

L. Gardner replied that the budget was a combination of waiving fees for groups to clean up, enforcement and regulated activities like signage and monitoring sites.

J. McTaggart-Cowan asked if there is an individual breakdown on various elements in single family, multi-family and ICI separately in order to see where the components are coming from?

S. Horsburgh responded that she could produce a slide to show the breakdown towards the end of the meeting.

L. Gardner commented that we receive approximately \$1 million a year from MMBC for collection and they pay us an amount per household which goes towards curbside education.

L. Coser remarked that it would be interesting to hear more about zero waste programs being done in other communities/countries.

Overview of Regulatory Authorities. (L. Gardner)

L. Gardner provided an overview of the authorities that may be granted by the province to the RDN through Ministerial approval of a SWMP.

From an authorities perspective a SWMP is an instrument of the *Environmental Management Act*, it serves to:

- Provide an exemption to gaining another type of authorization for discharges to the environment.
- Not require the assent of electors for adopting a bylaw for implementing a waste management plan.
- Provide regional districts additional powers to manage municipal solid waste.

A. McPherson commented that due to an emergency, the meeting would be adjourned until next meeting to discuss unfinished business.

A. McPherson requested that the presentation be circulated to the committee members for review and if there was any comments in regards to the survey the committee could forward those to RDN staff.

ADDENDUM

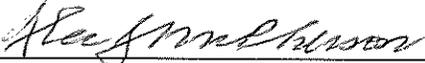
SOLID WASTE MANAGEMENT SELECT COMMITTEE MEETING MINUTES

NEW BUSINESS

Next RSWAC meeting will be held September 17, 2015.

ADJOURNMENT

MOVED J. McTaggart-Cowan, SECONDED G. Johnson, that this meeting be adjourned.



CHAIRPERSON

**REGIONAL DISTRICT OF NANAIMO
REGIONAL SOLID WASTE ADVISORY COMMITTEE MEETING**

**THURSDAY, September 17, 2015, 5:00 PM - 7:30 PM
RDN Board Chambers**

A G E N D A

PAGES

CALL TO ORDER

DELEGATIONS

MINUTES

3-6 Minutes of the Regional Solid Waste Advisory Committee meeting held July 9, 2015.

BUSINESS ARISING FROM THE MINUTES

COMMUNICATIONS/CORRESPONDENCE

UNFINISHED BUSINESS

REPORTS

7-14 Update on Communications and SWMP Review Survey. (S. Horsburgh – Update)
Regulatory Authorities to increase diversion. (L. Gardner – Report & Presentation)

GROUP EXERCISE

Approval of the SWMP can provide the RDN additional authorities. Which regulatory authorities should be considered for inclusion in the SWMP? How might additional authorities improve diversion?

ADDENDUM

SOLID WASTE MANAGEMENT SELECT COMMITTEE MEETING MINUTES

BUSINESS ARISING FROM DELEGATIONS OR COMMUNICATIONS

NEW BUSINESS

Future Reports.
Next Solid Waste Management Select Committee Meeting.

ADJOURNMENT

Distribution:

Alec McPherson	Chair, RDN Director	Michael Recalma	Qualicum First Nation
Jim Kipp	Deputy Chair	Chief & Council	Nanoose First Nation
Frank Van Eynde	Member at Large	Chief & Council	Snuneymuxw First Nation
Derek Haarsma	Business Representative	Bob Weir	Town of Qualicum Beach
Ed Walsh	Waste Management Industry	Fred Spears	District of Lantzville
Wally Wells	Business Representative	Charlotte Davis	City of Nanaimo
Jan Hastings	Non Profit Representative	Al Leuschen	Ministry of Environment
Jim McTaggart-Cowan	Member at Large	Karen Muttersbach	Environment Canada
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Michele Green	Member at Large		
Amanda Ticknor	Member at Large		
Michael Tripp	Business Representative		
Stewart Young Jr.	Business Representative		
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Larry Gardner	Manager, Solid Waste Services, RDN
Sharon Horsburgh	Senior Solid Waste Planner, RDN
Dennis Trudeau	GM Transportation & Solid Waste Services, RDN
Rebecca Graves	Recording Secretary, RDN
Meghan Larson	Special Projects Coordinator

For information only:

Regional Board Members: CAO's: Paul Thorkelsson (RDN), Brad McRae (District of Lantzville), Fred Manson (City of Parksville), Daniel Sailland (Town of Qualicum Beach), Ted Swabey (City of Nanaimo)

**REGIONAL DISTRICT OF NANAIMO
REGIONAL SOLID WASTE ADVISORY COMMITTEE MEETING
HELD ON THURSDAY, SEPTEMBER 17, 2015
BOARD CHAMBERS**

Present:

Alec McPherson	Chair, RDN Director
Craig Evans	Member at Large
John Finnie	Member at Large
Jim Kipp	RDN Director, Deputy Chair
Frank Van Eynde	Member at Large
Ellen Ross	Member at Large
Amanda Ticknor	Member at Large
Larissa Coser	Community Representative
Derek Haarsma	Business Representative
Jan Hastings	Non Profit Representative
Michael Tripp	Business Representative
Wally Wells	Business Representative
Stewart Young Jr.	Business Representative
Charlotte Davis	City of Nanaimo
Ed Walsh	Waste Management Industry
John Marsh	Town of Qualicum Beach

Also in Attendance:

Larry Gardner	Manager of Solid Waste, RDN
Rebecca Graves	Recording Secretary, RDN
Sharon Horsburgh	Senior Solid Waste Planner, RDN
Meghan Larson	Special Projects Coordinator, RDN

Regrets:

Dennis Trudeau	GM, Transportation & Solid Waste Services, RDN
Chief & Council	Nanoose First Nation
Chief & Council	Snuneymuxw First Nation
Glenn Gibson	Island Heath
Al Leuschen	Ministry of Environment
Karen Muttersbach	Environment Canada
Michael Recalma	Qualicum First Nation
Fred Spears	District of Lantzville
Gerald Johnson	Member at Large
Jim McTaggart-Cowan	Member at Large
Michele Green	Member at Large

CALL TO ORDER

The Chairperson called the meeting to order at 5:07 PM.

DELEGATES

MINUTES

MOVED F. Van Eynde, SECONDED J. Kipp, that the minutes from the meeting of the Regional Solid Waste Advisory Committee regular meeting held July 7, 2015, be adopted. CARRIED

BUSINESS ARISING FROM THE MINUTES**COMMUNICATIONS/CORRESPONDENCE****UNFINISHED BUSINESS****REPORTS****Update on Communications and SWMP Review Survey. (S. Horsburgh)**

S. Horsburgh provided a presentation on the status of the Stage 2 Communications and Consultation Plan. A report outlining the Stage 2 Communications is currently being developed and will be submitted to the Ministry of Environment. The report will outline the communication activities and will demonstrate the RDN's commitment to actively engaging the public in debate with respect to the SWMP. In 2015, there will be 6 mail outs done discussing the SWMP Plan Review and Update, 2 online surveys and attendance at multiple summer and public events.

L. Coser commented on the alternatives given in the survey that financially the costs hadn't been mapped out.

L. Gardner replied that the next time the RDN goes out to the community it will be at another level of detail so that informed decisions can be made based on real numbers.

J. Hastings asked what some of the comments were from the community survey when they answered that they would pay more to maintain or increase services.

L. Gardner commented that it was more to engage with the public and the general sense indicated that they were willing to pay a bit more to have services increased.

Regulatory Authorities to Increase Diversion. (L. Gardner)

L. Gardner gave a presentation on regulatory tools to promote increased waste diversion which included providing an explanation of authorities that may be granted through a SWMP, explaining additional powers that Regional Districts may obtain and provided examples of how these additional powers may influence diversion.

C. Davies questioned why we would get haulers to work as agents but rather mandate anyone that generates waste to sort at the point of generation?

L. Gardner commented that to regulate at the source it would take an additional authority and staffing needs to do the enforcement towards people that don't behave.

J. Marsh questioned if the provisions are not in the SWMP you can't regulate or deal with it, how often does the SWMP change and how difficult is it to amend?

L. Gardner replied that about once every decade and then it takes a couple of years to complete.

M. Tripp remarked on why not put all the provisions in the SWMP and have the debate later.

J. Hastings asked what problems will all this solve?

L. Gardner commented that if the committee believes we can encourage people to do the right thing with diversion because we ask them to, then we don't need any of these provisions. If we believe there is a line and we want to cross that line to compel people to do the desired behavior, then regulatory tools are necessary. If we want diversion to increase over the next 15 years then how do we anticipate increasing diversion? Without these regulatory tools will we achieve the desired behaviour? If we do, then we don't need any of these tools.

S. Young questioned what is the RDN's opinion on the cost of diversion?

L. Gardner commented that if you were to look at mandatory waste collection, either by a single contracted hauler or municipal staff, there wouldn't be a place for you unless you had a contract to provide the service.

D. Haarsma commented that the only provision that makes sense is waste source regulation. The private sector has invested way too much to have the RDN take over collection and in regards to working with the hauler to get source separation essentially the hauler currently has to regulate the customer base.

W. Wells stated that one of the options is to include all provisions and one option is to include none of the provisions. He would like to see future discussion focusing on regulatory authority to address the systematic issues that are holding back diversion and other options that would not necessarily require new regulations.

GROUP EXERCISE

L. Gardner introduced the group exercise and the Committee broke off into groups to discuss the topic "Which regulatory authorities should be considered for inclusion in the SWMP?" and "How might additional authorities improve diversion?"

ADDENDUM

SOLID WASTE MANAGEMENT SELECT COMMITTEE MEETING MINUTES

NEW BUSINESS

L. Gardner updated committee that there would be future reports sent to them over the next few weeks to help on future discussion.

J. Hastings commented that there were many exercise options that stated further research required.

L. Gardner replied that those required research requested will be addressed in the future reports.

Next RSWAC meeting will be held October 15, 2015.

ADJOURNMENT

MOVED J. Kipp, SECONDED F. Van Eynde, that this meeting be adjourned.



CHAIRPERSON

Regulatory Option	PRO	CON
<p>1. Mandatory Waste Collection System (MWC)</p>	<ul style="list-style-type: none"> ➤ Source separation is mandatory ➤ Potential to use a co-op for collection like 'recology' in San Francisco ➤ Ship to MRF for processing ➤ Potential to increase diversion % through mandatory collection 	<ul style="list-style-type: none"> ➤ Shuts down competitive business ➤ Destroys Capital investment ➤ Administrative burden on business and RD ➤ Jurisdiction – City of Nanaimo is a provider ➤ Jurisdiction – City of Parksville eliminate competition & free market ➤ Jurisdiction –Town of QB a service provider ➤ Eliminates price competition ➤ Business already collecting from ICI ➤ Limits private enterprise ➤ Too authoritative ➤ Not competitive - does not allow free enterprise
<p>2. Waste Hauler Franchise (WHF)</p>	<ul style="list-style-type: none"> ➤ Table 2 removed it as an option ➤ Slightly better than above as more than 1 hauler used ➤ Ship materials to MRF 	<ul style="list-style-type: none"> ➤ Table 2 removed it as an option ➤ As above
<p>3. Waste Haulers as Agents (WHA)</p>	<ul style="list-style-type: none"> ➤ Operational efficiencies & reduction of emissions ➤ Ship to MRF ➤ Retains opportunity for innovation and private investment 	<ul style="list-style-type: none"> ➤ More expensive collection ➤ Will not want to implement remittance to local govt ➤ Surcharges attached to business ➤ Lot of administration

<p>4. Flow Management (FM)</p>	<ul style="list-style-type: none"> ➤ Ship to MRF ➤ Controls material so high grading is possible 	<ul style="list-style-type: none"> ➤ Discourages cross regional coordination ➤ Too restrictive for residuals and does not aid diversion
<p>5. Waste Source Regulation (WSR)</p>	<ul style="list-style-type: none"> ➤ Promotes separation at source ➤ Enforcement by private sector is expensive but if works especially if it is done in conjunction with Flow Management. ➤ Higher diversion % from ICI ➤ Promotes high grade products 	<ul style="list-style-type: none"> ➤ Public sector responsible for enforcement & administrative costs. ➤ Moderate administrative burden ➤ High compliance through enforcement
<p>6. Other: Recycling</p>	<ul style="list-style-type: none"> ➤ Could provide stable recycling program to back up plan <p>Questions:</p> <ul style="list-style-type: none"> ➤ What is our goal? Diversion? Increase use of resources. Do we need to define 3R's? 	<ul style="list-style-type: none"> ➤ Subsidize last 30% of low value material ➤ Storage of hard to recycle material ➤ Socialize recycling cost

**REGIONAL DISTRICT OF NANAIMO
REGIONAL SOLID WASTE ADVISORY COMMITTEE MEETING**

**THURSDAY, NOVEMBER 5, 2015, 5:00 PM - 7:30 PM
RDN Board Chambers**

A G E N D A

PAGES

CALL TO ORDER

DELEGATIONS

MINUTES

3-7 Minutes of the Regional Solid Waste Advisory Committee meeting held Sept. 17, 2015.

BUSINESS ARISING FROM THE MINUTES

COMMUNICATIONS/CORRESPONDENCE

8-9 Letter from NextUse Recycling Ltd. dated October 27, 2015 re. Mixed Waste Recovery Facility.

10-14 SWANA Article re. *A Comparative Analysis of Source-Separation and Mixed Waste Recycling Systems in Charlotte, NC, and Montgomery, AL.*

UNFINISHED BUSINESS

REPORTS

15-21 Curbside Collection Program – Compliance and Enforcement to Improve Diversion.
(J. Ainge – Presentation with Group Discussion to Follow)

22-24 Curbside Collection Program – Household Glass Collection.
(M. Larson - Presentation with Group Discussion to Follow)

25-30 Curbside Collection Program – Yard Waste Collection.
(S. Horsburgh - Presentation with Group Discussion to Follow)

ADDENDUM

SOLID WASTE MANAGEMENT SELECT COMMITTEE MEETING MINUTES

31-32 Minutes of the Solid Waste Management Select Committee meeting held October 7, 2015.

BUSINESS ARISING FROM DELEGATIONS OR COMMUNICATIONS

NEW BUSINESS

ADJOURNMENT

Distribution:

Alec McPherson	Chair, RDN Director	Michael Recalma	Qualicum First Nation
Jim Kipp	Deputy Chair	Chief & Council	Nanoose First Nation
Frank Van Eynde	Member at Large	Chief & Council	Snuneymuxw First Nation
Derek Haarsma	Business Representative	John Marsh	Town of Qualicum Beach
Ed Walsh	Waste Management Industry	Fred Spears	District of Lantzville
Wally Wells	Business Representative	Charlotte Davis	City of Nanaimo
Jan Hastings	Non Profit Representative	Al Leuschen	Ministry of Environment
Jim McTaggart-Cowan	Member at Large	Karen Muttersbach	Environment Canada
John Finnie	Member at Large	Glenn Gibson	Island Health
Craig Evans	Member at Large		
Ellen Ross	Member at Large		
Gerald Johnson	Member at Large		
Michele Green	Member at Large		
Amanda Ticknor	Member at Large		
Michael Tripp	Business Representative		
Stewart Young Jr.	Business Representative		
Larissa Coser	Community Representative		

RDN Staff:

Larry Gardner	Manager, Solid Waste Services, RDN
Sharon Horsburgh	Senior Solid Waste Planner, RDN
Dennis Trudeau	GM Transportation & Solid Waste Services, RDN
Meghan Larson	Special Projects Coordinator
Jeff Ainge	Zero Waste Coordinator, RDN
Rebecca Graves	Recording Secretary, RDN

For information only:

Regional Board Members: CAO's: Paul Thorkelsson (RDN), Brad McRae (District of Lantzville), Fred Manson (City of Parksville), Daniel Sailland (Town of Qualicum Beach), Ted Swabey (City of Nanaimo)

**REGIONAL DISTRICT OF NANAIMO
REGIONAL SOLID WASTE ADVISORY COMMITTEE MEETING
HELD ON THURSDAY, NOVEMBER 5, 2015
BOARD CHAMBERS**

Present:

Alec McPherson	Chair, RDN Director
Craig Evans	Member at Large
John Finnie	Member at Large
Gerald Johnson	Member at Large
Frank Van Eynde	Member at Large
Ellen Ross	Member at Large
Amanda Ticknor	Member at Large
Jim McTaggart-Cowan	Member at Large
Michele Green	Member at Large
Larissa Coser	Community Representative
Derek Haarsma	Business Representative
Jan Hastings	Non Profit Representative
Charlotte Davis	City of Nanaimo

Also in Attendance:

Larry Gardner	Manager of Solid Waste, RDN
Rebecca Graves	Recording Secretary, RDN
Sharon Horsburgh	Senior Solid Waste Planner, RDN
Meghan Larson	Special Projects Coordinator, RDN
Jeff Ainge	Zero Waste Coordinator

Regrets:

Dennis Trudeau	GM, Transportation & Solid Waste Services, RDN
Chief & Council	Nanoose First Nation
Chief & Council	Snuneymuxw First Nation
Glenn Gibson	Island Heath
Al Leuschen	Ministry of Environment
Karen Muttersbach	Environment Canada
Michael Recalma	Qualicum First Nation
Fred Spears	District of Lantzville
Jim Kipp	RDN Director, Deputy Chair
Michael Tripp	Business Representative
Wally Wells	Business Representative
Stewart Young Jr.	Business Representative
John Marsh	Town of Qualicum Beach
Ed Walsh	Waste Management Industry

CALL TO ORDER

The Chairperson called the meeting to order at 5:07 PM.

DELEGATES

MINUTES

MOVED F. Van Eynde, SECONDED G. Johnson, that the minutes from the meeting of the Regional Solid Waste Advisory Committee regular meeting held Sept. 17, 2015, be adopted. CARRIED

BUSINESS ARISING FROM THE MINUTES

COMMUNICATIONS/CORRESPONDENCE

Letter from NextUse Recycling Ltd. dated October 27, 2015 re. Mixed Waste Recovery Facility.

MOVED G. Johnson, SECONDED F. Van Eynde, that the correspondence from NextUse Recycling Ltd. dated October 27, 2015 regarding a Mixed Waste Recovery Facility be received.

CARRIED

SWANA Article re. A Comparative Analysis of Source-Separation and Mixed Waste Recycling Systems in Charlotte, NC, and Montgomery, AL.

MOVED G. Johnson, SECONDED F. Van Eynde, that the article from SWANA regarding *A Comparative Analysis of Source-Separation and Mixed Waste Recycling Systems in Charlotte, NC, and Montgomery, AL.* be received.

CARRIED

UNFINISHED BUSINESS

S. Horsburgh introduced a decision making tool (DMT) which is an online audience polling tool that engages the public's interest and allows for participant anonymity. After each presentation a discussion on the topic will occur and then vote using the DMT.

REPORTS

Curbside Collection Program – Compliance and Enforcement to Improve Diversion. (J. Ainge)

J. Ainge gave a presentation on the Compliance and Enforcement report on possible opportunities to improve diversion rates through the existing curbside collection programs. The residential sector contributes the smallest amount of waste to landfill at 17%. Households receiving curbside collection service throughout the region are achieving a 60% diversion rate through their participation in the curbside recycling and food waste collection programs. Despite this laudable achievement, compostable organic waste still enters the waste stream.

Options to improve curbside compliance and participation in diversion programs include targeted outreach and education activities focusing on organics and other recyclable materials, extending the organics disposal ban to include food waste from residential sources

It was noted that focusing efforts on the commercial sector, along with the multi-family housing sector is likely to have greater impact than targeting curbside collection.

A group discussion followed and there was strong support for enforcement of recycling in multi-family dwellings (MFD). It was clarified that the DMT was only to consider residential collection and the result showed a slight preference to transition to more enforcement acceptable waste types set out at curb (i.e. proper separation of waste, organics and recyclables).

The DMT showed 62% favour in transitioning to more enforcement. It was noted that the DMT should have included a status quo option which would have influenced the result.

Curbside Collection Program – Household Glass Collection. (M. Larson)

M. Larson provided a presentation on the Household Glass Collection report which included a brief history of glass collection in the RDN and options for curbside glass collection.

Household glass containers have not been accepted as part of curbside recycling for several years in this region, and staff are not aware of any glass processors located in the Province who are capable of taking glass and making new glass containers. In 2009, an analysis of the RDN's curbside materials estimated glass containers made up about 5% of the overall recyclables set out for collection. With the advent of the Province's packaging and printed paper stewardship program, operated by the stewardship agency MMBC, household glass containers are considered packaging. Glass containers are accepted at no charge at six depots throughout the region that get paid by MMBC to handle the material.

A change to the curbside recycling collection programs operated by the CoN and RDN would require approval from MMBC, as well as contract changes for the curbside collection contractor. The CoN is contemplating service level options as a new collection system is phased in; this could include glass collection for their customers.

There is limited diversion impact in reinstating glass to the curbside recycling, and any change will come with costs (i.e., two collection trucks estimated at \$190,000/year to serve the RDN curbside routes). Glass collection can be included in contract renewal discussions with the collection contractor and MMBC when the time comes, however no immediate changes as part of the SWMP action items are foreseen.

A group discussion followed and the DMT polling results showed 38% favoured the inclusion of glass in the in the curbside collection program. It was noted that the DMT should have included a status quo option which would have influenced the result.

Curbside Collection Program – Yard Waste Collection. (S. Horsburgh)

S. Horsburgh gave a presentation on the current yard waste management practices; determine if there is an opportunity to add yard waste collection to the curbside program and to calculate diversion benefits.

Support for introducing curbside yard waste collection hovers around 40 to 60% based on surveys completed in the region over recent years. That support drops when respondents are asked about their willingness to pay for such a service. Even without curbside collection, approximately 12,000 tonnes of yard waste is diverted from disposal each year due to residents' use of yard waste drop-off facilities coupled with backyard composting activity. Compare this with less than 3,000 tonnes estimated to enter the landfill, of which only an estimated 225 tonnes is attributed to curbside sources.

The City of Nanaimo reports their intention to conduct public engagement in Fall/Winter of 2015. With the introduction of automated collection in Nanaimo, Council has asked staff to review the appetite of City residents for collection of Yard Waste. Staff and Council in Nanaimo regularly hear from residents that they wish to receive collection of Yard Waste, the question remains as to how much they are willing to pay. At a Council meeting in June 2015 City staff reported to Council that, of the 15 largest Cities in BC (of which Nanaimo is ninth), nine of them collected yard waste. City staff also noted as part of this

report that the average user rate of the 15 largest municipalities in BC is \$197 per household per year, compared to the City rate of \$99.75 per year.

Based on the 2012 waste composition study and data from facilities handling this material, roughly 80% of yard waste generated in the RDN is already diverted from landfill disposal. The collection of yard waste at the curb will not contribute significantly to the region's diversion goals, but the impression is that such a service will provide a much higher level of convenience for the resident generating the waste.

Curbside collection of yard waste is likely to reduce greenhouse gas emissions by reducing vehicle trips to the receiving facilities, but compulsory collection could also result in more yard waste being captured since residents would be paying for the service whether they used it or not. The most significant contribution to the region's sustainability goals associated with the introduction of curbside yard waste collection would be the rationale to extend backyard burning bans to more areas in the RDN.

A group discussion followed and the results from DMT polling indicated 23% supported including yard waste at curbside 23% were unsure of whether it should be included in the program. It was noted that the DMT should have included a status quo option which would have influenced the result.

ADDENDUM

SOLID WASTE MANAGEMENT SELECT COMMITTEE MEETING MINUTES

MOVED G. Johnson, SECONDED J. McTaggart-Cowan, that the minutes from the meeting of the Solid Waste Select Committee meeting held October 7, 2015, be adopted. CARRIED

NEW BUSINESS

Next RSWAC meeting will be held November 26, 2015.

ADJOURNMENT

MOVED J. McTaggart-Cowan, SECONDED G. Johnson, that this meeting be adjourned.

CHAIRPERSON

**REGIONAL DISTRICT OF NANAIMO
REGIONAL SOLID WASTE ADVISORY COMMITTEE MEETING**

**THURSDAY, NOVEMBER 26, 2015, 5:00 PM - 7:30 PM
RDN Board Chambers**

A G E N D A

PAGES

CALL TO ORDER

DELEGATIONS

Larissa Coser, Zero Waste Nanaimo (20 mins)

MINUTES

3-6 Minutes of the Regional Solid Waste Advisory Committee meeting held Nov. 5, 2015.

BUSINESS ARISING FROM THE MINUTES

COMMUNICATIONS/CORRESPONDENCE

7-12 NextUse Presentation to RDN Letter July 2015.

13-16 Residual Management Scope of Work Staff Report Nov. 2015.

17- 22 Solid Waste Management Plan Community Consultation Summary Report.

UNFINISHED BUSINESS

REPORTS

23-27 Technical Memorandum: Share Shed Programs at Regional District of Nanaimo Solid Waste Facilities. (S. Horsburgh – Presentation)

28-38 Technical Memorandum: EPR Materials at Regional District of Nanaimo Solid Waste Facilities. (M. Larson - Presentation)

ADDENDUM

SOLID WASTE MANAGEMENT SELECT COMMITTEE MEETING MINUTES

BUSINESS ARISING FROM DELEGATIONS OR COMMUNICATIONS

NEW BUSINESS

ADJOURNMENT

Distribution:

Alec McPherson	Chair, RDN Director	Michael Recalma	Qualicum First Nation
Jim Kipp	Deputy Chair	Chief & Council	Nanoose First Nation
Frank Van Eynde	Member at Large	Chief & Council	Snuneymuxw First Nation
Derek Haarsma	Business Representative	John Marsh	Town of Qualicum Beach
Ed Walsh	Waste Management Industry	Fred Spears	District of Lantzville
Wally Wells	Business Representative	Charlotte Davis	City of Nanaimo
Jan Hastings	Non Profit Representative	Al Leuschen	Ministry of Environment
Jim McTaggart-Cowan	Member at Large	Karen Muttersbach	Environment Canada
John Finnie	Member at Large	Glenn Gibson	Island Health
Craig Evans	Member at Large		
Ellen Ross	Member at Large		
Gerald Johnson	Member at Large		
Michele Green	Member at Large		
Amanda Ticknor	Member at Large		
Michael Tripp	Business Representative		
Stewart Young Jr.	Business Representative		
Larissa Coser	Community Representative		

RDN Staff:

Larry Gardner	Manager, Solid Waste Services, RDN
Sharon Horsburgh	Senior Solid Waste Planner, RDN
Dennis Trudeau	GM Transportation & Solid Waste Services, RDN
Meghan Larson	Special Projects Coordinator
Jeff Ainge	Zero Waste Coordinator, RDN
Rebecca Graves	Recording Secretary, RDN

For information only:

Regional Board Members: CAO's: Paul Thorkelsson (RDN), Brad McRae (District of Lantzville), Fred Manson (City of Parksville), Daniel Sailland (Town of Qualicum Beach), Tracy Samra (City of Nanaimo)

**REGIONAL DISTRICT OF NANAIMO
REGIONAL SOLID WASTE ADVISORY COMMITTEE MEETING
HELD ON THURSDAY, NOVEMBER 26, 2015
BOARD CHAMBERS**

Present:

Alec McPherson	Chair, RDN Director
Jim Kipp	Deputy Chair, RDN Director
Frank Van Eynde	Member at Large
Derek Haarsma	Business Representative
Jan Hastings	Non Profit Representative
Jim McTaggart-Cowan	Member at Large
Craig Evans	Member at Large
John Finnie	Member at Large
Gerald Johnson	Member at Large
Michele Green	Member at Large
Amanda Ticknor	Member at Large
Larissa Coser	Community Representative
Stewart Young Jr.	Business Representative

Also in Attendance:

Maureen Young	RDN Director
Larry Gardner	Manager of Solid Waste, RDN
Rebecca Graves	Recording Secretary, RDN
Sharon Horsburgh	Senior Solid Waste Planner, RDN
Meghan Larson	Special Projects Coordinator, RDN
Dennis Trudeau	GM, Transportation & Solid Waste Services, RDN

Regrets:

Chief & Council	Nanoose First Nation
Chief & Council	Snuneymuxw First Nation
Glenn Gibson	Island Heath
Al Leuschen	Ministry of Environment
Karen Muttersbach	Environment Canada
Michael Recalma	Qualicum First Nation
Fred Spears	District of Lantzville
Michael Tripp	Business Representative
Wally Wells	Business Representative
John Marsh	Town of Qualicum Beach
Ed Walsh	Waste Management Industry
Ellen Ross	Member at Large
Charlotte Davis	City of Nanaimo
Jeff Ainge	Zero Waste Coordinator

CALL TO ORDER

The Chairperson called the meeting to order at 5:03 PM and respectfully acknowledged the Coast Salish Nations on whose traditional territory the meeting took place.

DELEGATES

Darlene Arksey, Administrative Assistant, Woodgrove Centre

D. Arksey gave a verbal presentation on Woodgrove Centre's Corporate Sustainability Policy and their recycling program. In the spring, a company comes to the Centre and performs a waste audit. Woodgrove facilities staff provides education to their retail tenants however, their biggest challenge is trying to get customers, retailers and staff on board with recycling. Retailers are concentrating on selling not sorting recyclables and the majority of stores lack the space for storing recyclables for collection. The Centre has 30 – 95 gallon totes for organics which are changed out twice a week or more if needed. The loading bays have 6 blue bins for recycling and organic bins are available in the back hallways in the food court for tenants to dispose of their organics. Garbage is gathered from retailers and is sorted through, pictures are taken and then the retailers are approached to review what could have been recycled.

J. McTaggart-Cowan asked if she is aware of the recycling efforts in other malls.

D. Arksey responded she is unsure of the level of recycling at Nanaimo North and Country Club Mall.

C. Evans questioned if the expansion plans for Woodgrove Centre include resolving the lack of space or storage issue?

D. Arksey explained that the Centre is not expanding but renovating which includes new tile and lighting changes, etc.

J. Hastings questioned if it was mandatory or optional for the businesses to recycle?

D. Arksey replied that the Centre tries to make it mandatory when new leases are signed. There are strict rules but enforcement doesn't occur as they don't have the staff to enforce.

J. Hastings enquired if one of the options was to have local government regulate businesses and what do you think it should look like to be useful?

D. Arksey replied that the attitude is that once the recycling is put into the Centre's bins it is no longer the retailer's responsibility and even if legislation was put into place it would be hard to enforce. The fact that the Centre's diversion rate has increased shows improvement.

D. Haarsma enquired if their shopping mall in Alberta was actually recycling or landfilling?

D. Arksey commented she wasn't sure but would find out and forward that information to him.

J. McTaggart-Cowan commented that his observation on EPR is that it is not working because the retailers are part of the production side and EPR is producer responsibility not consumer responsibility. The retailers aren't recognizing that part of their business is to manage materials put out there that end up as waste.

J. Kipp stated that Nanaimo malls are the biggest tax payers as well as large generators of waste and have the potential to recycle more and should be receiving assistance from the City or the region.

Larissa Coser, Zero Waste Nanaimo

L. Coser from Zero Waste Nanaimo provide a Presentation on how Zero Waste works and the Zero Waste Hierarchy. Some principles and practical steps towards zero waste include:

1. Adopt the Zero Waste definition of ZWIA
2. Establish targets and a timeline
3. Engage the whole community
4. Demand decision makers manage resources not waste
5. Educate residents, businesses and visitors
6. Build Residual Separation and Research Facilities
7. Develop New Rules and Incentives to move towards ZW
8. Remove government subsidies for wasting
9. Support Zero Waste Procurement
10. Expand Zero Waste Infrastructure
11. Challenge Businesses to lead the way to Zero Waste.

L. Coser described Zero Waste in Action which includes community engagement and education within businesses, waste management at events, product and packaging information for the public and being the voice of Zero Waste to local government. Industrial, commercial and institutional sectors produce more than half of our waste and one question is how can we change the behavior of these large waste generators and help them get to Zero Waste? This would include waste audits, toolkits, Green Teams, Industry experts and consultants and education that supports regulations & bans.

G. Johnson questioned what cost would the community be willing to bare to achieve zero?

L. Coser replied that 69% surveyed were willing to pay more and if we know our goal is zero waste we know how to target our resources.

G. Johnson mentioned he believes we should be looking at introducing a grant application process for community groups and other organizations like Zero Waste Nanaimo, and consider it as a recommendation.

J. McTaggart-Cowan questioned what rules are there within the RDN to make sure the RDN is only purchasing recyclable/returnable items and avoiding generating waste?

D. Trudeau replied that the RDN does not have a formal purchasing policy for purchasing recycled/returnable items but rather our polices ensure, on the financial side, that we are giving value to the taxpayers and making sure we use the competitive bid process.

J. Kipp commented that zero waste has always been a vision for the community and it is an ethical decision to aim for 100% waste diversion.

L. Coser questioned if it would be possible to put a vote forward on using zero waste as a road map for the decisions made in the Committee?

A discussion ensued around the topic of zero waste and how it should be included in the future Solid Waste Management Plan.

D. Trudeau advised the committee that a staff report will be prepared outlining the RDN's current zero waste plan and brought forward to the next meeting.

MINUTES

MOVED J. McTaggart-Cowan, SECONDED G. Johnson, that the minutes from the meeting of the Regional Solid Waste Advisory Committee regular meeting held November 26, 2015, be adopted. CARRIED

J. McTaggart-Cowan requested that his comment regarding adding a status quo option for the in the electronic polling exercise be reflected in the November 5, 2015 minutes.

L. Gardner commented that minutes would be amended accordingly.

BUSINESS ARISING FROM THE MINUTES

G. Johnson conducted some independent research on glass recycling in the US and shared the following findings with the committee: glass is being used as a component in aggregate, in concrete and asphalt and also as glass pellets for sandblasting. G. Johnson requested that the RDN do further research and find similar ways to use recycled glass content.

A. McPherson noted that the RDN does not have a highway facility and this research would fall under Ministry of Transportation's jurisdiction.

COMMUNICATIONS/CORRESPONDENCE

MOVED G. Johnson, SECONDED J. McTaggart-Cowan, that the following communications / correspondence be received. CARRIED

NextUse Presentation to RDN Letter July 2015.

Residual Management Scope of Work Staff Report Nov. 2015.

Solid Waste Management Plan Community Consultation Summary Report.

UNFINISHED BUSINESS

REPORTS

Technical Memorandum: Share Shed Programs at Regional District of Nanaimo Solid Waste Facilities. (S. Horsburgh)

S. Horsburgh introduced a slide presentation on Share Shed programs at Regional Waste Facilities. Share Sheds give customers the opportunity to set aside items in good condition for re-use by others instead of landfilling as this may result in higher waste diversion.

Installing Share Sheds would have a number of short term costs including site preparation, engineering, buildings and signage and capital costs at the two facilities could be approximately \$13,000. It is estimated that annual operating costs could be approximately \$190,000 per annum for the two sites.

The RSWAC made the following comments on the presentation:

- agreed that a Share Shed type program is an excellent idea but not to be located at regional facilities.
- Nanaimo already has other options provided by social service organizations in the community.
- A share Shed at a Regional facility should not be operated by the RDN but possibly operated by a non-profit organization.

**Technical Memorandum: EPR Materials at Regional District of Nanaimo Solid Waste Facilities.
(M. Larson)**

M. Larson presented a slide presentation on the RDN introducing EPR recycling program at the Regional Landfill and CRTS for products such as packaging, cell phones, & batteries.

Currently, there are several for-profit and non-profit depots in the Nanaimo and Parksville areas where EPR items are accepted. Taking on EPR at the regional facilities could negatively impact revenue at these facilities that depend on the materials collected from EPR programs. Collection rebates are offered by some programs, and help to offset the costs of providing this service.

The introduction of EPR programs at the sites would have a number of short term costs including site preparation, engineering, new equipment, buildings and signage. The preliminary cost is estimated at \$250,000 to accommodate increased recycling. Over the long term there would be additional labour costs in providing two additional personnel. It is estimated that there would be an additional cost of \$380,000 per annum to staff the expanded recycling at both regional facilities.

Discussion on this item will take place at the next RSWAC meeting under unfinished business.

ADDENDUM

J. McTaggart-Cowan introduced the topic of challenges with source separation faced by the IC&I sector that hasn't been addressed. Given the nature of the size of the sector the need for a report with solid statistics on categories, breakdowns of the IC&I sector, and classes of the groups involved is needed.

L. Gardner replied that staff report is currently developing a report and it will be sent out in advance for the next meeting.

D. Haarsma's comments on the IC&I sector will be presented at a future meeting.

SOLID WASTE MANAGEMENT SELECT COMMITTEE MEETING MINUTES

NEW BUSINESS

ADJOURNMENT

MOVED J. McTaggart-Cowan, SECONDED G. Johnson, that this meeting be adjourned.



CHAIRPERSON

**REGIONAL DISTRICT OF NANAIMO
REGIONAL SOLID WASTE ADVISORY COMMITTEE MEETING**

**THURSDAY, January 14, 2016, 5:00 PM - 7:30 PM
RDN Board Chambers**

A G E N D A

PAGES

CALL TO ORDER

DELEGATIONS

MINUTES

3-7 Minutes of the Regional Solid Waste Advisory Committee meeting held Nov. 26, 2015.

BUSINESS ARISING FROM THE MINUTES

COMMUNICATIONS/CORRESPONDENCE

UNFINISHED BUSINESS

REPORTS

8-31 Technical Memorandum: Jurisdictional Scan Regarding Waste Diversion Programs.
(L. Gardner - Presentation)

32-46 Technical Memorandum: RDN's Zero Waste Plan.
(S. Horsburgh – Presentation)

47-59 Technical Memorandum: Multi-Family & IC&I Recycling in the RDN.
(M. Larson - Presentation)

ADDENDUM

SOLID WASTE MANAGEMENT SELECT COMMITTEE MEETING MINUTES

BUSINESS ARISING FROM DELEGATIONS OR COMMUNICATIONS

NEW BUSINESS

ADJOURNMENT

Distribution:

Alec McPherson	Chair, RDN Director	Michael Recalma	Qualicum First Nation
Jim Kipp	Deputy Chair	Chief & Council	Nanoose First Nation
Frank Van Eynde	Member at Large	Chief & Council	Snuneymuxw First Nation
Derek Haarsma	Business Representative	John Marsh	Town of Qualicum Beach
Ed Walsh	Waste Management Industry	Fred Spears	District of Lantzville
Wally Wells	Business Representative	Geoff Goodall	City of Nanaimo
Jan Hastings	Non Profit Representative	Al Leuschen	Ministry of Environment
Jim McTaggart-Cowan	Member at Large	Karen Muttersbach	Environment Canada
John Finnie	Member at Large	Glenn Gibson	Island Health
Craig Evans	Member at Large		
Ellen Ross	Member at Large		
Gerald Johnson	Member at Large		
Michele Green	Member at Large		
Amanda Ticknor	Member at Large		
Michael Tripp	Business Representative		
Stewart Young Jr.	Business Representative		
Larissa Coser	Community Representative		

RDN Staff:

Larry Gardner	Manager, Solid Waste Services, RDN
Sharon Horsburgh	Senior Solid Waste Planner, RDN
Randy Alexander	GM, RCU & Solid Waste Services, RDN
Meghan Larson	Special Projects Coordinator
Jeff Ainge	Zero Waste Coordinator, RDN
Rebecca Graves	Recording Secretary, RDN

For information only:

Regional Board Members: CAO's: Dennis Trudeau (RDN), Brad McRae (District of Lantzville), Debbie Comis (City of Parksville), Daniel Sailland (Town of Qualicum Beach), Tracy Samra (City of Nanaimo)

**REGIONAL DISTRICT OF NANAIMO
REGIONAL SOLID WASTE ADVISORY COMMITTEE MEETING
HELD ON THURSDAY, JANUARY 14, 2016
BOARD CHAMBERS**

Present:

Alec McPherson	Chair, RDN Director
Frank Van Eynde	Member at Large
Jan Hastings	Non Profit Representative
Jim McTaggart-Cowan	Member at Large
Craig Evans	Member at Large
John Finnie	Member at Large
Gerald Johnson	Member at Large
Amanda Ticknor	Member at Large
Michael Tripp	Business Representative
Wally Wells	Business Representative
Geoff Goodall	City of Nanaimo

Also in Attendance:

Maureen Young	RDN Director
Larry Gardner	Manager of Solid Waste, RDN
Rebecca Graves	Recording Secretary, RDN
Sharon Horsburgh	Senior Solid Waste Planner, RDN
Meghan Larson	Special Projects Coordinator, RDN
Dennis Trudeau	CAO, RDN

Regrets:

Chief & Council	Nanoose First Nation
Chief & Council	Snuneymuxw First Nation
Glenn Gibson	Island Heath
Al Leuschen	Ministry of Environment
Karen Muttersbach	Environment Canada
Michael Recalma	Qualicum First Nation
Fred Spears	District of Lantzville
John Marsh	Town of Qualicum Beach
Ed Walsh	Waste Management Industry
Ellen Ross	Member at Large
Charlotte Davis	City of Nanaimo
Jeff Ainge	Zero Waste Coordinator
Jim Kipp	Deputy Chair, RDN Director
Derek Haarsma	Business Representative
Michele Green	Member at Large
Larissa Coser	Community Representative
Stewart Young Jr.	Business Representative

CALL TO ORDER

The Chairperson called the meeting to order at 5:05 PM and respectfully acknowledged the Coast Salish Nations on whose traditional territory the meeting took place.

DELEGATES

MINUTES

MOVED J. McTaggart-Cowan, SECONDED G. Johnson, that the minutes from the meeting of the Regional Solid Waste Advisory Committee regular meeting held November 26, 2015, be adopted. CARRIED

BUSINESS ARISING FROM THE MINUTES

M. Larson reviewed her slide presentation from the Nov. 26, 2015 RSWAC meeting giving an overview of EPR collection practices in the Region.

Currently, there are several for-profit and non-profit depots throughout the Region that accept stewardship items as well as return to retailer options. Taking on EPR at the regional facilities could negatively impact revenue at these facilities that depend on the materials collected from EPR programs. EPR collection at both Regional Facilities could result in an estimated 0.2-0.5% waste diversion. No additional authorities would be required for the RDN to introduce EPR collection at both regional facilities, however, it would require RDN Board approval. Things to consider for the SWMP are convenience, cost implications, diversion impacts, current regulatory framework and impact on other depots.

J. McTaggart-Cowan questioned if the EPR Stewardship agencies in the region felt that coverage was adequate?

M. Larson replied that the RDN did speak with EPR agencies and on average they do have high user rates for local depots. Northern regions there are not so many options for depots.

S. Horsburgh responded that the RDN is a member of the BC Product Stewardship Council and discussions do occur with Ministry of Environment on the topic of stewardship programs in Regional Districts.

J. Hastings commented that she would much rather see collection for hard to recycle items than already stewarded items that would compete with existing depots.

W. Wells questioned why compete with existing programs and rather subsidize or find mechanisms to deal with existing programs and keep jobs in private sector?

The discussion demonstrated a low level of support to proceed with EPR collection at regional facilities.

COMMUNICATIONS/CORRESPONDENCE

UNFINISHED BUSINESS

REPORTS

Technical Memorandum: Jurisdictional Scan Regarding Waste Diversion Programs. (L. Gardner – Presentation)

L. Gardner introduced a slide presentation on waste diversion programs in Edmonton, San Francisco and the UK reviewing disposal rates vs. diversion rates. It was concluded that it is virtually impossible to derive valid comparisons of waste disposal rates from elsewhere in the world. The jurisdictional scan suggests that the RDN has one of the lowest disposal rates within the developed nations of the world.

J. McTaggart-Cowan questioned where Edmonton's materials end up that aren't acceptable into the composting or metal recycling?

L. Gardner replied that their new system assumes a 90% diversion target. The remaining 10% is either landfilled or is gasified.

G. Johnson questioned how enforcement in San Francisco occurs?

L. Gardner replied that the generator is regulated by San Francisco and fines can be applied at source.

Technical Memorandum: RDN's Zero Waste Plan. (S. Horsburgh - Presentation)

S. Horsburgh presented a slide presentation on the RDN's Zero Waste Plan which included guiding principles, zero waste strategy, key policies, performance objects/metrics and future opportunities.

The RDN has achieved 68% waste diversion and an annual per capita disposal rate of 347 kilograms which is one of the lowest disposal rates in Canada. The RDN and Cowichan Valley Regional Districts are believed to have the lowest per capita disposal rates in North America. With continued promotion and enforcement of our Zero Waste programs, we could see continued improvements in diversion rates.

G. Johnson enquired if the role of local government is to make money, breakeven or can chances be taken and venture into investments and develop markets and then have an entrepreneur take over?

L. Gardner replied it is to provide services and utilities that the community would like to see.

J. Finnie remarked that local government is here to provide services that the Province imposes, at a reasonable cost to the taxpayer. Regional Districts are the most accountable level of governments and need to get Electoral support for funding mechanisms.

M. Tripp described the investments in recycling equipment made by his company demonstrates their commitment in improving recycling in the RDN.

J. McTaggart- Cowan questioned what is needed from the RDN to make it more profitable?

M. Tripp remarked that capital investment is needed to make businesses profitable. Access to capital is tight due to fluctuating markets. MMBC made the Nanaimo operation profitable.

J. McTaggart-Cowan commented that we need EPR on mattresses and we need to pressure industry to make producers responsible for residuals. The provincial government has a role to implement more EPR programs. We have talked about working with the generators, what authorities does the RDN need to give you the capability to enforce?

J. McTaggart-Cowan requested staff draft a bylaw.

L. Gardner commented if there's a desire to go down that path we can include the draft in the SWMP.
A. McPherson replied that if the draft bylaw goes into the plan it will be forwarded to the Province for approval.

J. Finnie felt it's bigger than the RDN and industry is a powerful lobby group and will oppose increased government regulation. We need to get together with other regions to go forward.

L. Gardner replied that our requirement is to produce the SWMP with a Zero Waste component. There are strategies and continued efforts to reduce our waste. Our current strategies are specific corner stones and we need to identify our next targets.

Technical Memorandum: Multi-Family & IC&I Recycling in the RDN. (M. Larson - Presentation)

M. Larson gave a presentation on the Multi-Family and IC&I recycling in the RDN. The IC&I and Multi-Family sectors waste stream contain significant amounts of recyclable material and compostable organics despite landfill bans being in place for various recyclable materials and commercial organics. These sectors provide the greatest opportunity for further waste diversion in the RDN.

The IC&I sector represents 63% of landfilled waste at the Regional Landfill. Examples of waste generators in this sector include businesses, industries, or commercial operations including stores, offices, hotels, hospitals, schools, restaurants, construction companies, factories etc., and the Multi-Family housing sector. In the RDN, the IC&I sector (including Multi-Family) is serviced by private waste haulers. Outreach has been done to promote diversion in these sectors and has largely relied on voluntary compliance with the landfill bans and applying fines. Increased effort in both outreach and enforcement consistent with the current strategies can achieve a moderate increase of about 3% in overall waste diversion. It is believed that the provision of authorities available through the SWMP can provide additional regulatory and economic tools to drive very high levels of diversion up to a 10% increase in overall waste.

J. Finnie questioned if there was a blend of these two options that would be more efficient?

M. Larson commented that each new program will require some level of education and outreach.

M. Tripp commented that scenario one with a more blended pro-active approach is the way to go and relaunching the program for 10th Anniversary is beneficial to his company to get the organics out of the waste stream.

J. McTaggart-Cowan questioned how many are not MMBC haulers and why are we allowing that?

M. Tripp replied that just because a hauler is not an MMBC hauler it doesn't mean we're not doing the right things.

ADDENDUM

SOLID WASTE MANAGEMENT SELECT COMMITTEE MEETING MINUTES

NEW BUSINESS

ADJOURNMENT

MOVED J. McTaggart-Cowan, SECONDED G. Johnson, that this meeting be adjourned.



CHAIRPERSON

**REGIONAL DISTRICT OF NANAIMO
REGIONAL SOLID WASTE ADVISORY COMMITTEE MEETING**

**THURSDAY, February 4, 2016, 5:00 PM - 7:30 PM
RDN Board Chambers**

A G E N D A

PAGES

CALL TO ORDER

MINUTES

3-6 Minutes of the Regional Solid Waste Advisory Committee meeting held Jan. 14, 2016.

DELEGATIONS

Derek Haarsma, Haarsma Waste Innovations Inc., Management of Solid Waste in the Multi-Family & IC&I Sector.

BUSINESS ARISING FROM THE MINUTES

Technical Memorandum: Multi-Family & IC&I Recycling in the RDN.

UNFINISHED BUSINESS

COMMUNICATIONS/CORRESPONDENCE

7-12 **Jan Hastings**, re Zero Waste Definitions.

13-14 **Jim McTaggart-Cowan**, re RSWAC Motions & Questions.

REPORTS

ADDENDUM

SOLID WASTE MANAGEMENT SELECT COMMITTEE MEETING MINUTES

BUSINESS ARISING FROM DELEGATIONS OR COMMUNICATIONS

NEW BUSINESS

ADJOURNMENT

Distribution:

Alec McPherson	Chair, RDN Director	Michael Recalma	Qualicum First Nation
Bill McKay	Deputy Chair	Chief & Council	Nanoose First Nation
Frank Van Eynde	Member at Large	Chief & Council	Snuneymuxw First Nation
Derek Haarsma	Business Representative	John Marsh	Town of Qualicum Beach
Ed Walsh	Waste Management Industry	Fred Spears	District of Lantzville
Wally Wells	Business Representative	Geoff Goodall	City of Nanaimo
Jan Hastings	Non Profit Representative	Al Leuschen	Ministry of Environment
Jim McTaggart-Cowan	Member at Large	Karen Muttersbach	Environment Canada
John Finnie	Member at Large	Glenn Gibson	Island Health
Craig Evans	Member at Large		
Ellen Ross	Member at Large		
Gerald Johnson	Member at Large		
Michele Green	Member at Large		
Amanda Ticknor	Member at Large		
Michael Tripp	Business Representative		
Stewart Young Jr.	Business Representative		
Larissa Coser	Community Representative		

RDN Staff:

Larry Gardner	Manager, Solid Waste Services, RDN
Sharon Horsburgh	Senior Solid Waste Planner, RDN
Randy Alexander	GM, RCU & Solid Waste Services, RDN
Meghan Larson	Special Projects Coordinator
Jeff Ainge	Zero Waste Coordinator, RDN
Rebecca Graves	Recording Secretary, RDN

For information only:

Regional Board Members: CAO's: Dennis Trudeau (RDN), Brad McRae (District of Lantzville), Debbie Comis (City of Parksville), Daniel Sailland (Town of Qualicum Beach), Tracy Samra (City of Nanaimo)

**REGIONAL DISTRICT OF NANAIMO
REGIONAL SOLID WASTE ADVISORY COMMITTEE MEETING
HELD ON THURSDAY, FEBRUARY 4, 2016
BOARD CHAMBERS**

Present:

Alec McPherson	Chair, RDN Director
Bill McKay	Deputy Chair, RDN Director
Derek Haarsma	Business Representative
Wally Wells	Business Representative
Jan Hastings	Non Profit Representative
Michael Tripp	Business Representative
Jim McTaggart-Cowan	Member at Large
John Finnie	Member at Large
Ellen Ross	Member at Large
Gerald Johnson	Member at Large
Amanda Ticknor	Member at Large

Also in Attendance:

Randy Alexander	General Manager, RCU, RDN
Larry Gardner	Manager of Solid Waste, RDN
Rebecca Graves	Recording Secretary, RDN
Jeff Ainge	Zero Waste Coordinator, RDN
Sharon Horsburgh	Senior Solid Waste Planner, RDN
Dennis Trudeau	CAO, RDN

Regrets:

Chief & Council	Nanoose First Nation
Chief & Council	Snuneymuxw First Nation
Glenn Gibson	Island Heath
Al Leuschen	Ministry of Environment
Karen Muttersbach	Environment Canada
Michael Recalma	Qualicum First Nation
Fred Spears	District of Lantzville
John Marsh	Town of Qualicum Beach
Ed Walsh	Waste Management Industry
Charlotte Davis	City of Nanaimo
Geoff Goodall	City of Nanaimo
Frank Van Eynde	Member at Large
Michele Green	Member at Large
Craig Evans	Member at Large
Stewart Young Jr.	Business Representative
Meghan Larson	Special Projects Coordinator, RDN

CALL TO ORDER

The Chairperson called the meeting to order at 5:03 PM and respectfully acknowledged the Coast Salish Nations on whose traditional territory the meeting took place.

MINUTES

MOVED J. McTaggart-Cowan, SECONDED G. Johnson, that the minutes from the meeting of the Regional Solid Waste Advisory Committee regular meeting held January 14, 2016, be adopted. CARRIED

DELEGATES

Derek Haarsma, Haarsma Waste Innovations Inc. re Management of Solid Waste in the Multi-Family & IC&I Sector.

D. Haarsma gave a verbal presentation on region wide recycling options available to the multi-family & Industrial Commercial & Industrial Sector (IC&I). Multi-family recycling is not a mandatory program and there is the perception that by introducing recycling programs this will lower garbage fees. This has led to varying levels of recycling in the Multi Family and ICI sectors. In regards to IC&I, steel containers are made available for recyclables. Haarsma reduces contamination by sorting recycling into bags so when materials are received at the facility sorting is done much faster. Source separation requires haulers to run more trucks a week to service sites and this doesn't make sense due to the level of contamination in bins.

A discussion occurred in regards to the management of solid waste including topics related to the RDN making recycling mandatory region wide.

L.Gardner outlined that the Regional District has the ability to introduce mandatory collection similar to how we introduced curbside service as a utility. This is a mechanism we have that could ensure ICI buildings comply with recycling programs.

G. Johnson asked if the RDN made recycling mandatory for all multi-family how would it affect your business and how would it increase recycling?

D.Haarsma stated his customer base almost everyone has a recycling program. Depends on size of building, garbage is picked up weekly, recycling every two weeks. Commercial is pretty up to speed on recycling. Not much issue with compliance and buy in. Multi-family buildings are looking for the low cost option. If a mandatory system was in place haulers could still exist the way we do.

M. Tripp commented that his customers business in town have two containers. ICI is 60% of sector, 40% would be residence. The business community is recycling. The is staying afloat with changing technology and competing with other haulers that ship export waste. The Parksville stratas are included in the RDN collection program. Nanaimo handles only curbside and any strata's are outside of the City's curbside collection program and these are handled by private haulers. There is no hard and fast regulation telling an apartment owner or condo owner that they must recycle. If there was more regulation recycling services would increase dramatically. This would create a level playing field as all haulers would have to abide by the same rules.

J. Hastings highlighted that 95% of residences in the MF sector have access to same service, what is the barrier to that service being the same?

MMBC poses a different challenge as containers have to be kept in a separate location and paper removed from packaging. MMBC does not give haulers w funds to educate the MF sector and this would be beneficial as it would help reduce contamination as there is a strict threshold of 3% contamination.

J. McTaggart Cowan asked if it is only paper making money. Is MMBC not paying you properly for that recycled material? D. Haarsma replied that for multi-family its ½ the fee of curbside. ICI that includes the schools is not captured under the MMBC program so we rely on what the market rate is for recyclable commodities. The City and the RDN receive payment to provide residential education programs.

J. Finnie made the observation that Strata's are a legal entity and many have taken on the responsibility of introducing recycling. What would be a better approach to apt buildings?

D. Haarsma responded that when he signed on as an MMBC contractor it was under the impression that the entire Multi Family sector had to comply. As it's rolled out that's not the case. If there was regulation through the RDN, then there would have some teeth to the program.

J. Hastings stated that it isn't right that a private hauler has to provide education. We want to focus efforts on increasing diversion for the ICI sector, and especially for multi-family. I would like to see ICI as the cornerstone for the new plan and designed under the umbrella of Zero Waste. To do that, we need an operational definition of Zero Waste for the purpose of the SWMP.

D. Haarsma commented that education is important, as a hauler we do not have the resources to provide education. This should be the responsibility of RDN or an agency that specializes in education programs so they can do a proper job. It is time consuming and there needs to be consistent messaging and refreshers.

G. Johnson suggested looking into grant programs for providing education as the commercial sector finds complying with MMBC challenging as there is not sufficient funding for education.

BUSINESS ARISING FROM THE MINUTES

Technical Memorandum: Multi-Family & IC&I Recycling in the RDN. (L. Gardner – Presentation)

L. Gardner introduced a slide presentation summarizing Multi-Family & IC&I waste stream. There are two potential diversion strategy scenarios which would include Scenario 1: increased education/enforcement at regional facilities with a diversion potential of 3% and Scenario 2: additional regulatory authority with a diversion potential of 7.9 -11%. Multi-family recycling rates are estimated to be between 16-18% compared to 30% for single-family and approximately 44% of the waste stream is compostable. L. Gardner provided an overview of the various Regulatory Authority Options which included Waste Source Regulation, Flow Management, Mandatory Waste Collection Service, Waste Hauler Franchise and Waste Haulers as Agents.

A discussion ensued regarding the regulatory authority options and if any should be included in the SWMP. What options are there for targeting the paper and plastic that makes up 25% of the IC&I sector waste stream? Which regulatory authorities would be most effective; mandatory waste collection service for all waste generators, franchising, source regulation, haulers as agents?

J. McTaggart-Cowan questioned how do we need to reduce ICI waste? What is needed to achieve 25%? L Gardner clarified that the diversion potential is up to 11% of the total waste stream and explained the waste composition percentages.

J. Hastings stated that there are municipalities that do mandatory waste collection service, how would it put free enterprise into jeopardy?

L Gardner explained that mandatory waste collection would be set up the same as the residential curbside program, where the RDN contracts the service to a single waste hauler. The contract would be awarded through a tendering process. There wouldn't be any opportunity of others to subsequently compete for business..

J. Hastings asked why can't we have mandatory service and then let the hauler do it? I don't see barrier.

L Gardner outlined a mandatory collection service by, or on behalf of local government can be introduced. The RDN needs additional authorities from the province if, instead, a regulation requires people to obtain their own recycling service. J. McTaggart-Cowan commented the objective is to reduce amount of material going into the landfill to achieve zero waste.

L. Gardner commented to achieve zero waste there would be implications on taxation. Waste generators that send waste outside of the region don't contribute money to the region's waste management function. We could try to get cost of disposal down and recover the shortfall in revenue through taxation. We've intentionally put costs high to create an incentive to divert material to the private sector facilities for recycling.

A. McPherson commented we need to make sure everyone is paying for education through the tipping fees in order to cover the education programs so that everyone using the regional system is contributing.

J. McTaggart-Cowan commented we should look at the business and encourage them to redesign by pushing back to the design phase. The business sector should be involved in putting forward what the haulers need with respect to education and regulation. He also suggested that if we're going to set diversion targets, we need to have a target and identify what measures will be implemented to achieve it. Decide what strategies we are going to include so we can measure our progress to see how we are achieving our goal. The RDN needs to become a model of zero waste.

UNFINISHED BUSINESS

COMMUNICATIONS/CORRESPONDENCE

Jan Hastings, re Zero Waste Definitions.

J. Hastings reviewed the zero waste definitions and principles from each of the below agencies:

- Zero Waste International Alliance
- National Zero Waste Council
- Zero Waste BC
- Recycling Council of BC
- BC Ministry of the Environment
- London Remade.

Jim McTaggart-Cowan, re RSWAC Motions & Questions.

A. McPherson introduced and suggested that the motions, as presented, will provide an opportunity for the Committee to discuss what options they wish to see in the SWMP.

J. McTaggart-Cowan commented that the purpose of the motions was to provide a structure and to focus on what information is needed to make decisions.

J. McTaggart-Cowan asked if D. Haarsma, M. Tripp and staff could provide information on what is needed to regulate and to create a level playing field.

REPORTS

ADDENDUM

NEW BUSINESS

ADJOURNMENT

MOVED J. McTaggart-Cowan, SECONDED G. Johnson, that this meeting be adjourned.

Time: 7:29 pm.



CHAIRPERSON

**REGIONAL DISTRICT OF NANAIMO
REGIONAL SOLID WASTE ADVISORY COMMITTEE MEETING**

**THURSDAY, February 18, 2016, 5:00 PM - 7:30 PM
RDN Board Chambers**

A G E N D A

CALL TO ORDER

DELEGATIONS

MINUTES

3-5 Minutes of the Regional Solid Waste Advisory Committee meeting held Feb. 4, 2016.

BUSINESS ARISING FROM THE MINUTES

UNFINISHED BUSINESS

COMMUNICATIONS/CORRESPONDENCE

REPORTS

Residual Management Options

- Introduction by Larry Gardner
- Morrison Hershfield, re Findings of Residual Managements Options for Consideration by the RDN (Konrad Fichtner – Presentation)
- Group Exercise

ADDENDUM

BUSINESS ARISING FROM DELEGATIONS OR COMMUNICATIONS

NEW BUSINESS

ADJOURNMENT

Distribution:

Alec McPherson	Chair, RDN Director	Michael Recalma	Qualicum First Nation
Bill McKay	Deputy Chair	Chief & Council	Nanoose First Nation
Derek Haarsma	Business Representative	Chief & Council	Snuneymuxw First Nation
Ed Walsh	Waste Management Industry	John Marsh	Town of Qualicum Beach
Wally Wells	Business Representative	Fred Spears	District of Lantzville
Jan Hastings	Non Profit Representative	Geoff Goodall	City of Nanaimo
Jim McTaggart-Cowan	Member at Large	Al Leuschen	Ministry of Environment
John Finnie	Member at Large	Karen Muttersbach	Environment Canada
Craig Evans	Member at Large	Glenn Gibson	Island Health
Ellen Ross	Member at Large		
Gerald Johnson	Member at Large		
Michele Green	Member at Large		
Amanda Ticknor	Member at Large		
Michael Tripp	Business Representative		
Stewart Young Jr.	Business Representative		

RDN Staff:

Larry Gardner	Manager, Solid Waste Services, RDN
Sharon Horsburgh	Senior Solid Waste Planner, RDN
Randy Alexander	GM, RCU & Solid Waste Services, RDN
Meghan Larson	Special Projects Coordinator
Jeff Ainge	Zero Waste Coordinator, RDN
Rebecca Graves	Recording Secretary, RDN

For information only:

Regional Board Members: CAO's: Dennis Trudeau (RDN), Brad McRae (District of Lantzville), Debbie Comis (City of Parksville), Daniel Sailland (Town of Qualicum Beach), Tracy Samra (City of Nanaimo)

**REGIONAL DISTRICT OF NANAIMO
REGIONAL SOLID WASTE ADVISORY COMMITTEE MEETING
HELD ON THURSDAY, FEBRUARY 18, 2016
BOARD CHAMBERS**

Present:

Alec McPherson	Chair, RDN Director
Bill McKay	Deputy Chair, RDN Director
Jan Hastings	Non Profit Representative
Derek Haarsma	Business Representative
Wally Wells	Business Representative
Craig Evans	Member at Large
Michele Green	Member at Large
John Finnie	Member at Large
Jim McTaggart-Cowan	Member at Large
Ellen Ross	Member at Large
Amanda Ticknor	Member at Large
Stewart Young Jr.	Business Representative
Fred Spears	District of Lantzville

Also in Attendance:

Howard Houle	RDN Director
Wendy Pratt	RDN Director
Bill Veenhof	RDN Director
Maureen Young	RDN Director
Larry Gardner	Manager of Solid Waste, RDN
Rebecca Graves	Recording Secretary, RDN
Sharon Horsburgh	Senior Solid Waste Planner, RDN
Jane MacIntosh	Superintendent, RDN
Dennis Trudeau	CAO, RDN
Maggie Warren	Superintendent, RDN

Regrets:

Gerald Johnson	Member at Large
Charlotte Davis	City of Nanaimo
Geoff Goodall	City of Nanaimo
John Marsh	Town of Qualicum Beach
Chief & Council	Nanoose First Nation
Chief & Council	Snuneymuxw First Nation
Michael Recalma	Qualicum First Nation
Glenn Gibson	Island Heath
Al Leuschen	Ministry of Environment
Karen Muttersbach	Environment Canada
Michael Tripp	Business Representative
Randy Alexander	General Manager, RCU, RDN
Jeff Ainge	Zero Waste Coordinator, RDN
Meghan Larson	Special Projects Coordinator, RDN

CALL TO ORDER

The Chairperson called the meeting to order at 5:04 PM and respectfully acknowledged the Coast Salish Nations on whose traditional territory the meeting took place.

DELEGATES

MINUTES

MOVED J. McTaggart-Cowan, SECONDED B. McKay, that the minutes from the meeting of the Regional Solid Waste Advisory Committee regular meeting held February 4, 2016, be received for information only and be amended. CARRIED

BUSINESS ARISING FROM THE MINUTES

UNFINISHED BUSINESS

COMMUNICATIONS/CORRESPONDENCE

REPORTS

Residual Management Options (Morrison Hershfield - K. Fichtner – Presentation)

L. Gardner gave an introduction to the Residual Management Presentation and discussed the upcoming Stage 2 timeline for RSWAC/SWMSA meetings.

K. Fichtner gave a presentation on Waste Processing Technologies. Technologies available to process waste include Material Recovery Facilities, Waste to Fuel, Biological Energy Recovery and Thermal Energy Recovery. Summary of costs, diversion rates along with advantages and disadvantages of each technology was presented.

B. McKay asked if there are any examples of businesses that are using one of these processes that would produce lower emissions than the current endeavour?

K. Fichtner replied that from his experience cement kilns have the potential to offset the use of coal and lower overall emissions if they are permitted to use waste as a fuel source.

B. McKay commented on the composition of waste and the new material being introduced causing an increase in the level of non-recyclable materials which are becoming almost impossible to recycle.

K. Fichtner remarked that some material is getting harder to recycle and therefore creating the development of product stewardship programs. Construction and demolition materials in a lot of municipalities are causing a problem and composite materials are challenging to recycle.

J. Finnie questioned if the information provided was showing higher costs for combustion and pyrolysis processes and how much of that cost is due to emission control systems or is it part of the technology cost?

K. Fichtner replied 30-50% of the cost is for emission control systems.

B. McKay questioned if Vancouver Island has been viewed as a model and if Nanaimo could become a central clearing house for a polymer plant?

K. Fichtner could not answer but would like to follow-up. There is a recent study conducted for Regional Districts from Central and Southern Vancouver Island that concluded both highway and rail transportation was more expensive than to have a regional facility to manage their own residual waste.

J. McTaggart-Cowan enquired about a cost estimate to make the material at Nanaimo Organic Waste (NOW) a Class A product?

L. Gardner, NOW produces a Class A compost in accordance with the Provincial Organic Matter Recycling Regulation. However due to contaminants the finished compost is difficult to market. NOW is a privately owned facility and the current owners would be required to invest significant Capital in the plant to improve the end produce. The owners have reviewed the option of installing an anaerobic digestion (AD) system. Orgaworld that are building the new facility in Surrey visited NOW and gave the owners some advice and a cost estimate with regards improving the operation and the quality of the finished product. It is not improvements at the front end of the operation but a change in how the feedstock is processed to help remove contamination that will greatly improve the end product.

D. Haarsma questioned the waste material in a dirty MRF if under ideal conditions we could capture 45% and the remainder 55% would still go to landfill?

K. Fichtner replied that the material balance is maximum 20% recycling, maximum 40% organics, and 40% left for residuals and those residuals could be made to fuel or be landfilled.

J. MacIntosh questioned if the waste material prepared for the digestion system could be used at a wastewater treatment facility?

K. Fichtner replied that the AD systems are designed for a certain biological oxygen demand and if you add a lot of solids it would overload the system.

B. McKay asked if there are any examples of facilities that produce energy from these technologies that is utilized as district energy?

K. Fichtner commented that Houwelling Nurseries Co generation plant in Delta utilizes landfill gas in its greenhouses near the Vancouver Landfill.

B. McKay questioned if glass is going the way of newsprint as far as volume?

K. Fichtner replied that there is a bit of glass recycling in some areas but the use of glass is getting less. There aren't a lot of markets for used glass and manufactures can make glass cheaper from sand than from cullet.

GROUP EXERCISE

L. Gardner introduced the group exercise and the Committee broke off into groups to discuss the topics "Which residual management options would you advise the board to consider and why?" and "What would trigger you to advise the Board to consider any new technologies in the future?"

The results from the Group Exercise are shown in Table 1 below.

TABLE 1	Group Exercise	
Group	Which Residual Management Options Would You Advise The Board to Consider And Why?	What would trigger you to advise the Board to consider any new technologies in the future?

#1	<ul style="list-style-type: none"> • Landfill capacity (somewhere/somewhat) • Integrate with clean MRF • Continue to embrace new and emerging technologies 	<ul style="list-style-type: none"> • Collaborating with other jurisdictions for new ideas, economies of scale, including diversion strategies.
#2	<ul style="list-style-type: none"> • MRF- for residual, (dirty) for ICI and for what is already going to the landfill (garbage) with an AD closed system • Prefer SS to create a more robust system first. 	<ul style="list-style-type: none"> • We define technology as regulation and enforcement and the “force is with us”, we have been triggered
#3	<ul style="list-style-type: none"> • Island solution • Education/Enforcement • Keep eyes open/stay informed • Source control improvements • Siting new landfill extremely hard (0.1%) 	<ul style="list-style-type: none"> • No other alternatives – must • New technology arises • Cost effective • Known markets • High social value • Community benefit

ADDENDUM

NEW BUSINESS

ADJOURNMENT

MOVED B. McKay, SECONDED J. McTaggart-Cowan, that this meeting be adjourned.

Time: 7:30 pm.



 CHAIRPERSON

**REGIONAL DISTRICT OF NANAIMO
REGIONAL SOLID WASTE ADVISORY COMMITTEE MEETING**

**THURSDAY, March 17, 2016, 5:00 PM - 7:30 PM
RDN Board Chambers**

A G E N D A

CALL TO ORDER

DELEGATIONS

MINUTES

- 3-7 Amended Minutes of the Regional Solid Waste Advisory Committee meeting held February 4, 2016.
- 8-11 Minutes of the Regional Solid Waste Advisory Committee meeting held February 18, 2016.

BUSINESS ARISING FROM THE MINUTES

UNFINISHED BUSINESS

COMMUNICATIONS/CORRESPONDENCE

REPORTS

- 12-24 Construction and Demolition Waste – Current State & Future Options Presentation (S. Horsburgh).

ADDENDUM

BUSINESS ARISING FROM DELEGATIONS OR COMMUNICATIONS

- 25-32 Issues Review (L. Gardner).
- Group Exercise.

NEW BUSINESS

ADJOURNMENT

Distribution:

Alec McPherson	Chair, RDN Director	Gerald Johnson	Member at Large
Bill McKay	Deputy Chair	Ellen Ross	Member at Large
Derek Haarsma	Business Representative	Amanda Ticknor	Member at Large
Jan Hastings	Non Profit Representative	Michael Recalma	Qualicum First Nation
Dean Jones	Waste Management Industry	Chief & Council	Nanoose First Nation
Jim McTaggart-Cowan	Member at Large	Chief & Council	Snuneymuxw First Nation
Michael Tripp	Business Representative	Geoff Goodall	City of Nanaimo
Stewart Young Jr.	Business Representative	John Marsh	Town of Qualicum Beach
Wally Wells	Business Representative	Al Leuschen	Ministry of Environment
Craig Evans	Member at Large	Fred Spears	District of Lantzville
John Finnie	Member at Large	Karen Muttersbach	Environment Canada
Ben Geselbracht	Member at Large	Glenn Gibson	Island Health
Michele Green	Member at Large		

RDN Staff:

Larry Gardner	Manager, Solid Waste Services, RDN
Sharon Horsburgh	Senior Solid Waste Planner, RDN
Randy Alexander	GM, RCU & Solid Waste Services, RDN
Meghan Larson	Special Projects Coordinator
Jeff Ainge	Zero Waste Coordinator, RDN
Rebecca Graves	Recording Secretary, RDN

For information only:

Regional Board Members: CAO's: Dennis Trudeau (RDN), Brad McRae (District of Lantzville), Debbie Comis (City of Parksville), Daniel Sailland (Town of Qualicum Beach), Tracy Samra (City of Nanaimo)

**REGIONAL DISTRICT OF NANAIMO
REGIONAL SOLID WASTE ADVISORY COMMITTEE MEETING
HELD ON THURSDAY, MARCH 17, 2016
BOARD CHAMBERS**

Present:

Alec McPherson	Chair, RDN Director
Bill McKay	Deputy Chair, RDN Director
Jan Hastings	Non Profit Representative
Derek Haarsma	Business Representative
Wally Wells	Business Representative
Dean Jones	Waste Management Industry
Craig Evans	Member at Large
Ben Geselbracht	Member at Large
Michele Green	Member at Large
Gerald Johnson	Member at Large
Jim McTaggart-Cowan	Member at Large
Ellen Ross	Member at Large
Geoff Goodall	City of Nanaimo

Also in Attendance:

Larry Gardner	Manager of Solid Waste, RDN
Rebecca Graves	Recording Secretary, RDN
Sharon Horsburgh	Senior Solid Waste Planner, RDN
Meghan Larson	Special Projects Coordinator, RDN
Randy Alexander	General Manager, RCU, RDN

Regrets:

Charlotte Davis	City of Nanaimo
John Marsh	Town of Qualicum Beach
Chief & Council	Nanoose First Nation
Chief & Council	Snuneymuxw First Nation
Michael Recalma	Qualicum First Nation
Glenn Gibson	Island Heath
Al Leuschen	Ministry of Environment
Karen Muttersbach	Environment Canada
Michael Tripp	Business Representative
Dennis Trudeau	CAO, RDN
Fred Spears	District of Lantzville
Stewart Young Jr.	Business Representative
John Finnie	Member at Large
Amanda Ticknor	Member at Large

CALL TO ORDER

The Chairperson called the meeting to order at 5:07 PM and respectfully acknowledged the Coast Salish Nations on whose traditional territory the meeting took place.

DELEGATES

Ellen Ross gave a brief presentation on reusable bags that she helped to design and that are now distributed by Loblaw's. Approximately 7 years ago she approached the corporate office at Loblaw's and requested that a standard bag be designed, and it is now available for purchase to help keep plastic bags out of the landfill.

MINUTES

MOVED J. McTaggart-Cowan, SECONDED B. McKay, that the minutes from the meeting of the Regional Solid Waste Advisory Committee regular meeting held February 4, 2016, be adopted. CARRIED

MOVED B. McKay, SECONDED G. Johnson, that the minutes from the meeting of the Regional Solid Waste Advisory Committee regular meeting held February 18, 2016, be adopted. CARRIED

BUSINESS ARISING FROM THE MINUTES

UNFINISHED BUSINESS

COMMUNICATIONS/CORRESPONDENCE

REPORTS

Construction and Demolition Waste – Current State & Future Options (S. Horsburgh – Presentation)

S. Horsburgh gave a presentation on the current state of the Construction and Demolition (CD) Waste and future options and to estimate additional waste diversion potential from the CD sector of the waste stream.

J. McTaggart-Cowan questioned the use of the word items that are “difficult” to recycle but simply because of quantity here in the RDN we don’t have enough to make it profitable for companies to do it. Perhaps we need to find another way to work with other regional districts or Vancouver area to get items over there.

S. Horsburgh commented that in BC there are no new stewardship programs being considered for introduction in the short term. The RDN currently accepts asbestos from the Cowichan Valley at the landfill.

L. Gardner remarked that a significant portion of non-recyclable materials is asbestos, insulation/drywall with asbestos, painted materials, treated wood, and as regulatory requirements are tightening up there are more items coming to the landfill as it is the only option for disposal.

J. Hastings questioned what would the diversion options be if composite or painted wood ends up in the landfill?

S. Horsburgh commented that the mills have less tolerance to accept treated wood and the only alternative at the moment is to landfill.

D. Jones commented that DBL ships ground wood waste to Catalyst mills and they have a 2% tolerance for contaminants. Products that are problematic are wood laminated with other materials such as countertops. These materials along with pressure treated wood are landfilled.

Typically, house demolitions require hazardous materials testing to be conducted to identify if the building contains lead based paints and or asbestos. Removal of these materials requires staff to follow strict handling procedures to meet health and safety regulations.

J. McTaggart-Cowan questioned how much of the self-haul is small industry versus the homeowner?

S. Horsburgh replied that the majority of self-haul customers are residential.

D. Jones commented that the building industry has moved away from lead based paint as people are demanding more environmental friendly products.

C. Evans asked if the wood waste that's received at the landfill was processed for beneficial purposes.

L. Gardner commented that the landfill uses the wood grind to build road bases to move equipment around the site.

C. Evans questioned if that is considered diversion from the landfill?

S. Horsburgh responded that ground wood waste and asphalt shingles are counted as beneficial use as these materials are used in landfill applications.

L. Gardner commented that beneficial use is considered diversion from the landfill. We report to the Ministry of Environment standards but as far as utilization on site we would import one way or another because we need it to operate.

C. Evans asked if there was anywhere in the lower mainland taking old carpets for recycling?

J. Hastings replied to C. Evans that there are two possible kinds of carpet recycling. What's currently being done now is the new carpet because P.E.T. can be recovered for recycling. However, what you are describing is repurposing and grinding up carpet for other uses. There are definitely markets for recycling underlay that can be crushed and reused so this item could be diverted from landfill.

D. Jones remarked on the interpretation of the term beneficial use when wastes used in a landfill application is considered diversion?

L. Gardner commented that the RDN promoted a more restrictive definition of beneficial use but it wasn't supported by the waste management sector or the province. In the end we report as directed and follow rules that are given to us by the province

B. Geselbrecht asked what is the fraction of the percent of the total waste used for the roads?

S. Horsburgh replied it is a very small component of the overall waste stream that is being repurposed on site.

B. McKay mentioned a person in Vancouver that sets up in a warehouse such as Jordan's and carpets/underlay are dropped off and then he takes the product away for recycling. Perhaps a similar initiative could be developed on Vancouver Island and this opportunity could be taken on by a social enterprise?

B. McKay questioned once a permit has been issued, where can we go to ensure that the CD waste is properly being disposed of?

S. Horsburgh replied that this is an opportunity in the future to work with Community Planning and development departments region wide, so a standardized process for including recycling plans as part of issuing demolition permits to demonstrate how the waste is being handled.

G. Johnson remarked that the solution is simple; they should need to amend the demolition permit to include a recycling plan?

L. Gardner answered that we could ask for a recycling plan but we could not enforce the plan without additional authorities. If we ask for permission, in the SWMP, to say we would like to regulate the conditions in the building permit, and if the province agreed, then we could proceed.

J. McTaggart-Cowan questioned what is needed or what is the new authority to ask for to step up and get control on the demolition permit?

L. Gardner replied if we can get a mandate from the RSWAC and it gets Board support we would create a draft bylaw. If there is no interest at this stage we wouldn't pursue further.

GROUP EXERCISE

L. Gardner introduced the group exercise and the Committee broke off into groups to discuss the topics that have been topics of interest with the committee. A summary of the chart was distributed to committee members on March 23rd. Based on the summary, as well as discussions during the exercise, the following themes emerged and required further discussion:

- Education
- Enforcement/Regulatory Tools
- Zero Waste
- Economic Drivers/Incentives to drive diversion
- Residual Management

ADDENDUM

NEW BUSINESS

ADJOURNMENT

MOVED J. McTaggart-Cowan, SECONDED G. Johnson, that this meeting be adjourned.

Time: 7:37 pm.



CHAIRPERSON

**REGIONAL DISTRICT OF NANAIMO
REGIONAL SOLID WASTE ADVISORY COMMITTEE MEETING**

**THURSDAY, April 14, 2016, 5:00 PM - 7:30 PM
RDN Board Chambers**

A G E N D A

CALL TO ORDER

DELEGATIONS

MINUTES

- 3-6 Minutes of the Regional Solid Waste Advisory Committee meeting held March 17, 2016.

BUSINESS ARISING FROM THE MINUTES

UNFINISHED BUSINESS

COMMUNICATIONS/CORRESPONDENCE

REPORTS

- Results of Last Meetings Exercise (presentation only; R. Alexander)
- Levels of Services Matrix Review. (presentation only; L. Gardner)
- 7-14 Complimentary Disposal Services at Regional District of Nanaimo Solid Waste Facilities. (S. Horsburgh)
- 15-20 Solid Waste Management Education. (M. Larson)
- Future Residual Disposal (presentation only; L. Gardner)

ADDENDUM

BUSINESS ARISING FROM DELEGATIONS OR COMMUNICATIONS

NEW BUSINESS

ADJOURNMENT

Distribution:

Alec McPherson	Chair, RDN Director	Gerald Johnson	Member at Large
Bill McKay	Deputy Chair	Ellen Ross	Member at Large
Derek Haarsma	Business Representative	Amanda Ticknor	Member at Large
Jan Hastings	Non Profit Representative	Michael Recalma	Qualicum First Nation
Dean Jones	Waste Management Industry	Chief & Council	Nanoose First Nation
Jim McTaggart-Cowan	Member at Large	Chief & Council	Snuneymuxw First Nation
Michael Tripp	Business Representative	Geoff Goodall	City of Nanaimo
Stewart Young Jr.	Business Representative	John Marsh	Town of Qualicum Beach
Wally Wells	Business Representative	Al Leuschen	Ministry of Environment
Craig Evans	Member at Large	Fred Spears	District of Lantzville
John Finnie	Member at Large	Karen Muttersbach	Environment Canada
Ben Geselbracht	Member at Large	Glenn Gibson	Island Health
Michele Green	Member at Large		

RDN Staff:

Larry Gardner	Manager, Solid Waste Services, RDN
Sharon Horsburgh	Senior Solid Waste Planner, RDN
Randy Alexander	GM, RCU & Solid Waste Services, RDN
Meghan Larson	Special Projects Coordinator
Jeff Ainge	Zero Waste Coordinator, RDN
Rebecca Graves	Recording Secretary, RDN

For information only:

Regional Board Members: CAO's: Dennis Trudeau (RDN), Brad McRae (District of Lantzville), Debbie Comis (City of Parksville), Daniel Sailland (Town of Qualicum Beach), Tracy Samra (City of Nanaimo)

**REGIONAL DISTRICT OF NANAIMO
REGIONAL SOLID WASTE ADVISORY COMMITTEE MEETING
HELD ON THURSDAY, APRIL 14, 2016
BOARD CHAMBERS**

Present:

Alec McPherson	Chair, RDN Director
Bill McKay	Deputy Chair, RDN Director
Jan Hastings	Non Profit Representative
Wally Wells	Business Representative
Dean Jones	Waste Management Industry
Derek Haarsma	Business Representative
Michael Tripp	Business Representative
Craig Evans	Member at Large
John Finnie	Member at Large
Ben Geselbracht	Member at Large
Michele Green	Member at Large
Gerald Johnson	Member at Large
Jim McTaggart-Cowan	Member at Large
Amanda Ticknor	Member at Large
Cam Purdon	Town of Qualicum Beach

Also in Attendance:

Director Young	Electoral Area 'C'
Larry Gardner	Manager of Solid Waste, RDN
Rebecca Graves	Recording Secretary, RDN
Sharon Horsburgh	Senior Solid Waste Planner, RDN
Meghan Larson	Special Projects Coordinator, RDN
Randy Alexander	General Manager, RCU, RDN

Regrets:

Stewart Young Jr.	Business Representative
Charlotte Davis	City of Nanaimo
Geoff Goodall	City of Nanaimo
Chief & Council	Nanoose First Nation
Chief & Council	Snuneymuxw First Nation
Michael Recalma	Qualicum First Nation
Glenn Gibson	Island Heath
Al Leuschen	Ministry of Environment
Karen Muttersbach	Environment Canada
Fred Spears	District of Lantzville
Ellen Ross	Member at Large

CALL TO ORDER

The Chairperson called the meeting to order at 5:07 PM and respectfully acknowledged the Coast Salish Nations on whose traditional territory the meeting took place.

Welcomed new member Cam Purdon, representing the Town of Qualicum Beach.

DELEGATES

MINUTES

MOVED J. McTaggart-Cowan, SECONDED G. Johnson, that the minutes from the meeting of the Regional Solid Waste Advisory Committee regular meeting held March 17, 2016, be adopted. CARRIED

BUSINESS ARISING FROM THE MINUTES

UNFINISHED BUSINESS

J. McTaggart-Cowan commented that he would like a discussion on the motions that were presented at the February 4, 2016, RSWAC meeting.

A. McPherson replied that issues that have been identified have been documented throughout the process. There will still be time to identify high priority options before the drafting of the SWMP.

J. Hastings questioned why as a committee are we are not making a motion to adopt the Zero Waste International Alliance (ZWIA) definition and hierarchy?

L. Gardner commented that for the next meeting, a proposed zero waste definition or the ZWIA definition will be brought forward for discussion by the committee, as well as the guiding principles that are currently in the plan.

J. Finnie clarified his understanding and expectations of the process to draft the next plan that will come back to the committee for review. Our challenge will be arriving at consensus and assigning values and priorities before we advance the draft plan for public review.

R. Alexander highlighted that through this process the knowledge has been gained through the discussions. This has allowed us to identify a number of issues and options. The next step is to determine what the targets and principles and what we want to include in the plan and how we achieve those targets and principles.

J. McTaggart-Cowan questioned the progress of the proposal by Derek, Mike and Larry on options to address the challenges in the IC&I sector?

Derek responded that he would provide a report on the challenges that front end haulers have with multi-family units and offer suggestions.

COMMUNICATIONS/CORRESPONDENCE

REPORTS

Results of Last Meetings Exercise. (R. Alexander – Presentation)

R. Alexander gave feedback from the March 17, 2016 group exercise. Three questions were asked in that session which included;

- Are there topics where more research is required to make a recommendation to the Board?
- Are there topics that need more discussion in order to make a recommendation to the Board, and
- Are there topics where there is adequate information/discussion to advise the Board?

J. McTaggart-Cowan requested more dialogue be done with the IC&I sector before any further suggestions or decisions are made.

J. Finnie commented that a lot of the commercial operations have systems in place and when we talk about getting regulatory authority the concern is who's going to do that and with what? There are insufficient resources to deliver on the systems that we already have in place.

W. Wells recalled in the Stage 1 Report that haulers had been consulted but not the generators in the IC&I sector. There needs to be a discussion with the generators while the plan is being developed.

L. Gardner commented the first step is to narrow down the preferred options and then consult with the business community about what is being considered to get their input.

G. Johnson remarked that he felt the committee should have had representation from the Chamber of Commerce.

L. Gardner responded that the committee is made up of a range of representatives from different sectors and areas. It is already a fairly large group and it is impossible to cover off all groups.

D. Haarsma stated that on behalf of the business community he felt the haulers have a good understanding of the IC&I sector and what their customers are looking for in regards to waste and recycling removal services. Also, they are sensitive to the marketplace and what options their customers are willing to pay for.

B. Geselbracht commented that he recognizes we can tweak our infrastructure to reduce the waste but if Nanaimo doesn't stand up and advocate on certain waste streams or regulatory items at the Provincial level, waste exports will continually be subsidized.

R. Alexander replied that the advocacy role has been identified but was just not introduced in the presentation.

Levels of Service Matrix Review. (L. Gardner – Presentation)

L. Gardner presented the Level of Service Matrix which captures all the services discussed to date, the scope of service, the RSWAC level of interest in pursuing service levels that include; curbside glass and yard waste collection, curbside compliance & enforcement, share sheds, EPR stewardship programs, ICI & MFD diversion, Zero Waste plan, complementary drop off days, CD Waste, HHW collection, and residual management and landfill options.

M. Tripp remarked that while basic items are covered it's the difficult to recycle items that are challenging. Businesses have tried sorting materials themselves but recovery is low at 5-10%. You would have to create a market and fund it. New markets have to be developed with funding to help make them viable. He would like to see secondary industries and markets created for plastics. Until markets open up we can only do so much.

D. Jones commented that it comes down to customers themselves, there are multi-national clients that achieve 90% diversion rates but they are willing to pay, a lot of industries either can't or won't pay. Does that fall back on enforcement or education or is it the haulers job to fund or support it, who pays for it?

D. Haarsma commented that traditionally when a landfill ban is implemented the hauler notifies the business or property management companies. This puts the responsibility of enforcement on those

haulers that promote recycling services and makes it difficult to compete with haulers not promoting the same level of service, which makes it difficult to compete when it's not a level playing field. Regulation and enforcement has encouraged haulers to put garbage into trailers and ship across the border.

Complimentary Disposal Services at Regional District of Nanaimo Solid Waste Facilities. (S. Horsburgh)

S. Horsburgh gave an overview on Complimentary Disposal Services discussing history, challenges, diversion and financial impact. In the past, the program was popular due to convenience but concerns were raised in regards to traffic control and safety concerns. The service does not support reduce, reuse or the principles outlined in our current SWMP and could increase disposal and loss could potentially losses \$42,500 per day in revenue.

J. McTaggart-Cowan responded that if it's not equitable, what's the purpose of even thinking about it?

MOVED J. Finnie, SECONDED J. McTaggart-Cowan that this committee does not support the Complimentary Disposal Services initiative.

CARRIED

J. Hastings commented she would like to see local government fund a pickup day for items such as hazardous waste.

L. Gardner commented that a number of EPR programs cover a lot of that material and there are communities that provide that service so providing costs can be presented.

G. Johnson questioned if there is a document available that outlines how the Province calculates EPR rebates?

L. Gardner answered that each program provides their own annual reports but doesn't believe there is a single site to review.

M. Larson replied that separate EPR agencies set the price of rebates paid to collectors (i.e. depots). Their financials are audited by the MOE but MOE has no responsibility for setting those rebates.

S. Horsburgh commented that stewardship organizations are required to produce annual reports that include financial statements.

Solid Waste Management Education. (M. Larson)

M. Larson gave an overview of Solid Waste Management Education which included strategy for education, diversion & financial impact, regulatory authority and provided a summary.

M. Green questioned why not find out what the barriers are and address those through education and other programs?

M. Larson replied that cost is a barrier for many people and we do post what the costs are at RDN facilities for waste disposal. When waste is generated then they bear the cost. We advocate that residents reduce, reuse and recycle and all other free options to help relieve the costs of disposal.

Future Residual Disposal (L. Gardner)

Presentation postponed until next meeting.

ADDENDUM

NEW BUSINESS

ADJOURNMENT

MOVED J. McTaggart-Cowan, SECONDED G. Johnson, that this meeting be adjourned.

Time: 7:40 pm.



CHAIRPERSON

**REGIONAL DISTRICT OF NANAIMO
REGIONAL SOLID WASTE ADVISORY COMMITTEE MEETING**

**THURSDAY, May 19, 2016, 5:00 PM - 7:30 PM
RDN Board Chambers**

A G E N D A

CALL TO ORDER

DELEGATIONS

MINUTES

- 3-7 Minutes of the Regional Solid Waste Advisory Committee meeting held April 14, 2016.

BUSINESS ARISING FROM THE MINUTES

UNFINISHED BUSINESS

COMMUNICATIONS/CORRESPONDENCE

8-8

REPORTS

Update on the Stage 2 Process. (R. Alexander – presentation)

Future Residual Disposal. (L. Gardner – presentation)

Review of Additional Regulatory Authorities. (L. Gardner – presentation)

- 9-9 Zero Waste Definitions and RDN Guiding Principles. (S. Horsburgh – distribution)

- 10-14 Options for the Management of Hazardous Household Waste. (S. Horsburgh - presentation)

ADDENDUM

BUSINESS ARISING FROM DELEGATIONS OR COMMUNICATIONS

NEW BUSINESS

ADJOURNMENT

Distribution:

Alec McPherson	Chair, RDN Director	Gerald Johnson	Member at Large
Bill McKay	Deputy Chair	Ellen Ross	Member at Large
Derek Haarsma	Business Representative	Amanda Ticknor	Member at Large
Jan Hastings	Non Profit Representative	Michael Recalma	Qualicum First Nation
Dean Jones	Waste Management Industry	Chief & Council	Nanoose First Nation
Jim McTaggart-Cowan	Member at Large	Chief & Council	Snuneymuxw First Nation
Michael Tripp	Business Representative	Geoff Goodall	City of Nanaimo
Stewart Young Jr.	Business Representative	Cam Purdon	Town of Qualicum Beach
Wally Wells	Business Representative	Al Leuschen	Ministry of Environment
Craig Evans	Member at Large	Fred Spears	District of Lantzville
John Finnie	Member at Large	Karen Muttersbach	Environment Canada
Ben Geselbracht	Member at Large	Glenn Gibson	Island Health
Michele Green	Member at Large		

RDN Staff:

Larry Gardner	Manager, Solid Waste Services, RDN
Sharon Horsburgh	Senior Solid Waste Planner, RDN
Randy Alexander	GM, RCU & Solid Waste Services, RDN
Meghan Larson	Special Projects Coordinator
Jeff Ainge	Zero Waste Coordinator, RDN
Rebecca Graves	Recording Secretary, RDN

For information only:

Regional Board Members: CAO's: Dennis Trudeau (RDN), Brad McRae (District of Lantzville), Debbie Comis (City of Parksville), Daniel Sailland (Town of Qualicum Beach), Tracy Samra (City of Nanaimo)

**REGIONAL DISTRICT OF NANAIMO
REGIONAL SOLID WASTE ADVISORY COMMITTEE MEETING
HELD ON THURSDAY, MAY 19, 2016
BOARD CHAMBERS**

Present:

Alec McPherson	Chair, RDN Director
Bill McKay	Deputy Chair, RDN Director
Jan Hastings	Non Profit Representative
Dean Jones	Waste Management Industry
Derek Haarsma	Business Representative
Michael Tripp	Business Representative
Craig Evans	Member at Large
Ben Geselbracht	Member at Large
Gerald Johnson	Member at Large
Jim McTaggart-Cowan	Member at Large
Ellen Ross	Member at Large
Amanda Ticknor	Member at Large
Cam Purdon	Town of Qualicum Beach

Also in Attendance:

Director Young	Electoral Area 'C'
Larry Gardner	Manager of Solid Waste, RDN
Rebecca Graves	Recording Secretary, RDN
Sharon Horsburgh	Senior Solid Waste Planner, RDN
Meghan Larson	Special Projects Coordinator, RDN
Randy Alexander	General Manager, RCU, RDN

Regrets:

Stewart Young Jr.	Business Representative
Charlotte Davis	City of Nanaimo
Geoff Goodall	City of Nanaimo
Chief & Council	Nanoose First Nation
Chief & Council	Snuneymuxw First Nation
Michael Recalma	Qualicum First Nation
Glenn Gibson	Island Heath
Al Leuschen	Ministry of Environment
Karen Muttersbach	Environment Canada
Fred Spears	District of Lantzville
John Finnie	Member at Large
Michele Green	Member at Large
Wally Wells	Business Representative

CALL TO ORDER

The Chairperson called the meeting to order at 5:05 PM and respectfully acknowledged the Coast Salish First Nations on whose traditional territory the meeting took place.

DELEGATES

MINUTES

MOVED J. McTaggart-Cowan, SECONDED G. Johnson, that the minutes from the meeting of the Regional Solid Waste Advisory Committee regular meeting held April 14, 2016, be adopted. CARRIED

BUSINESS ARISING FROM THE MINUTES

UNFINISHED BUSINESS

COMMUNICATIONS/CORRESPONDENCE

ICI Waste Diversion Challenges – Mike Tripp (Progressive Waste Solutions) & Derek Haarsma (Haarsma Waste Innovations Inc.

MOVED G. Johnson, SECONDED J. McTaggart-Cowan, that the ICI Waste Diversion Challenges communications/correspondence be received. CARRIED

J. Finnie, re comments regarding Zero Waste and HHW diversion.

W. Wells, re proposed Zero Waste Definition.

MOVED J. McTaggart-Cowan, SECONDED G. Johnson, that communications/correspondence received from J. Finnie and W. Wells be received. CARRIED

REPORTS

Update on the Stage 2 Process. (R. Alexander – presentation)

R. Alexander gave a brief presentation on the Stage 2 process. Next steps will be:

- distribution of summary binder
- recommendation workshop
- draft recommendations
- submit recommendations to Board Select
- draft stage 2 report
- stage 3 consultation
- SWMP submission.

J. McTaggart-Cowan expressed concern about the lack of time to review the background information before the workshop. R. Alexander committed to providing the summary binder one week earlier.

J. Hastings remarked that there have been presentations and information but not the opportunity for dialogue.

E. Ross commented that she is comfortable with the process and moving ahead to a workshop.

Future Residual Disposal. (L. Gardner – presentation)

L. Gardner gave a presentation on Future Residual Disposal and what is included in the current SWMP presented options to manage future requirements.

G. Johnson questioned if any studies have been done on economies of scale with respect to working with other communities?

L. Gardner replied that since plan implementation ongoing research has been conducted on various new & emerging technologies in conjunction with the Capital Regional District, and the Cowichan Valley Regional District to evaluate Capital and operating costs of future disposal options.

A. McPherson noted if exporting into the US occurs there needs to be a backup landfill option locally.

J. Hastings commented on keeping residuals close and visible in order to study and allow industry an opportunity to innovate and reduce waste. The landfill should become a research base.

G. Johnson questioned what are the air quality standards for particulates matter?

L. Gardner replied the Ministry of Environment regulates air quality and there are varying discharge standards for industry.

B. McKay remarked that there are European and Federal standards and that the Province of BC asked an engineering company to provide standards for emissions to regulate future waste to energy facilities. Were these standards received or adopted?

L. Gardner was not aware of any new standards being developed but remarked the Province will establish new standards, adopt, regulate and adjust where necessary.

B. McKay noted that during the waste to energy discussions, people on central Vancouver Island did not want to import other people's problem but the local population was prepared to come up with regional solutions.

Review of Additional Regulatory Authorities. (L. Gardner – presentation)

L. Gardner reviewed the topic of Additional Regulatory Authorities. A SWMP may provide regional districts additional powers to manage municipal solid waste and the MOE must approve the additional powers in the SWMP as well as the bylaw. The legislation provides the ability for regional districts to regulate. Examples of the tools include:

- Mandatory waste collection service
- Waste source regulation
- Flow management
- Waste Hauler Franchise
- Waste Hauler as Agents

G. Johnson asked if you can have both agent and a franchise option in the SWMP?

L. Gardner replied that we can and that in order for the Minister to give local government additional powers the more specific we are by Stage 3 then there is higher level of assurance that the Province will grant the RDN additional regulatory authorities.

M. Tripp commented on MMBC and the intention was to reduce packaging and the amount of recyclable materials in the waste stream but to date there appears to be no improvement.

G. Johnson questioned if we could consider user-pay and give the incentive to recycle?

M. Larson replied that within the RDN it is a mandatory utility fee for curbside residential pickup with strict limits.

J. McTaggart-Cowan asked what could be done to encourage additional recycling in the IC&I and Multi-family sector and maintain the opportunity for the waste haulers to compete?

L. Gardner replied that this can be done with waste source regulation and economic incentives. It would require people to divert more but there would be a higher cost to regulate.

S. Horsburgh commented the existing regulatory framework that includes landfill bans has supported the recycling industry and encouraged the current level of private sector infrastructure. Further regulation that creates an economic incentive would help strengthen the private sector waste diversion activities.

M. Tripp noted with a financial incentive under a levy he would turn the cost back to the customer and receive further diversion.

D. Jones mentioned if franchising goes into the SWMP it would kill private investment.

D. Haarsma commented if a regulation was imposed on multi-family buildings and recycling was regulated, enforcement would be easy for the hauler and it would prevent recyclables being landfilled.

J. McTaggart-Cowan questioned if there was an up to date report on the waste volumes generated from the IC&I and multi-family sector as well as material disposed of outside of the RDN?

L. Gardner replied that the 2012 report has reporting numbers on WSML materials and hasn't changed much.

Zero Waste Definitions and RDN Guiding Principles. (S. Horsburgh – distribution)

S. Horsburgh gave an overview on ZWIA and the definition of zero waste.

J. Hastings commented that the current Stage One Strategic Plan reads that the RDN doesn't consider waste to energy, in ZWIA definitions no incineration is part of the hierarchy and would like clarification if it is in the strategic plan to explore emerging technologies.

S. Horsburgh commented that while preferences around Zero Waste are not to bury or burn waste, waste to energy is just one of a variety of new and emerging technology treatments to assist regional districts manage future waste disposal options.

Alec McPherson commented that gasification has been discussed at AVICC meetings and there was indication the committee is open to technological change.

G. Johnson commented that he is endorsing the ZWIA definition as long as there is a statement based on the most current independent peer reviewed science.

MOVED J. McTaggart-Cowan, SECONDED J. Hastings, that the ZWIA definition of Zero Waste and the ZWIA Hierarchy of Best Uses guide the consideration of proposals for the next Solid Waste Management Plan. CARRIED

MOVED J. McTaggart-Cowan, SECONDED G. Johnson, that increasing IC&I diversion will be a cornerstone of the next Solid Waste Management Plan. CARRIED

ADDENDUM

NEW BUSINESS

ADJOURNMENT

MOVED J. McTaggart-Cowan, SECONDED E. Ross, that this meeting be adjourned.

Time: 7:40 pm.



CHAIRPERSON

**REGIONAL DISTRICT OF NANAIMO
REGIONAL SOLID WASTE ADVISORY COMMITTEE MEETING**

**THURSDAY, October 27, 2016, 5:00 PM - 7:30 PM
(RDN Board Chambers)**

RDN Meetings may be recorded

A G E N D A

CALL TO ORDER

DELEGATIONS

MINUTES

2-6 Minutes of the Regional Solid Waste Advisory Committee meeting held June 23, 2016.

BUSINESS ARISING FROM THE MINUTES

UNFINISHED BUSINESS

COMMUNICATIONS/CORRESPONDENCE

REPORTS

ADDENDUM

BUSINESS ARISING FROM DELEGATIONS OR COMMUNICATIONS

NEW BUSINESS

ADJOURNMENT

Distribution:

Alec McPherson	Chair, RDN Director	Gerald Johnson	Member at Large
Bill McKay	Deputy Chair	Ellen Ross	Member at Large
Derek Haarsma	Business Representative	Amanda Ticknor	Member at Large
Jan Hastings	Non Profit Representative	Michael Recalma	Qualicum First Nation
Dean Jones	Waste Management Industry	Chief & Council	Nanoose First Nation
Jim McTaggart-Cowan	Member at Large	Chief & Council	Snuneymuxw First Nation
Michael Tripp	Business Representative	Charlotte Davies	City of Nanaimo
Stewart Young Jr.	Business Representative	Cam Purdon	Town of Qualicum Beach
Wally Wells	Business Representative	Al Leuschen	Ministry of Environment
Craig Evans	Member at Large	Fred Spears	District of Lantzville
John Finnie	Member at Large	Karen Muttersbach	Environment Canada
Ben Geselbracht	Member at Large	Glenn Gibson	Island Health
Michele Green	Member at Large		

RDN Staff:

Larry Gardner	Manager, Solid Waste Services, RDN
Meghan Larson	Senior Solid Waste Planner, RDN
Randy Alexander	GM, RCU & Solid Waste Services, RDN
Sonam Bajwa	Special Projects Assistant, RDN
Rebecca Graves	Recording Secretary, RDN
Ben Routledge	Zero Waste Coordinator

For information only:

Regional Board Members: CAO's: Dennis Trudeau (RDN), Brad McRae (District of Lantzville), Debbie Comis (City of Parksville), Daniel Sailland (Town of Qualicum Beach), Tracy Samra (City of Nanaimo)

DRAFT

**REGIONAL DISTRICT OF NANAIMO
REGIONAL SOLID WASTE ADVISORY COMMITTEE MEETING
HELD ON THURSDAY, JUNE 23, 2016
BOARD CHAMBERS**

Present:

Alec McPherson	Chair, RDN Director
Bill McKay	Deputy Chair, RDN Director
Jan Hastings	Non Profit Representative
Wally Wells	Business Representative
Stewart Young Jr.	Business Representative
Derek Haarsma	Business Representative
Amanda Ticknor	Business Representative
Dean Jones	Waste Management Industry
Craig Evans	Member at Large
Ben Geselbracht	Member at Large
Gerald Johnson	Member at Large
Jim McTaggart-Cowan	Member at Large
Ellen Ross	Member at Large
John Finnie	Member at Large
Michele Green	Member at Large

Also in Attendance:

Director Young	Electoral Area 'C'
Randy Alexander	General Manager, RCU, RDN
Larry Gardner	Manager of Solid Waste, RDN
Sharon Horsburgh	Senior Solid Waste Planner, RDN
Meghan Larson	Special Projects Coordinator, RDN
Sonam Bajwa	Special Projects Assistant, RDN
Rebecca Graves	Recording Secretary, RDN

Regrets:

Charlotte Davis	City of Nanaimo
Chief & Council	Nanoose First Nation
Chief & Council	Snuneymuxw First Nation
Michael Recalma	Qualicum First Nation
Glenn Gibson	Island Heath
Al Leuschen	Ministry of Environment
Karen Muttersbach	Environment Canada
Fred Spears	District of Lantzville
Cam Purdon	Town of Qualicum Beach
Michael Tripp	Business Representative

CALL TO ORDER

The Chairperson called the meeting to order at 3:18 PM and respectfully acknowledged the Coast Salish First Nations on whose traditional territory the meeting took place.

DELEGATES

MINUTES

MOVED J. McTaggart-Cowan, SECONDED B. McKay, that the minutes from the meeting of the Regional Solid Waste Advisory Committee regular meeting held May 19, 2016, be adopted. CARRIED

BUSINESS ARISING FROM THE MINUTES

UNFINISHED BUSINESS

COMMUNICATIONS/CORRESPONDENCE

REPORTS

ADDENDUM

NEW BUSINESS

RDN Solid Waste Management Plan Update - Facilitated Workshop. (J. Enes)

Workshop notes forthcoming.

ADJOURNMENT

MOVED J. McTaggart-Cowan, SECONDED E. Ross, that this meeting be adjourned.

Time: 7:40 pm.



CHAIRPERSON

**REGIONAL DISTRICT OF NANAIMO
REGIONAL SOLID WASTE ADVISORY COMMITTEE MEETING**

**THURSDAY, October 27, 2016, 5:00 PM - 7:30 PM
(RDN Board Chambers)**

A G E N D A
RDN Meetings may be recorded

CALL TO ORDER

DELEGATIONS

MINUTES

- 3-8 Minutes of the Regional Solid Waste Advisory Committee meeting held June 23, 2016.

BUSINESS ARISING FROM THE MINUTES

UNFINISHED BUSINESS

COMMUNICATIONS/CORRESPONDENCE

REPORTS

- Update on the Stage 2 Process. (R. Alexander – Presentation)
- 9-41 Stage 2 Draft Solid Waste Management Plan (M. Larson – Presentation/Distribution)
- Future Solid Waste Strategies (L. Gardner – Presentation)

ADDENDUM

BUSINESS ARISING FROM DELEGATIONS OR COMMUNICATIONS

NEW BUSINESS

ADJOURNMENT

Distribution:

Alec McPherson	Chair, RDN Director	Gerald Johnson	Member at Large
Bill McKay	Deputy Chair	Ellen Ross	Member at Large
Derek Haarsma	Business Representative	Amanda Ticknor	Member at Large
Jan Hastings	Non Profit Representative	Michael Recalma	Qualicum First Nation
Dean Jones	Waste Management Industry	Chief & Council	Nanoose First Nation
Jim McTaggart-Cowan	Member at Large	Chief & Council	Snuneymuxw First Nation
Michael Tripp	Business Representative	Charlotte Davies	City of Nanaimo
Stewart Young Jr.	Business Representative	Cam Purdon	Town of Qualicum Beach
Wally Wells	Business Representative	Al Leuschen	Ministry of Environment
Craig Evans	Member at Large	Fred Spears	District of Lantzville
John Finnie	Member at Large	Karen Muttersbach	Environment Canada
Ben Geselbracht	Member at Large	Glenn Gibson	Island Health
Michele Green	Member at Large		

RDN Staff:

Larry Gardner	Manager, Solid Waste Services, RDN
Randy Alexander	GM, RCU & Solid Waste Services, RDN
Meghan Larson	Special Projects Coordinator, RDN
Ben Routledge	Zero Waste Coordinator, RDN
Rebecca Graves	Recording Secretary, RDN
Sonam Bajwa	Special Projects Assistant, RDN

For information only:

Regional Board Members: CAO's: Phyllis Carlyle (RDN), Brad McRae (District of Lantzville), Debbie Comis (City of Parksville), Daniel Sailland (Town of Qualicum Beach), Tracy Samra (City of Nanaimo)

**REGIONAL DISTRICT OF NANAIMO
REGIONAL SOLID WASTE ADVISORY COMMITTEE MEETING
HELD ON THURSDAY, OCTOBER 27, 2016
BOARD CHAMBERS**

Present:

Bill McKay	Deputy Chair, RDN Director
Jan Hastings	Non Profit Representative
Dean Jones	Waste Management Industry
Jim McTaggart-Cowan	Member at Large
Craig Evans	Member at Large
John Finnie	Member at Large
Ben Geselbracht	Member at Large
Michele Green	Member at Large
Gerald Johnson	Member at Large
Ellen Ross	Member at Large
Amanda Ticknor	Member at Large
Charlotte Davis	City of Nanaimo

Also in Attendance:

Randy Alexander	General Manager, RCU, RDN
Larry Gardner	Manager of Solid Waste, RDN
Meghan Larson	Solid Waste Planner, RDN
Rebecca Graves	Recording Secretary, RDN

Regrets:

Alec McPherson	Chair, RDN Director
Chief & Council	Nanoose First Nation
Chief & Council	Snuneymuxw First Nation
Michael Recalma	Qualicum First Nation
Glenn Gibson	Island Heath
Al Leuschen	Ministry of Environment
Karen Muttersbach	Environment Canada
Fred Spears	District of Lantzville
Cam Purdon	Town of Qualicum Beach
Michael Tripp	Business Representative
Wally Wells	Business Representative
Stewart Young Jr.	Business Representative
Derek Haarsma	Business Representative

CALL TO ORDER

The Chairperson called the meeting to order at 5:07 PM and respectfully acknowledged the Coast Salish First Nations on whose traditional territory the meeting took place.

DELEGATES

MINUTES

MOVED G. Johnson, SECONDED J. McTaggart-Cowan, that the minutes from the meeting of the Regional Solid Waste Advisory Committee regular meeting held June 23, 2016, be adopted. CARRIED

BUSINESS ARISING FROM THE MINUTES

UNFINISHED BUSINESS

COMMUNICATIONS/CORRESPONDENCE

REPORTS

MOVED J. Hastings, SECONDED J. McTaggart-Cowan, that the Committee discuss the process of how revisions to the Draft Stage 2 report are made.

Update on the Stage 2 Process.

R. Alexander gave an overview of current process and milestones which included RSWAC recommended strategies and options, draft stage 2 report, RSWAC comments on draft, submit revised draft to RDN Board, stage 3 consultation and SWMP submission. Shortlisted options include multi-family food waste collection, haulers as agents and waste source control.

Stage 2 Draft Solid Waste Management Plan.

M. Larson gave an overview on the Stage 2 Draft SWMP which included key recommendations and preferred options. Options still requiring discussion are economic and regulatory tools, construction and demolition waste and new and emerging technologies.

Future Solid Waste Strategies.

L. Gardner reviewed options that still require discussion including economic and regulatory tools, construction and demolition waste, new and emerging technologies and waste prevention.

Some of the options that still required discussion are:

- Economic and Regulatory Tools (i.e. Waste Haulers as Agents, Waste Source Regulation, and Waste Hauler Franchising)
- Construction and Demolition Waste
- New and Emerging Technologies
- Waste Prevention

MOVED J. Hastings, SECONDED J. McTaggart-Cowan, that Waste Source Regulation and Waste Haulers as Agents be included in the Solid Waste Management Plan.

CARRIED

MOVED G. Johnson, SECONDED B. Geselbrecht, that Waste Hauler Franchising not be considered in the Solid Waste Management Plan.

CARRIED

MOVED J. McTaggart-Cowan, SECONDED B. Geselbrecht, that introduction of additional regulatory authority, as previously discussed, be included as part of the Construction and Demolition Waste strategy in the Solid Waste Management Plan.

CARRIED

Under Section 4.8 of the draft New and Emerging Technologies discussion highlighted the need to continue to investigate new and emerging technologies throughout the lifespan of the plan with a focus on source separation before implementing new technologies (i.e. MRF) and in line with the Zero Waste Hierarchy.

Discussion highlighted the need for waste prevention and stronger messaging under Section 4.2.3 as part of the advocacy role of the RDN.

ADDENDUM

NEW BUSINESS

ADJOURNMENT

MOVED G. Johnson, SECONDED J. McTaggart-Cowan, that this meeting be adjourned.

CARRIED

Time: 7:35 pm.

CHAIRPERSON

**REGIONAL DISTRICT OF NANAIMO
REGIONAL SOLID WASTE ADVISORY COMMITTEE MEETING**

**THURSDAY, DECEMBER 1, 2016 5:00 PM - 7:30 PM
(RDN Board Chambers)**

A G E N D A
RDN Meetings may be recorded

CALL TO ORDER

DELEGATIONS

MINUTES

2-4 Minutes of the Regional Solid Waste Advisory Committee meeting held October 27, 2016.

BUSINESS ARISING FROM THE MINUTES

UNFINISHED BUSINESS

COMMUNICATIONS/CORRESPONDENCE

REPORTS

5-38 Final Stage 2 SWMP Report (M. Larson - Presentation/Distribution)

PRESENTATION

Stage 2 SWMP Update (M. Larson)

ADDENDUM

BUSINESS ARISING FROM DELEGATIONS OR COMMUNICATIONS

NEW BUSINESS

ADJOURNMENT

Distribution:

Alec McPherson	Chair, RDN Director	Gerald Johnson	Member at Large
Bill McKay	Deputy Chair	Ellen Ross	Member at Large
Derek Haarsma	Business Representative	Amanda Ticknor	Member at Large
Jan Hastings	Non Profit Representative	Michael Recalma	Qualicum First Nation
Dean Jones	Waste Management Industry	Chief & Council	Nanoose First Nation
Jim McTaggart-Cowan	Member at Large	Chief & Council	Snuneymuxw First Nation
Michael Tripp	Business Representative	Charlotte Davies	City of Nanaimo
Stewart Young Jr.	Business Representative	Cam Purdon	Town of Qualicum Beach
Wally Wells	Business Representative	Al Leuschen	Ministry of Environment
Craig Evans	Member at Large	Fred Spears	District of Lantzville
John Finnie	Member at Large	Karen Muttersbach	Environment Canada
Ben Geselbracht	Member at Large	Glenn Gibson	Island Health
Michele Green	Member at Large		

RDN Staff:

Larry Gardner	Manager, Solid Waste Services, RDN	Ben Routledge	Zero Waste Coordinator, RDN
Randy Alexander	GM, RCU & Solid Waste Services, RDN	Rebecca Graves	Recording Secretary, RDN
Meghan Larson	Special Projects Coordinator, RDN	Sonam Bajwa	Special Projects Assistant, RDN

For information only:

Regional Board Members: CAO's: Phyllis Carlyle (RDN), Brad McRae (District of Lantzville), Debbie Comis (City of Parksville), Daniel Sailland (Town of Qualicum Beach), Tracy Samra (City of Nanaimo)

**REGIONAL DISTRICT OF NANAIMO
REGIONAL SOLID WASTE ADVISORY COMMITTEE MEETING
HELD ON THURSDAY, December 1, 2016
BOARD CHAMBERS**

Present:

Alec McPherson	Chair, RDN Director
Bill McKay	Deputy Chair, RDN Director
Jan Hastings	Non Profit Representative
Dean Jones	Waste Management Industry
Jim McTaggart-Cowan	Member at Large
Wally Wells	Business Representative
Craig Evans	Member at Large
John Finnie	Member at Large
Michael Tripp	Business Representative
Gerald Johnson	Member at Large
Ellen Ross	Member at Large
Cam Purdon	Town of Qualicum Beach
Ben Geselbracht	Member at Large
Derek Haarsma	Business Representative
Amanda Ticknor	Member at Large

Also in Attendance:

Randy Alexander	General Manager, RCU, RDN
Larry Gardner	Manager of Solid Waste, RDN
Meghan Larson	Solid Waste Planner, RDN
Ben Routledge	Zero Waste Coordinator, RDN
Shelleen Schultz	Recording Secretary, RDN

Regrets:

Chief & Council	Nanoose First Nation
Chief & Council	Snuneymuxw First Nation
Michael Recalma	Qualicum First Nation
Glenn Gibson	Island Heath
Al Leuschen	Ministry of Environment
Karen Muttersbach	Environment Canada
Fred Spears	District of Lantzville
Stewart Young Jr.	Business Representative
Michele Green	Member at Large
Charlotte Davis	City of Nanaimo
Matthew Louie	Member at Large

CALL TO ORDER

The Chairperson called the meeting to order at 5:05 PM and respectfully acknowledged the Coast Salish First Nations on whose traditional territory the meeting took place.

DELEGATES

MINUTES

MOVED J. McTaggart-Cowan, SECONDED G. Johnson, that the minutes from the meeting of the Regional Solid Waste Advisory Committee regular meeting held October 27, 2016, be adopted.

CARRIED

BUSINESS ARISING FROM THE MINUTES

UNFINISHED BUSINESS

COMMUNICATIONS/CORRESPONDENCE

RDN Solid Waste Management Stage 2 Report – VIRWIC.

MOVED G. Johnson, SECONDED J. Hastings, that the communications/correspondence from VIRWIC re. RDN Solid Waste Management Stage 2 Report be received.

CARRIED

REPORTS

Draft Stage 2 SWMP Report (M. Larson – Presentation)

M. Larson gave a presentation on the Draft Stage 2 SWMP report and requested that members read section 5.0 Long Term Residual Management. Comments, questions and/or suggestions were requested regarding the report and be received by Wednesday December 7, 2016.

Discussion highlighted the need for committee members input on a number of areas on the Draft Stage 2 SWMP report.

M. Larson reviewed the changes that occurred with the Draft SWMP were:

- Re-ordered the Strategies outlined in the report
- Updated Guiding Principles to BC Ministry of Environment Guiding Principles
- Replaced the BC Ministry Hierarchy with ZIWA Hierarchy
- Inserted “First Nations” when referring to the four First Nations Indian Reserves
- Added to Regional District (Board and Staff) roles in Solid Waste Management
 - Develops policies which promotes a level playing field within the waste management sector
- Reordered the Section 4.1 General Strategies
- Expanded Advocacy Roles in 4.2.3
- Section 4.3 addition of: Additionally, Section 4.5.2 discusses the introduction of Waste Source Regulation as an additional authority under the SWMP which would drive the requirement for all multi-family buildings to have full diversion programs in place for recyclables and organics.
- Changed the order of the Regulatory Authorities with Waste Source Regulation before Waste Haulers as Agents

Some points of discussion were:

- Reference to and for the ZWIA hierarchy & definition commitment
- Role of local, provincial and federal government to advocate for the 5 R’s
- Identify the need to develop a Solid Waste Emergency Management Plan
- Identify social enterprises’ role
- New and emerging waste management technology in Stage 3
- Funding structure in order to reach 90% diversion goal

MOVED B. McKay, SECONDED G. Johnson, that the Draft SWMP Stage 2 Report be accepted for public consultation.

CARRIED

PRESENTATION

Stage 2 SWMP Update presented in conjunction with the report.

ADDENDUM

Addendum covered under Communications/Correspondence.

NEW BUSINESS

ADJOURNMENT

MOVED J. McTaggart, SECONDED E. Ross, that the meeting be adjourned.

CARRIED

Time: 7:29 pm.

CHAIRPERSON

**REGIONAL DISTRICT OF NANAIMO
REGIONAL SOLID WASTE ADVISORY COMMITTEE MEETING**

**THURSDAY, APRIL 20, 2017 5:00 PM - 7:30 PM
(RDN Board Chambers)**

A G E N D A
RDN Meetings may be recorded

CALL TO ORDER

MINUTES

2-4 Minutes of the Regional Solid Waste Advisory Committee meeting held December 1, 2016.

PRESENTATION

SWMP Consultation Update. *Staff will provide presentation.*

5-15 Dispute Resolution Process. *Staff will provide presentation.
Background information provided.*

SWMP Financial Projections Update. *Staff will provide presentation.*

DELEGATIONS

COMMUNICATIONS/CORRESPONDENCE

UNFINISHED BUSINESS

REPORTS

BUSINESS ARISING FROM DELEGATIONS/COMMUNICATIONS

NEW BUSINESS

ADJOURNMENT

Distribution:

Alec McPherson	Chair, RDN Director	Gerald Johnson	Member at Large
Bill McKay	Deputy Chair	Ellen Ross	Member at Large
Derek Haarsma	Business Representative	Amanda Ticknor	Member at Large
Jan Hastings	Non Profit Representative	Mathew Louie	Member at Large
Dean Jones	Waste Management Industry	Michael Recalma	Qualicum First Nation
Jim McTaggart-Cowan	Member at Large	Chief & Council	Nanoose First Nation
Michael Tripp	Business Representative	Chief & Council	Snuneymuxw First Nation
Stewart Young Jr.	Business Representative	Charlotte Davies	City of Nanaimo
Wally Wells	Business Representative	Cam Purdon	Town of Qualicum Beach
Craig Evans	Member at Large	Al Leuschen	Ministry of Environment
John Finnie	Member at Large	Fred Spears	District of Lantzville
Ben Geselbracht	Member at Large	Karen Muttersbach	Environment Canada
Michele Green	Member at Large	Glenn Gibson	Island Health

RDN Staff:

Larry Gardner	Manager, Solid Waste Services, RDN	Ben Routledge	Zero Waste Coordinator, RDN
Randy Alexander	GM, RCU & Solid Waste Services, RDN	Rebecca Graves	Recording Secretary, RDN
Meghan Larson	Solid Waste Planner, RDN	Sonam Bajwa	Special Projects Assistant, RDN

For information only:

Regional Board Members: CAO's: Phyllis Carlyle (RDN), Brad McRae (District of Lantzville), Debbie Comis (City of Parksville), Daniel Sailland (Town of Qualicum Beach), Tracy Samra (City of Nanaimo)

**REGIONAL DISTRICT OF NANAIMO
REGIONAL SOLID WASTE ADVISORY COMMITTEE MEETING
HELD ON THURSDAY, APRIL 20, 2017
BOARD CHAMBERS**

Present:

Alec McPherson	Chair, RDN Director
Bill McKay	Deputy Chair, RDN Director
Jan Hastings	Non Profit Representative
Dean Jones	Waste Management Industry
Jim McTaggart-Cowan	Member at Large
Craig Evans	Member at Large
John Finnie	Member at Large
Gerald Johnson	Member at Large
Ellen Ross	Member at Large
Ben Geselbracht	Member at Large
Amanda Ticknor	Member at Large
Stewart Young Jr.	Business Representative
Charlotte Davis	City of Nanaimo
Derek Haarsma	Business Representative
Matthew Louie	Member at Large

Also in Attendance:

Phyllis Carlyle	CAO, RDN
Randy Alexander	General Manager, RCU, RDN
Larry Gardner	Manager of Solid Waste, RDN
Meghan Larson	Solid Waste Planner, RDN
Rebecca Graves	Recording Secretary, RDN

Regrets:

Wally Wells	Business Representative
Michael Tripp	Business Representative
Cam Purdon	Town of Qualicum Beach
Chief & Council	Nanoose First Nation
Chief & Council	Snuneymuxw First Nation
Michael Recalma	Qualicum First Nation
Glenn Gibson	Island Heath
Al Leuschen	Ministry of Environment
Karen Muttersbach	Environment Canada
Fred Spears	District of Lantzville
Michele Green	Member at Large

CALL TO ORDER

The Chairperson called the meeting to order at 5:13 PM and respectfully acknowledged the Coast Salish First Nations on whose traditional territory the meeting took place.

APPROVAL OF AGENDA

It was moved and seconded that the agenda be approved as circulated.

CARRIED UNANIMOUSLY

ADOPTION OF MINUTES

It was moved and seconded that the minutes from the Regional Solid Waste Advisory Committee meeting held December 1, 2016, be adopted.

CARRIED UNANIMOUSLY

PRESENTATION

SWMP Consultation Update.

M. Larson updated the Committee on the Stage 2 SWMP consultation completed to date. The overall feedback was positive for programs presented in the draft report and further revisions are not warranted.

Discussion ensued on the potential for development of a Material Recovery Facility. The report had previously been revised to reflect that such a facility is envisioned through private sector investment. A public sector facility would only be considered after fully implementing source reduction efforts and if a private sector facility does not materialize.

Solid Waste Management Plan Dispute Resolution.

L. Gardner presented on SWMP Dispute Resolution. The Ministry of Environment recommends every regional district should establish and consult on a dispute resolution procedure for dealing with disputes arising during implementation of a plan. Examples of disputes include administrative decisions related to a license, interpretation of a provision in the Plan and any other matter not related to a proposed change to the actual wording of the plan.

It was moved and seconded that:

SWMP disputes be directed to the Board for decision; and that the Board consider mediation for non-regulatory or legislative decisions.

Opposed (3): S. Young, D. Jones, D. Haarsma

CARRIED

The Committee recommended that once Metro Vancouver has completed their review they would revisit the procedure.

Stage 2 SWMP Financial Projections.

L. Gardner gave a presentation on the Stage 2 SWMP financial projections on the SWMP preferred options.

It was moved and seconded to include a line item in the SWMP for subsidizing social enterprise.

It was moved and seconded that the recommendation be referred back to staff for inclusion in next agenda of this body.

Opposed (1): J. McTaggart-Cowan.

CARRIED

ADJOURNMENT

It was moved and seconded that this meeting be adjourned.

CARRIED UNANIMOUSLY

Time: 7:47 pm.

CHAIRPERSON

**REGIONAL DISTRICT OF NANAIMO
REGIONAL SOLID WASTE ADVISORY COMMITTEE MEETING**

**THURSDAY, MAY 25, 2017 5:00 PM - 7:30 PM
(RDN Board Chambers)**

A G E N D A
RDN Meetings may be recorded

PAGES

- 1. CALL TO ORDER**
- 2. ADOPTION OF THE AGENDA**
- 3. ADOPTION OF MINUTES**
3-4 3.1 *That the minutes of the Regional Solid Waste Advisory Committee meeting held April 20, 2017 be adopted.*
- 4. PRESENTATIONS**
4.1 SWMP Update.
Staff will provide presentation.
- 5. DELEGATION**
- 6. COMMUNICATIONS/CORRESPONDENCE**
- 7. UNFINISHED BUSINESS**
7.1 Subsidizing of Social Enterprise under the Solid Waste Management Plan.
- 8. COMMITTEE MINUTES AND RECOMMENDATIONS**
- 9. REPORTS**
- 10. BUSINESS ARISING FROM DELEGATIONS**
- 11. NEW BUSINESS**
- 12. ADJOURNMENT**

Distribution:

Alec McPherson	Chair, RDN Director	Gerald Johnson	Member at Large
Bill McKay	Deputy Chair	Ellen Ross	Member at Large
Derek Haarsma	Business Representative	Amanda Ticknor	Member at Large
Jan Hastings	Non Profit Representative	Matthew Louie	Member at Large
Dean Jones	Waste Management Industry	Michael Recalma	Qualicum First Nation
Jim McTaggart-Cowan	Member at Large	Chief & Council	Nanoose First Nation
Michael Tripp	Business Representative	Chief & Council	Snuneymuxw First Nation
Stewart Young Jr.	Business Representative	Charlotte Davies	City of Nanaimo
Wally Wells	Business Representative	Cam Purdon	Town of Qualicum Beach
Craig Evans	Member at Large	Al Leuschen	Ministry of Environment
John Finnie	Member at Large	Fred Spears	District of Lantzville
Ben Geselbracht	Member at Large	Karen Muttersbach	Environment Canada
Michele Green	Member at Large	Glenn Gibson	Island Health

RDN Staff:

Larry Gardner	Manager, Solid Waste Services, RDN	Ben Routledge	Zero Waste Coordinator, RDN
Randy Alexander	GM, RCU & Solid Waste Services, RDN	Rebecca Graves	Recording Secretary, RDN
Meghan Larson	Solid Waste Planner, RDN	Sonam Bajwa	Special Projects Assistant, RDN

For information only:

Regional Board Members: CAO's: Phyllis Carlyle (RDN), Ronald Campbell (District of Lantzville), Debbie Comis (City of Parksville), Daniel Sailland (Town of Qualicum Beach), Tracy Samra (City of Nanaimo)

**REGIONAL DISTRICT OF NANAIMO
REGIONAL SOLID WASTE ADVISORY COMMITTEE MEETING
HELD ON THURSDAY, MAY 25, 2017
BOARD CHAMBERS**

Present:

Alec McPherson	Chair, RDN Director
Bill McKay	Deputy Chair, RDN Director
Jan Hastings	Non Profit Representative
Jim McTaggart-Cowan	Member at Large
Craig Evans	Member at Large
John Finnie	Member at Large
Gerald Johnson	Member at Large
Ellen Ross	Member at Large
Amanda Ticknor	Member at Large
Charlotte Davis	City of Nanaimo
Wally Wells	Business Representative
Ben Geselbracht	Member at Large
Dean Jones	Waste Management Industry

Also in Attendance:

Phyllis Carlyle	CAO, RDN
Randy Alexander	General Manager, RCU, RDN
Larry Gardner	Manager of Solid Waste, RDN
Meghan Larson	Solid Waste Planner, RDN
Rebecca Graves	Recording Secretary, RDN

Regrets:

Matthew Louie	Member at Large
Stewart Young Jr.	Business Representative
Michele Green	Member at Large
Derek Haarsma	Business Representative
Michael Tripp	Business Representative
Cam Purdon	Town of Qualicum Beach
Chief & Council	Nanoose First Nation
Chief & Council	Snuneymuxw First Nation
Michael Recalma	Qualicum First Nation
Glenn Gibson	Island Heath
Al Leuschen	Ministry of Environment
Karen Muttersbach	Environment Canada
Fred Spears	District of Lantzville

CALL TO ORDER

The Chairperson called the meeting to order at 5:15 PM and respectfully acknowledged the Coast Salish First Nations on whose traditional territory the meeting took place.

APPROVAL OF AGENDA

It was moved and seconded that the agenda be approved as circulated.

CARRIED UNANIMOUSLY

ADOPTION OF MINUTES

It was moved and seconded that the minutes from the Regional Solid Waste Advisory Committee meeting held April 20, 2017, be adopted.

CARRIED UNANIMOUSLY

PRESENTATION

SWMP Update.

L. Gardner and M. Larson gave an outline on the SWMP Update which included an update on the timeline, Stage 2 Consultation Report, Stage 2 SWMP Report Adoption, Stage 3 SWMP Next Steps, Stage 3 Consultation and Financial Projections Update.

A discussion occurred in regards to any edits or additions that should be included in the Stage 2 SWMP report.

CORRESPONDENCE

Jan Hastings, NRE, re Funding for Social Enterprise.

UNFINISHED BUSINESS

Subsidizing of Social Enterprise under the Solid Waste Management Plan.

J. Hastings introduced and discussed the Income Summary for Zero Waste Recycling items that the NRE accepts.

It was moved and seconded that the discussion in regards to Subsidizing of Social Enterprise under the Solid Waste Management Plan be deferred to the next Regional Solid Waste Advisory Committee meeting.

Opposed J. McTaggart-Cowan. (1)

CARRIED

REPORTS

Stage 2 Consultation Summary

It was moved and seconded that the Regional Solid Waste Advisory Committee receives the Stage 2 Solid Waste Management Plan Consultation and Communications Summary for information.

CARRIED UNANIMOUSLY

2017 SWMP Stage 2 Report Adoption

It was moved and seconded that the Regional Board adopt the Stage 2 Solid Waste Management Plan report.

CARRIED UNANIMOUSLY

ADJOURNMENT

It was moved and seconded that this meeting be adjourned.

CARRIED UNANIMOUSLY

Time: 7:38pm.

CHAIRPERSON

**REGIONAL DISTRICT OF NANAIMO
REGIONAL SOLID WASTE ADVISORY COMMITTEE MEETING**

**THURSDAY, July 13, 2017 5:00 PM - 7:30 PM
(RDN Board Chambers)**

A G E N D A
RDN Meetings may be recorded

PAGES

- 1. CALL TO ORDER**
- 2. ADOPTION OF THE AGENDA**
- 3. ADOPTION OF MINUTES**
3-4 3.1 *That the minutes of the Regional Solid Waste Advisory Committee meeting held May 25, 2017 be adopted.*
- 4. PRESENTATIONS**
 - 4.1 Draft SWMP
Staff will provide presentation.
 - 4.2 SWMP Consultation Update
- 5. DELEGATION**
- 6. COMMUNICATIONS/CORRESPONDENCE**
 - 6.1 Resignation of Matthew Louie
- 7. UNFINISHED BUSINESS**
 - 7.1 Subsidizing of Social Enterprise/Zero Waste Recycling under the Solid Waste Management Plan.
- 8. COMMITTEE MINUTES AND RECOMMENDATIONS**
- 9. REPORTS**
- 10. BUSINESS ARISING FROM DELEGATIONS**
- 11. NEW BUSINESS**
- 12. ADJOURNMENT**

Distribution:

Alec McPherson	Chair, RDN Director	Gerald Johnson	Member at Large
Bill McKay	Deputy Chair	Ellen Ross	Member at Large
Derek Haarsma	Business Representative	Amanda Ticknor	Member at Large
Jan Hastings	Non Profit Representative	Matthew Louie	Member at Large
Dean Jones	Waste Management Industry	Michael Recalma	Qualicum First Nation
Jim McTaggart-Cowan	Member at Large	Chief & Council	Nanoose First Nation
Michael Tripp	Business Representative	Chief & Council	Snuneymuxw First Nation
Stewart Young Jr.	Business Representative	Charlotte Davies	City of Nanaimo
Wally Wells	Business Representative	Cam Purdon	Town of Qualicum Beach
Craig Evans	Member at Large	Al Leuschen	Ministry of Environment
John Finnie	Member at Large	Fred Spears	District of Lantzville
Ben Geselbracht	Member at Large	Karen Muttersbach	Environment Canada
Michele Green	Member at Large	Glenn Gibson	Island Health

RDN Staff:

Larry Gardner	Manager, Solid Waste Services, RDN	Ben Routledge	Zero Waste Coordinator, RDN
Randy Alexander	GM, RCU & Solid Waste Services, RDN	Rebecca Graves	Recording Secretary, RDN
Meghan Larson	Solid Waste Planner, RDN	Sonam Bajwa	Special Projects Assistant, RDN

For information only:

Regional Board Members: CAO's: Phyllis Carlyle (RDN), Ronald Campbell (District of Lantzville), Debbie Comis (City of Parksville), Daniel Sailland (Town of Qualicum Beach), Tracy Samra (City of Nanaimo)

REGIONAL DISTRICT OF NANAIMO

MINUTES OF THE REGIONAL SOLID WASTE ADVISORY COMMITTEE MEETING

Thursday, July 13, 2017

5:00 P.M.

RDN Board Chambers

In Attendance:	A. McPherson	Chairperson
	B. McKay	City of Nanaimo
	J. Hastings	Non Profit Representative
	J. McTaggart-Cowan	Member at Large
	J. Finnie	Member at Large
	W. Wells	Business Representative
	B. Geselbracht	Member at Large
	D. Haarsma	Business Representative
	A. Ticknor	Member at Large
C. Purdon	Town of Qualicum Beach	
Regrets:	C. Evans	Member at Large
	G. Johnson	Member at Large
	E. Ross	Member at Large
	D. Jones	Waste Management Industry
	S. Young	Business Representative
	M. Tripp	Business Representative
M. Green	Member at Large	
Also in Attendance:	L. Gardner	Manager, Solid Waste Services
	R. Alexander	General Manager, RCU
	M. Larson	Solid Waste Planner
	R. Graves	Recording Secretary
	M. Young	Director, Electoral Area C
	G. Garbutt	General Manager, SCD

CALL TO ORDER

The Chair called the meeting to order and respectfully acknowledged the Coast Salish Nations on whose traditional territory the meeting took place.

APPROVAL OF THE AGENDA

It was moved and seconded that the agenda be approved as presented.

CARRIED UNANIMOUSLY

ADOPTION OF MINUTES

Regional Solid Waste Advisory Committee Meeting - May 25, 2017

That the minutes of the Regional Solid Waste Advisory Committee meeting held May 25, 2017, be adopted.

eSCRIBE Minutes

CARRIED UNANIMOUSLY

It was moved and seconded that the Unfinished Business item be brought forward.

CARRIED UNANIMOUSLY

Unfinished Business

Subsidizing of Social Enterprise/Zero Waste Recycling under the Solid Waste Management Plan.

The Regional Solid Waste Advisory Committee recommends that the Board fund a non-profit enterprise to act as a research/recycling hub for recycling items currently not commercially marketable. The research/recycling hub would develop methods, markets and collaborations for items not currently easily recyclable, investigate barriers to recycling these items, and develop recycling programs that would ultimately benefit the Regional district of Nanaimo as a whole. Funding for the research/recycling hub would be set at \$300,000 annually over a 5 year pilot project.

CARRIED UNANIMOUSLY

INVITED PRESENTATIONS

Draft SWMP

Staff provided the Committee with a verbal presentation.

SWMP Consultation Update

Staff provided the Committee with a verbal presentation.

CORRESPONDENCE

Matthew Louie, re Resignation Email

It was moved and seconded that the Resignation Email from Matthey Louie be received.

CARRIED UNANIMOUSLY

Maura Walker & Associates, re Review of Stage 2 Solid Waste Management Plan Consultation Efforts

It was moved and seconded that the correspondence from Maura Walker & Associates re Review of Stage 2 Solid Waste Management Plan Consultation Efforts be received.

CARRIED UNANIMOUSLY

NEW BUSINESS

Metro Van Programs

Staff provided the Committee with a verbal presentation.

ADJOURNMENT

It was moved and seconded that the meeting be adjourned.

CARRIED UNANIMOUSLY

CHAIR

**REGIONAL DISTRICT OF NANAIMO
REGIONAL SOLID WASTE ADVISORY COMMITTEE
AGENDA**

Thursday, April 19, 2018

5:00 P.M.

RDN Board Chambers

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1. CALL TO ORDER	
2. APPROVAL OF THE AGENDA	
3. ADOPTION OF MINUTES	
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That the minutes of the Regional Solid Waste Advisory Committee meeting held July 13, 2017, be adopted.	
4. DELEGATIONS	
5. CORRESPONDENCE	
6. INVITED PRESENTATIONS	
6.1 Stage 3 Consultation Report <i>Staff will provide presentation.</i>	5
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6.3 Updated Solid Waste Management Plan <i>Staff will provide presentation.</i>	195
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8. BUSINESS ARISING FROM DELEGATIONS	
9. NEW BUSINESS	
10. ADJOURNMENT	

REGIONAL DISTRICT OF NANAIMO

MINUTES OF THE REGIONAL SOLID WASTE ADVISORY COMMITTEE MEETING

Thursday, April 19, 2018

5:00 P.M.

RDN Board Chambers

In Attendance:	Director A. McPherson	Chair
	Director B. McKay	City of Nanaimo
	C. Evans	Member at Large
	J. Finnie	Member at Large
	B. Geselbracht	Member at Large
	M. Green	Member at Large
	D. Haarsma	Business Representative
	J. Hastings	Non Profit Representative
	G. Johnson	Member at Large
	D. Jones	Waste Management Industry
	J. McTaggart-Cowan	Member at Large
	E. Ross	Member at Large
	A. Ticknor	Member at Large
M. Tripp	Business Representative	
Regrets:	W. Wells	Business Representative
	S. Young	Business Representative
Also in Attendance:	R. Alexander	Gen. Mgr. Regional and Community Utilities
	L. Gardner	Mgr. Solid Waste Services
	C. Davies	City of Nanaimo
	C. Purdon	Town of Qualicum Beach
	M. Recalma	Qualicum First Nation
	S. Bajwa	Special Projects Assistant
	R. Graves	Recording Secretary

CALL TO ORDER

The Chair called the meeting to order and respectfully acknowledged the Coast Salish Nations on whose traditional territory the meeting took place.

APPROVAL OF THE AGENDA

It was moved and seconded that the agenda be approved as presented.

CARRIED UNANIMOUSLY

ADOPTION OF MINUTES

Regional Solid Waste Advisory Committee Meeting - July 13, 2017

It was moved and seconded that the minutes of the Regional Solid Waste Advisory Committee meeting held July 13, 2017, be adopted.

CARRIED UNANIMOUSLY

INVITED PRESENTATIONS

It was moved and seconded that the Stage 3 Consultation Report, Monitoring Committee Plan and Updated Solid Waste Management Plan be received for information.

CARRIED UNANIMOUSLY

ADJOURNMENT

It was moved and seconded that the meeting be adjourned.

CARRIED UNANIMOUSLY

TIME: 6:02 PM

CHAIR

Appendix J - Bylaws

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BYLAW NO. 1386

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10	FEES AND MONTHLY STATEMENTS.....	16
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SCHEDULE "A"
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SCHEDULE "D"

EXEMPTIONS FROM LICENSING REQUIREMENTS
PLAN FACILITIES (PUBLIC)
FEES – FACILITIES
PUBLISHING AND BILLBOARD POSTING REQUIREMENTS

REGIONAL DISTRICT OF NANAIMO

BYLAW NO. 1386

(consolidated for convenience to include up to 1386.01)

A BYLAW OF THE REGIONAL DISTRICT OF NANAIMO TO REGULATE THE MANAGEMENT OF MUNICIPAL SOLID WASTE AND RECYCLABLE MATERIAL

WHEREAS:

- A. The Regional District of Nanaimo and the Province of British Columbia are jointly committed to the regulation and management of municipal solid waste and recyclable material within the district so as to encourage waste reduction and recycling and ensure that residual materials are disposed of in a manner consistent with the Solid Waste Management Plan approved by the Minister of Water, Land and Air Protection;
- B. The Regional District of Nanaimo is authorized pursuant to the *Environmental Management Act* to regulate with respect to municipal solid waste and recyclable material;
- C. The Regional District of Nanaimo is operating under a Solid Waste Management Plan which defines a regulatory system for the management of all privately operated municipal solid waste and recyclable material operations. The goal of the regulatory system is to ensure proper management of privately operated facilities by specifying operating requirements so as to protect the environment, to ensure that regional and municipal facilities and private facilities operate to equivalent standards, and to achieve the objectives of the Solid Waste Management Plan.

NOW THEREFORE the board of the Regional District of Nanaimo in open meeting duly assembled enacts as follows:

ARTICLE 1

1. INTERPRETATION

- 1.1 Definitions.** In this bylaw, terms defined in the *Environmental Management Act* shall have the meaning set out therein for the purpose of this bylaw unless otherwise defined in this bylaw. In this bylaw:

“**biosolids**” means stabilized municipal sewage sludge resulting from a municipal waste water treatment process or septage treatment process which has been sufficiently treated to reduce pathogen densities and vector attraction to allow the sludge to be beneficially recycled in accordance with the requirements of the Province of BC Organic Matter Recycling Regulation.

“**board**” means the Regional board of the Regional District of Nanaimo.

“**charitable organization**” is an organization as defined in the *Income Tax Act* (Canada) as a registered charity.

“**composting facility**” means a facility that processes organic matter that may include biosolids to produce compost.

“depot” means an operation, facility or retail premises, or an association of operations, facilities or retail premises, identified by or operating under or in fulfillment of a *Environmental Management Act* Stewardship Program.

“district” means the Regional District of Nanaimo.

“Environmental Management Act” means the Province of BC *Environmental Management Act*, SBC 2004 c.30, as amended or replaced and any successor legislation and any regulations thereunder.

“facility license” means a waste stream management license or a recycler license issued by the district.

“General Manager” means a person appointed to the position of General Manager of the Regional District of Nanaimo.

“leachate” means:

- a) effluent originating from municipal solid waste and/or recyclable material being received, processed, composted, cured or stored at a facility,
- b) effluent originating from municipal solid waste and/or recyclable material being stored, or
- c) precipitation, storm water, equipment wash water or other water which has come into contact with, or mixed with, municipal solid waste and/or recyclable material being received, processed, composted, cured or stored.

“licensee” means the owner or operator to whom a valid and subsisting facility license has been issued.

“litter” means loose refuse deposited, discarded or stored in an open place other than in a container.

“non-profit organization” is an organization as defined in the *Income Tax Act* (Canada) as a non-profit organization.

“odour” means smells which are ill-smelling, unpleasant, disgusting, offensive, nauseous or obnoxious as reported to and considered as such by the General Manager.

“process” or **“processing”** means sorting, baling, repackaging, grinding, crushing or any other management activity that requires hauled recyclable material or municipal solid waste to be unloaded from the delivery vehicle.

“qualified professional” means a person who:

- a) is registered in British Columbia with his or her appropriate professional association, acts under that professional association's code of ethics, and is subject to disciplinary action by that professional association, and

b) through suitable education, experience, accreditation and knowledge may be reasonably relied on to provide advice within his or her area of expertise as it relates to this bylaw.

“recycle” or any variation thereof, means any process by which municipal solid waste or recyclable material is transformed into new products or a feedstock to manufacture or process products that meet internationally or other approved specifications and standards using current available technology.

“reprocessing” means conversion of recyclable materials or municipal solid waste into a form suitable for transportation or manufacture into new products.

“resale” refers to selling of a material that has been purchased but not processed.

“residue” or **“residual”** means the portion of municipal solid waste or recyclable material that remains unusable after the manager of the municipal solid waste or recyclable material has no further use for it.

“runoff” means any rainwater, leachate, or other liquid which drains over land from any part of a facility.

“sludge” means an unstabilized, semi-solid by product of wastewater treatment.

“Solid Waste Management Plan” means the district’s Solid Waste Management Plan, as amended from time to time.

“store” and **“storage”** means to keep on land or water, whether or not open to the air, covered, in a structure or container.

“transfer station” means any land and related improvements or buildings and related improvements at which municipal solid waste from collection vehicles is received, compacted, or rearranged for subsequent transport.

“vector” means a carrier organism that is capable of transmitting a pathogen from one facility, waste source, product or organism to another facility, waste source, product or organism.

1.2 Schedules. The schedules listed below and annexed hereto, shall be deemed to be an integral part of this bylaw,

- Schedule “A” - Exemptions from Licensing Requirements
- Schedule “B” - Plan Facilities (Public)
- Schedule “C” - Fees – Facilities
- Schedule “D” - Publishing and Billboard Posting Requirements

1.3 No Conflict with Municipal Requirements. The requirements under this bylaw are distinct and separate from the requirements of a municipality. For greater clarity, municipalities may impose further restrictions or require further conditions than those imposed under this bylaw by the district.

- 1.4 Compliance with Other Laws.** Nothing in this bylaw, including, *inter alia*, a license, excuses any person from complying with all other applicable enactments.
- 1.5 Purpose of Bylaw.** This bylaw is enacted for the purposes of regulating waste management facilities within the regional district in the general public interest. It is not contemplated nor intended, nor does the purpose of this bylaw extend:
- (1) to the protection of any person from economic loss;
 - (2) to the assumption by the regional district or any employee of any responsibility for ensuring the compliance by a facility operator, his or her representatives or any employees, retained by him or her, with the requirements of this bylaw or any other applicable codes, enactments or standards;
 - (3) to providing to any person a warranty with respect to any facility for which a License is issued under this bylaw;
 - (4) to providing to any person a warranty that a facility operation is in compliance with this bylaw or any other applicable enactment.
- 1.6 Licensees to Comply.** Neither the issuance of a license under this bylaw nor the acceptance or review of plans or specifications or supporting documents, nor any inspections made by or on behalf of the regional district shall in any way relieve the owner, operator or licensee from full and sole responsibility to operate in accordance with this bylaw and all other applicable enactments, codes and standards.

ARTICLE 2

2 FACILITIES REQUIRING FACILITY LICENSES

- 2.1 Prohibition.** Subject to Section 2.2, no person or organization shall own or operate within the area of the Regional District of Nanaimo a site, facility or premises where municipal solid waste or recyclable material is managed unless that person holds with respect thereto and strictly complies with a valid and subsisting facility license.
- 2.2 Exclusions.** Notwithstanding Section 2.1, no facility license is required for:
- a) facilities owned and operated by the district or its member municipalities,
 - b) those facilities set out in Schedules “A” and “B” to this bylaw,
 - c) a facility or operation that is registered under and that is fully in compliance with a code of practice under Article 5,
 - d) those facilities otherwise exempted under this bylaw.

- 2.3 Type of Facility License.** Type I facility licenses are required for all facilities except any facility which is owned or operated by a charitable organization or non-profit organization which requires a Type II facility license.

ARTICLE 3

3 FACILITY LICENSE APPLICATION

- 3.1 Form of Application.** A facility license application under this bylaw shall be filed at the district's office in the form prescribed by the district. Applications must be accompanied by:

- a) the application fee specified in Schedule "C",
- b) a written statement from the owner (if other than the applicant) of the property on which the facility is located or is to be located acknowledging and approving of the proposed use of the property,
- c) a written statement from the senior manager of the land use planning department of the municipality or electoral area in which the facility is located or is to be located stating that the applied for use is a permitted use under the municipality's or district's zoning bylaws or under Section 911 of the *Local Government Act*, and
- d) a proposed operating plan for the facility as provided in Section 9.1.

- 3.2 Procedure on Application for all Facilities.** The following application requirements must be met by all operations requiring a facility license:

- a) The applicant must publish, not more than 30 days from the date of submission of the application, at the applicant's expense, a notice that has been reviewed and approved by the General Manager, in a local newspaper that is distributed at least weekly in the area where the facility is located or proposed to be located, in accordance with Section 1 of Schedule "D", and within 30 days after the date of publication provide to the General Manager a copy of the full page tear sheet as proof of publication.
- b) The applicant must post a clearly legible copy of the details of application as described in Schedule "D", protected from the weather, to the satisfaction of the General Manager, in a conspicuous place at all entrances to the land fronting on a public road on which the facility is located or proposed to be located within 15 days after the date of the application and keep the copy posted for a period of not less than 30 days.
- c) The General Manager may give written notice of an application to any person that the General Manager considers may be affected by the application or full details of the application to any authority the General Manager deems necessary to assist with regulatory requirements.

- d) Persons who consider themselves adversely affected by the granting of a facility license, may within 45 days of the date of the first posting, publishing, service or display required by this bylaw, notify the General Manager in writing setting out the reasons why they consider themselves adversely affected, and the General Manager will provide a copy of the written reasons submitted by the persons who consider themselves adversely affected to the applicant and allow the applicant to respond.
- e) The General Manager may take into consideration any information received after the 45-day period prescribed by Subsection 3.2(d) if the General Manager has not made a decision on the facility license within that time period.

3.3 Adequate Notice. Despite Subsection 3.2, if, in the opinion of the General Manager, any method of giving notice set out in Subsection 3.2 is not adequate or practical, the General Manager may, within 30 days of receipt of the application, require an applicant to give notice of the application by another method that is, in the opinion of the General Manager, more effective.

3.4 Evaluation of a Facility License Application. The General Manager will consider the following matters with respect to the facility proposed in the application:

- a) the potential risk posed to the environment and/or public health,
- b) the protection of the environment,
- c) comments from the host municipality relating to compliance with the local zoning or other bylaws that may affect a facility design and/or operating plan,
- d) comments from persons who consider themselves adversely affected,
- e) information received as a result of the fulfillment of the requirements set out in Sections 3.2 and 3.3,
- f) compliance with the Solid Waste Management Plan,
- g) any operating plan submitted to the General Manager under Article 9, and
- h) compliance by the applicant with the requirements to pay fees and report as required under this bylaw.

3.5 Issuance of a Facility License. After receipt of a facility license application and completion of requirements in this Article 3 to the satisfaction of the General Manager, the General Manager may issue a facility license on such terms and conditions set out in Section 4.1 and 4.2 as the General Manager considers necessary to protect the environment and to achieve the objectives of this bylaw and the Solid Waste Management Plan.

ARTICLE 4

4 FACILITY OPERATING REQUIREMENTS

4.1 **Operating Conditions for Facilities.** All owners and operators of facilities that are required under this bylaw to obtain a facility license must comply with the following operating conditions:

- a) install and maintain locking gates on all access roads into the facility to prevent unauthorized access and ensure that the gates are locked at all times when the facility is unattended,
- b) construct access roads to and through the facility from suitable material satisfactory to the General Manager and capable of providing all weather access for all emergency vehicles,
- c) install and maintain, as required by the General Manager, barriers to limit access to the facility except by the access roads (in the form of fencing, trees, shrubbery, natural features or other barriers),
- d) ensure that at all times the facility has telephone service or other functioning communication equipment with which to immediately summon fire, police or other emergency service personnel in the event of an emergency,
- e) prevent the escape of litter, mud or debris from the facility site to adjoining roads or adjacent lands,
- f) prevent the escape of any leachate from the facility to a surface not covered by an impermeable barrier and not equipped with a leachate containment system,
- g) ensure that an employee is present at all times that the facility is open for business or accepting municipal solid waste or recyclable material,
- h) inspect every load received before mixing with any other loads,
- i) maintain a record of all rejected loads including date, time, type of material, hauler's name, generator's name and vehicle license number,
- j) ensure that any municipal solid waste or recyclable material that is removed from the facility is taken to a site or facility that complies with all applicable provincial, state or federal regulations and with zoning and any other applicable enactments and hold any license, permit or approval required by the local government(s) of the jurisdiction in which the facility is located and be able to produce documentary evidence confirming the above,
- k) ensure that there is no burning of municipal solid waste or recyclable material at the facility, and take all precautionary measures possible required by the General Manager to reduce the potential risk of ignition of such materials,
- l) produce and comply with an operating plan acceptable to the General Manager under Article 9,
- m) require the licensee to provide and maintain security in such amount and in a form satisfactory to the General Manager under Section 8.1,

- n) ensure access to, and provide and maintain necessary related works associated with an adequate water supply or other suitable fire suppressant on site for extinguishing fires on site, and
- o) if there is a fire, immediately notify the local fire department and the General Manager and take all measures necessary to extinguish the fire.

4.2 Terms and Conditions for Facility Licenses. In addition to and without limiting the requirements set out in Section 4.1 or otherwise, where sufficient cause exists, as determined by the General Manager, the General Manager may do the following in a facility license:

- a) specify, prohibit, or restrict the type, quality, or quantity of municipal solid waste or recyclable material that may be brought onto or removed from a facility,
- b) require the licensee to contain the municipal solid waste or recyclable material within a height or heights and spatial area or areas specified by the General Manager,
- c) require the licensee, at its sole cost, to submit to the General Manager a quantity survey or a land survey of the municipal solid waste or recyclable material at the facility, prepared by a British Columbia Land Surveyor,
- d) require the licensee to recover, for the purpose of recycling, any recyclable materials which are subject to material bans imposed by bylaw or by resolution of the district,
- e) require the licensee to construct, install, repair, alter, remove, or maintain works, and provide plans and specifications prepared by a registered professional engineer (or any other qualified professional as appropriate and recognized as such by the General Manager) prior to the commencement of any construction, installation, repair, alteration, removal or maintenance of such works,
- f) require the licensee to submit plans, procedures, and specifications prepared by a registered professional engineer (or any other qualified professional as appropriate and recognized as such by the General Manager), for or relating to the handling of spills, fires, floods, earthquakes, and other emergencies at the facility,
- g) require the licensee to provide and maintain risk insurance in such amount and in a form satisfactory to the General Manager under Section 8.12,
- h) require the licensee, at such times and in such manner as is acceptable to the General Manager, to measure, record, and submit information to the General Manager relating to:
 - (i) the type, quality, and quantity of municipal solid waste and recyclable material brought onto and removed from the facility,
 - (ii) the handling of municipal solid waste and recyclable material at the facility,
 - (iii) the quantity and characteristics of leachate, runoff, and odour generated by the facility,

- (iv) the characteristics of the surface water, groundwater and soil at the facility to assess for existing degradation or contamination,
 - (v) the characteristics of surface water and groundwater in the surrounding area which may be affected by leachate or other runoff from the facility,
 - (vi) the condition of roads and public utilities located at or adjacent to the facility insofar as the condition of the roads and public utilities affects or are affected by the operation of the facility,
 - (vii) slope stability, settlement, and erosion at the facility, and
 - (viii) the operation and maintenance of equipment and works at the facility, including leachate collection and treatment systems, runoff, water management systems, and air quality and air quality control systems,
- i) require that any or all of the information required in Subsection 4.2 (h) be prepared by a registered professional engineer (or any other qualified professional as appropriate and recognized as such by the General Manager), and
 - j) provide for implementing terms and conditions of a facility license in phases or provide for varying dates for compliance with the terms and conditions of a facility license.

ARTICLE 5

5 CODES OF PRACTICE

5.1 Establishment of Codes of Practice. The board may, from time to time, establish codes of practice setting out different prohibitions, regulations, conditions, requirements, exemptions, and rates or levels of fees for different classes of persons, facilities, operations, activities, trades, businesses, municipal solid waste, or recyclable material for the purpose of prohibiting, regulating, or controlling the handling of municipal solid waste and recyclable material. Codes of practice will be established by way of adoption of a code of practice as an amendment to this bylaw.

5.2 Conditions of a Code of Practice. A code of practice may set such terms and conditions and specify such requirements as the district considers advisable and, without limiting in any way the generality of the foregoing, the district may in a code of practice:

- a) require that facilities or operations, to be as specified by the district, register with the district in order to qualify under a code of practice,
- b) include any of the requirements set out in Article 4, and
- c) require security in an amount and form and subject to conditions set out in Article 8, or as defined in the code of practice itself.

- 5.3 Registration Fee.** An application to register under a code of practice under this bylaw must be filed at the district's office in the prescribed form accompanied by the applicable registration fee set out in column 2 of Schedule "C" to this bylaw.

ARTICLE 6

6 ILLEGAL DUMPING

6.1 Definitions. In this article:

"responsible person" means one or more of the following:

- a) a person who generated municipal solid waste or recyclable material that has been delivered, deposited, stored, or abandoned, and/or
- b) a person who hauled municipal solid waste or recyclable material that has been delivered, deposited, stored, or abandoned, and/or
- c) a person who had or has charge or control of the land or buildings on which municipal solid waste or recyclable material has been deposited, stored, or abandoned or to which municipal solid waste or recyclable material has been delivered.

6.2 Prohibition. No responsible person shall deliver, deposit, store, or abandon, cause or allow to be delivered, deposited, stored or abandoned, municipal solid waste or recyclable material on or within any lands or improvements except a facility that holds a valid and subsisting facility license within the area of the Regional District of Nanaimo unless the municipal solid waste or recyclable material:

- a) is placed in a receptacle for scheduled curbside collection by a hauler or a local government, or
- b) is taken to a facility outside the boundaries of the Regional District of Nanaimo that complies with all applicable enactments, including without limitation, land use bylaws.

6.3 Liability for Illegal Dumping. In addition to any other penalty imposed under this bylaw, the General Manager may require, by written notice, a responsible person to remove to a licensed facility any municipal solid waste or recyclable material that has been deposited in contravention of Section 6.2. Such removal shall be at the responsible person's cost. If a responsible person fails to remove the municipal solid waste or recyclable material within the time period specified in the notice, the General Manager may cause the municipal solid waste or recyclable material to be disposed at a licensed facility, and the responsible person shall pay all of the costs associated with the disposal.

6.4 Proof of Compliance The General Manager may require a responsible person who wishes to manage municipal solid waste or recyclable material in accordance with paragraph 6.2 b) to provide to the district documents evidencing that the facility complies with the enactments referred to in that paragraph.

ARTICLE 7

7 AMENDMENTS

7.1 Amendment of a Facility License. The General Manager may amend the terms and conditions of a facility license either in whole or in part:

- a) on its own initiative where it considers necessary due to changes in the facility's practices, or
- b) on application in writing by a licensee,
- c) on its own initiative where it considers necessary due to changes external to the operations of the facility

7.2 Major and Minor Amendment. For the purposes of this article:

- a) **“major amendment”** to a facility license means any amendment which is not a minor amendment, and
- b) **“minor amendment”** to a facility license means:
 - (i) a change of ownership, control, or name,
 - (ii) a change of legal address or mailing address,
 - (iii) a change to the hours of operation,
 - (iv) a decrease in the authorized quantity of municipal solid waste or recyclable material, accepted or stored,
 - (v) an increase in the authorized quantity of municipal solid waste or recyclable material accepted or stored that does not exceed 10% of the authorized quantity specified in the license first received by the facility,
 - (vi) a change in the authorized quantity of municipal solid waste or recyclable material accepted or stored such that, in the opinion of the General Manager, the change has or will have less impact on the environment,
 - (vii) a change in a requirement to record and submit information, or
 - (viii) a change to the works, method of treatment, or any other condition in a facility license such that, in the opinion of the General Manager, the change has or will have less impact on the environment.

7.3 Procedure on Amendment Application.

- a) For all applications for major amendments, the provisions set out in Sections 3.1 to 3.5 shall apply subject to necessary modification as deemed appropriate by the General Manager.

- b) For all applications for minor amendments, the General Manager may, at his discretion, require that any of the provisions set out in Sections 3.1 to 3.5 also apply, subject to necessary modification as considered appropriate by the General Manager.

ARTICLE 8

8 SECURITY AND RISK INSURANCE

8.1 Requirement for Security. The General Manager, as a precondition to issuing a facility license, or as a term or condition of a facility license or by written notice at any time prior to or after the issuance of the facility license, requires an owner, operator or licensee of a facility to provide and maintain security in an amount and form satisfactory to the General Manager and for such period as may be required, to ensure:

- a) compliance with this bylaw or a facility license, and
- b) that sufficient funding is available for facility operations and maintenance, remediation of the facility, facility closure, and post-closure monitoring of the facility, in accordance with the terms and conditions of the license.

8.2 Form of Security. The security held by the district under Section 8.1 may be in the following form, provided that the particular form of security is satisfactory to the district, acting reasonably:

- a) cash,
- b) certified cheque,
- c) an irrevocable standby letter of credit issued by a Canadian Schedule I chartered bank.

8.3 Amount of Security. The security held by the district under Section 8.1 in respect of a facility shall be in such amounts as may be reasonably satisfactory to the General Manager and be based primarily on the maximum tonnage of pre-processed material allowed at the facility at one time, multiplied by the current per tonne cost to haul and dispose of the material. This shall be done for each material type allowed at the facility. Calculations for material types that may result in a positive value shall also be shown when determining the amount of security required, but these values cannot be used to offset the total security required. In addition, the security may, without limitation, vary depending on any or all of the following:

- a) the type of facility,
- b) the type of operations and maintenance activities performed or to be performed at the facility,
- c) the anticipated or actual activities required for closure and post-closure monitoring of the facility,

- d) the types of discharges that could have the potential to result from the operation, remediation, closure, and post-closure monitoring of the facility, including, without limitation, leachate, storm water, odours, dust, litter, and erosion, and the cost of installing, operating, repairing, and maintaining works that may be required to control such discharges at the facility,
- e) the geotechnical and other physical characteristics of the facility site,
- f) possible administrative or contingency fees for site clean-up activities coordinated by the General Manager, and
- g) such other factors as the General Manager may reasonably determine.

Without limiting the generality of the foregoing, the General Manager may, in an amendment to a facility license under Section 7.1, amend the amount of security required under Section 8.1 for the facility.

8.4 Conditions for Drawing on Security. Where a licensee, owner or operator defaults under this bylaw or a facility license, the General Manager may, by written notice to the licensee, require the default to be remedied within a period specified by the district and if the default is not remedied within the specified time, the district may draw down in whole or in part on the security for purposes as described in Section 8.5.

8.5 Use of Security. The security drawn down by the district, under Section 8.4, may be used to ensure compliance with the provisions of this bylaw and the facility license, including without limitation funding for the following:

- a) the handling of municipal solid waste, recyclable material, or any other materials at the facility,
- b) the carrying out of operations and maintenance activities at the facility in compliance with an operating plan accepted by the General Manager under Section 9.3,
- c) the control, abatement or prevention of leachate or contaminants escaping from the facility,
- d) the expenses incurred by the district, including legal expenses, in
 - (i) carrying out or causing to be carried out any of the activities described in this section, and
 - (ii) complying with any laws or enactments of the federal, provincial or any local government, including the district.

8.6 Additional Conditions for Drawing on Security. Notwithstanding Section 8.4, the district shall be entitled to draw down, in whole or in part, on any security it holds under Section 8.1, where:

- a) such security is not renewed, replaced, or extended at least 30 days in advance of its scheduled expiry date, or

- b) the General Manager is satisfied on reasonable grounds that the value and utility of the security may otherwise be compromised.

In this event, the district shall hold and deal with the proceeds thereof as security in the same manner as the district is entitled to hold and deal with the original security.

- 8.7 Replenishment of Security.** If the district draws down in whole or in part on the security under this article, the owner, operator or licensee of a facility must replenish the security drawn down within 30 days if required to do so in writing by the General Manager and the provisions of this article, with the necessary changes, shall apply to such replenished security.
- 8.8 Survival.** Notwithstanding any suspension, cancellation, expiration, or other termination of a facility license, all owners, operators, or licensees of a facility shall continue to be bound by the requirements in a facility license to provide and maintain security, which requirements shall survive any such suspension, cancellation, expiration, or other termination until otherwise notified by the General Manager.
- 8.9 Return of Security.** Provided the owner, operator or licensee of a facility is in full compliance with this bylaw and a facility license, the district may return to the owner, operator or licensee of a facility the security held by it:
 - (a) upon completion, to the reasonable satisfaction of the General Manager, of all activities required for the closure or post-closure of the facility,
 - (b) upon receipt by the district of substitute or replacement security satisfactory to the General Manager, or
 - (c) where the General Manager otherwise deems expedient.
- 8.10 Unclaimed Security.** If after making reasonable efforts the district is unable to effect return of the security under Section 8.9, title of the security shall vest absolutely in the district after the fifth anniversary of the initial attempt to return the security.
- 8.11 Interest on Cash Security.** If the security or any portion thereof provided under Section 8.1 is in the form of cash, the interest earned thereon at the rate referred to below will be added to and form part of the principle amount of the security, and may be used under Section 8.4. Any portion of the principle amount of the security and accrued interest not utilized will be returned pursuant to Section 8.9. The interest rate for the security will be the prime rate charged by the Canadian Imperial Bank of Commerce for Canadian dollar loans, from time to time, less two percentage points.
- 8.12 Security in the Form of Insurance.** Notwithstanding Section 8.2, the General Manager may require that an owner, operator, or licensee obtain environmental risk insurance from an insurance broker approved by the General Manager, that covers risks associated with such events as floods, earthquakes, toxic spills, fires, leachate breakouts, and water, sewer, and gas pipe breaks.

ARTICLE 9

9 OPERATING PLANS

9.1 Operating Plan Requirements. Every person who submits an application for a facility license under Section 3.1 must include with the application a proposed operating plan for the facility described in the application. Proposed operating plans must provide full and complete details on all of the following:

- a) the site and location of all works within the facility,
- b) the types, quantity, and quality of municipal solid waste and recyclable material that will be managed within the facility,
- c) the methods for handling municipal solid waste and recyclable material within the facility,
- d) the measures that will be taken to protect the environment, the site, and the lands adjacent to the facility,
- e) a monitoring program to assess the measures in paragraph (d) above,
- f) the methods for complying with regional disposal bans and recycling requirements,
- g) the methods for dust, odour, vector, mud, and litter control and prevention,
- h) the methods for handling any waste delivered to the facility which is not authorized by the license,
- i) the procedures for weigh scale operation at the facility, or other site where municipal solid waste and recyclable material is weighed for acceptance at the facility or removal from the facility,
- j) the frequency and method of facility inspection to be carried out by facility staff,
- k) measures to protect the site and adjacent lands in case of fire, seismic disturbance, or flood,
- l) the methods for containment and treatment of runoff at the facility and the prevention of runoff from the facility to adjacent lands,
- m) the actions that will be taken if ground or surface water becomes contaminated as a result of operations at the facility, and
- n) any other matter specified by the General Manager regarding the management of municipal solid waste and recyclable material at the facility.

9.2 Professional Engineering Involvement. The General Manager, at his sole discretion may require any or all of the information required in Subsections 9.1 (a) through (n) inclusive to be prepared by a registered professional engineer (or any other qualified professional as appropriate and recognized as such by the district).

- 9.3 Review and Acceptance of Operating Plans.** The General Manager will review all proposed operating plans submitted under Section 9.1, and may require amendments.
- 9.4 Further Amendments to Operating Plans.** Following the acceptance of an operating plan under Section 9.3, the General Manager may require the terms, conditions or other aspects of the operating plan to be amended:
- a) on the General Manager's own initiative where the General Manager considers it necessary and after consultation with the licensee, or
 - b) on request in writing by the licensee, subject to approval by the General Manager.

ARTICLE 10

10 FEES AND MONTHLY STATEMENTS

- 10.1 Application Fees.** Every person who requires an amendment as described in Section 7.1 (a) or applies for a facility license or any amendment as described in Section 7.1 (b) shall pay to the district, on application or commencement of amendment process, for a facility set out in column 1 of Schedule "C" to this bylaw, the corresponding license application fee or amendment application fee as set out in columns 2, 3 or 4, respectively, as applicable. An application fee will not be refunded if a license is not issued or amended.
- 10.2 Payment of Security.** Applications for a facility license for facilities not established prior to enactment of the bylaw must provide the amount of security required under Section 8.2 with the submission of the application. For a facility license for facilities existing at the time of enactment of the bylaw, up to 50% of the amount of security may be deferred for a period of one year from the date of submission of the application.
- 10.3 Annual Administration Fee.** Every licensee shall pay to the district upon the date of issuance of a facility license and thereafter annually on the anniversary date of the issuance of the license, the annual administration fee set out in column 5 of Schedule "C". The district will provide to all licensees annual invoices setting out the annual administration fee due and payable in accordance with Schedule "C".
- 10.4 Monthly Statement.** Unless requested at greater frequency by the General Manager, every licensee shall deliver to the district, a monthly (twelve times per year) written statement signed by an officer or a principal of the owner or operator of the facility setting out either the amount or quantity in metric tonnes of all municipal solid waste and recyclable materials received, shipped from, and the maximum net tonnage on site at any one time during the month at the facility as measured in the delivery vehicle. The statement shall be delivered monthly to the district within 21 days after the last day of the previous month.
- 10.5 District Invoices.** All invoices rendered by the district shall be due and payable 30 days from the date of the invoice. Late payments will accrue interest computed at the rate of one and one quarter percent (1.25%) per month on the outstanding balance, calculated and compounded monthly, from the date such amounts become due and payable until the date they are paid in full.

- 10.6 Records.** Every licensee must make and maintain for a period of seven years from the date when they were made, accurate records, books of account, copies of the monthly statements referred to in Section 10.4, and copies of all electronic and hard copy information and data upon which those statements were prepared (for the purposes of this article called "records"). The records must identify either:
- a) the amount or quantity in metric tonnes (or cubic metres) of municipal solid waste and recyclable materials received, shipped from, and the maximum net tonnage on site at any one time during the month at the facility, or
 - b) the number of container and vehicle loads and the size or capacity of the containers and vehicles carrying municipal solid waste received, shipped from, and the maximum net tonnage on site at any one time during the month at the facility.
- 10.7 Inspection and Copying of Records.** The General Manager may inspect, make copies and take away such copies of any records referred to in Section 10.6 maintained by and for any person who is required to provide a monthly statement under Section 10.4 during normal hours of business, at any business premises where the records are maintained. The General Manager may take with them to the business premises such other persons and equipment as may be necessary.
- 10.8 Proof of Identity.** An employee or agent of the district inspecting records under Section 10.7 must, when requested, provide proof of identity to any person present at the location where the records are maintained.
- 10.9 Audit.** A person who is required to provide a monthly statement under Section 10.4, if requested in writing by the General Manager, shall at that person's expense provide to the General Manager within 45 days of such request, an audited statement of the total amount of fees payable under Sections 10.1, 10.2, and 10.3, for a specified period of time. This statement must be prepared by a Chartered Accountant or Certified General Accountant in accordance with Generally Accepted Auditing Principles.

ARTICLE 11

11 DUTY TO REPORT

- 11.1 Discharge of Waste at Facility.** Where, out of the normal course of events, there occurs at a facility a discharge of waste to the environment or a serious and imminent danger thereof by reason of any condition, and where any damage or danger to land, water or air may reasonably be expected to result therefrom, any person who at any material time:

- (a) owns the waste or has the charge, management or control of the waste, or
- (b) causes or contributes to the discharge or danger of discharge

shall verbally report such occurrence to the General Manager as soon as practicably possible and shall report such occurrence to the General Manager in writing within 48 hours.

- 11.2 Deviation from Normal Operating Practices.** Where, during the normal course of operations, there occurs at a facility a situation or combination of events that is a deviation from the approved operating practices as set out by the terms and conditions set out in the license, operating plan, code of practice, or this bylaw, the facility operator shall verbally report such occurrence to the General Manager as soon as practicably possible and shall report such occurrence to the General Manager in writing within 48 hours.
- 11.3 Duty to take all Reasonable Measures.** A person who is referred to in Section 11.1 shall, as soon as possible in the circumstances, take all reasonable measures consistent with safety, protection of the environment, and compliance with the terms and conditions of the license, operating plan, code of practice, or this bylaw, and thereby counteract, mitigate or remedy any adverse effects that result or may reasonably be expected to result from the occurrences referred to in Section 11.1 or 11.2.
- 11.4 Compliance.** Compliance with Article 11 and Article 12 of this bylaw does not signify compliance with any other requirements found within the bylaw. The district retains the right to pursue any actions available to remedy non-compliance with any other section of this bylaw, notwithstanding compliance with Article 11 and Article 12.

ARTICLE 12

12 INVESTIGATION, INSPECTION AND RECORDS

- 12.1 Powers of the District.** The powers of the district under this article may be exercised in relation to any site, facility, or premises which is, or which the General Manager upon reasonable grounds believes to be, among those described in Article 2.1 of this bylaw, and any site, facility, or premises associated therewith.
- 12.2 Residential Structures.** Nothing in this section authorizes the entry of any structure used primarily as a residence, or any residential accommodation in any other structure.
- 12.3 Investigation.** A bylaw enforcement officer or other employee or agent of the regional district may at any reasonable time enter any facility, site or premises and investigate any works, process or activity that is related to, used for or capable of being used for the production or handling of municipal solid waste or recyclable material.
- 12.4 Additional Powers.** The powers of a district under Section 12.3 include the following powers:
- a) to examine, take away and make copies of records relating to:
 - (i) the causing or the potential to cause pollution by municipal solid waste or recyclable material,
 - (ii) the production and managing of municipal solid waste or recyclable material,
 - (iii) the characteristics of the municipal solid waste or recyclable material produced or managed, and

(iv) a potential contravention,

b) to carry out inspections, observations, measurements, tests and sampling and to otherwise ascertain whether the terms of this bylaw or a facility license have been or are being complied with and take away samples of leachate, runoff, groundwater, soil, articles, substances, municipal solid waste or recyclable material as they consider appropriate.

12.5 Return of Documents. Where the district has taken away original records from a facility, site or premises under Subsection 12.4(a), the district, upon written request from the owner or operator of the facility, will return copies of the records to the owner or operator within 24 hours of the inspection or if that is not possible, as soon thereafter as is practicable.

12.6 Assistance. The employee or representative of the district may take with him or her onto any facility, site, or premises such other persons and equipment as may be necessary to carry out the actions authorized in Section 12.4.

12.7 Identification. The employee or representative of the district shall, forthwith upon arrival at a facility, site, or premises, provide proof of identity to a person present at the facility, site, or premises.

12.8 Records. Notwithstanding Sections 2.2, 4.1, and 10.4, the General Manager may require the owner or operator of a facility, site, or premises at which municipal solid waste or recyclable material is managed to keep records of volumes, weights, types, amounts, quantities, and composition of municipal solid waste or recyclable material originating from within the Regional District of Nanaimo that is brought onto or removed from the facility, site, or premises and to submit, on request annually, the records to the district.

ARTICLE 13

13 SUSPENSION AND CANCELLATION

13.1 Suspension and Cancellation of Facility Licenses. Without limiting any other provision of this bylaw, the General Manager, after giving notice to a licensee, may suspend for any period or cancel a facility license in whole or in part where the following has occurred or is occurring:

- a) the licensee fails to comply with any term, condition, or requirement of the facility license or any provision of this bylaw,
- b) the licensee has made a material misstatement or material misrepresentation in the application for the facility license,
- c) the licensee has failed to:
 - (i) provide the monthly statement of quantities in accordance with Section 10.4, or
 - (ii) make payment of fees in accordance with Article 10,
- d) the licensee does not exercise any rights under the facility license for a period of 3 years,

- e) the facility license is no longer necessary by reason of a code of practice under this bylaw,
- f) the licensee is an individual who has died,
- g) the licensee is a corporation that is struck off the register or is dissolved under its incorporating enactment,
- h) the licensee is a partnership that is dissolved,
- i) the licensee requests that the facility license be cancelled, or
- j) the land and related improvements or buildings and related improvements licensed under this bylaw are no longer a facility.

13.2 Notice. A notice served under Section 13.1 must state the time at and the date on which the suspension or cancellation is to take effect.

13.3 Suspended or Cancelled License Not Valid. A facility license that is suspended or cancelled is not a valid and subsisting license. Notwithstanding the foregoing, the provisions in a facility license relating to security continue to survive as set out in Section 8.5.

ARTICLE 14

14 OFFENCES AND PENALTIES

14.1 Offence. Any person who contravenes a provision of this bylaw, a facility license, an order, a code of practice, or a requirement made or imposed under this bylaw commits an offence and is liable to a fine not exceeding \$200,000.

14.2 Separate Offences. Where there is contravention that continues for more than one day, each day or part of a day on which the contravention occurs is a separate offence.

14.3 Offences by Employees, Officers, Directors or Agents. If a corporation commits an offence under this bylaw, an employee, officer, director, or agent of the corporation who authorized, permitted or acquiesces in the offence commits the offence even though the corporation is convicted.

14.4 Remedies Cumulative. The rights and remedies available to the district under this bylaw shall be cumulative and not alternative and shall be in addition to and not a limitation of any other rights and remedies that would otherwise be available to the district at law.

ARTICLE 15

15 APPEALS

- 15.1 Appeals to Board.** An applicant or licensee affected by a decision of the General Manager under Section 3.5, 4.2, 7.1, 8.1, 8.3 or 8.12 to this bylaw may appeal the decision to the board by advising the board in writing of the order or requirement being appealed from and setting out the reason for the appeal and attaching any relevant documents.
- 15.2 Time Limit for Commencing Appeal.** The written notice of appeal under Section 15.1 must be delivered to the board within 30 days of the decision from which the appeal is made.
- 15.3 Review by the Board.** The matter will be reviewed by the board pursuant to Section 15.4.
- 15.4 Power of the Board.** Upon considering the matter under appeal, the board may:
- a) confirm, reverse or vary the decision under appeal, and
 - b) make any decision that the board considers appropriate.
- 15.5 Appeal Does Not Operate as Stay.** An appeal under this section does not operate as a stay or suspend the operation of the decision being reviewed unless the board orders otherwise.

ARTICLE 16

16 GENERAL

- 16.1 Notification of Change in Control.** A licensee shall notify the district in writing of a change in ownership or control of the license within 10 days after such a change.
- 16.2 Delivery of Notices.** Any notice required to be given to an owner or operator of a facility or a licensee shall be deemed to have been delivered if such notice is delivered personally to an owner or operator of a facility or a licensee or is mailed by double registered mail to the registered or records office of an owner or operator of a facility or a licensee or to the address for service set out in a license. If delivery of a notice is unable to be effected by double registered mail then delivery may be affected by any of the following:
- a) personal delivery to the registered or records office of an owner or operator of a facility or a licensee,
 - b) personal delivery to a director, officer, liquidator, trustee in bankruptcy or receiver manager of an owner or operator of a facility or a licensee,
 - c) personal delivery to an adult individual at the facility who appears to be an employee of an owner or operator of a facility or a licensee or appears to be in control of the facility, and
 - d) posting on the door or gate of the facility, when no one is present at the facility or the facility appears to be abandoned.

- 16.3 No Transfer or Assignment.** A transfer or assignment of a facility license is without effect without the prior written approval of the General Manager. Approval will be given if all license requirements are being fulfilled and no license or license amendment fees are owed to the district.
- 16.4 Headings.** The headings in this bylaw are for convenience only and shall not limit, enlarge or affect the scope of any of the provisions in this bylaw.
- 16.5 Severability.** If any portion of this bylaw is deemed *ultra vires*, illegal, invalid or unenforceable in any way in whole or in part by any court of competent jurisdiction, such decision shall not invalidate or void the remainder of this bylaw. The parts so held to be *ultra vires*, illegal, invalid or unenforceable shall be deemed to have been stricken from this bylaw with the same force and effect as if such parts had never been included in this bylaw or revised and reduced in scope so as to be valid and enforceable.

ARTICLE 17

17 TITLE

This bylaw may be cited for all purposes as the “Regional District of Nanaimo Waste Stream Management Licensing Bylaw No. 1386, 2004”.

Read three times the 10th day of August, 2004.

Received approval from the Ministry of Water, Land and Air Protection this 6th day of April, 2005.

Adopted this 26th day of April, 2005.

Chairperson

Deputy Administrator

SCHEDULE "A"

EXEMPTIONS FROM LICENSING REQUIREMENTS

For greater certainty and without limiting the generality of Section 2.1 of the bylaw, the following facilities, or any portion of a facility managing recyclable material or municipal solid waste in accordance with the following specifications, shall be exempt from the licensing requirements under Section 2.1:

1. any facility which accepts exclusively asphalt and concrete for the purposes of reprocessing, resale and reuse;
2. any retail food, grocery, beverage or drug establishment that accepts recyclable products on a return-to-retail basis;
3. any depot operating under or in fulfillment of the *Environmental Management Act* Beverage Container Stewardship Program Regulation, 1997; and
4. any facility operating under or in fulfillment of a *Environmental Management Act* Stewardship Program.

A facility that manages recyclable material or municipal solid waste in accordance with the above and also manages recyclable material or municipal solid waste in a manner not specified above will be required to be licensed within the provisions of this bylaw for the portion(s) of the operation not specified as exemptions in this Schedule A.

SCHEDULE "B"

PLAN FACILITIES (PUBLIC)

FACILITY	LOCATION
Regional District of Nanaimo Landfill	1105 Cedar Rd, Nanaimo
RDN Church Road Transfer Station	860 Church Rd, Parksville

SCHEDULE "C"
FEES - FACILITIES

The fees payable to the district by owners or operators of facilities under this bylaw shall be as follows:

1. Application, Amendment, Annual Administration and Other Fees

Column 1	Column 2	Column 3	Column 4	Column 5
	License Application Fee	Major Amendment Application Fee	Minor Amendment Application Fee	Annual Administration Fee
Facility license Type I	\$1,000	\$500	\$100	\$500
Facility license Type II	\$100	\$100	\$50	\$100
Code of Practice Registration	\$100	-	-	\$100

SCHEDULE "D"

PUBLISHING AND BILLBOARD POSTING REQUIREMENTS

1. Publishing Notice Details for all Applications

A published notice in a newspaper must:

- (i) be at least 8 centimetres in width,
- (ii) be at least 100 square centimetres in area,
- (iii) be entitled "FACILITY LICENSE APPLICATION NOTICE" in a minimum type size of 12 points,
- (iv) have the text of the license application in a minimum type size of 8 points,
- (v) include the civic address of the proposed facility,
- (vi) include the name of the owner of the land on which the facility is proposed to be located,
- (vii) include the full name and address of the operator of the proposed facility,
- (viii) include a complete description of the activity to be carried out and the types and quantities of municipal solid waste or recyclable material to be managed at the facility, and
- (ix) include such other information as the General Manager considers necessary.

REGIONAL DISTRICT OF NANAIMO

BYLAW NO. 1531

(Consolidated for convenience only to include up to 1531.08)

A BYLAW TO PROVIDE FOR THE REGULATION OF SOLID WASTE MANAGEMENT FACILITIES

WHEREAS the Regional District of Nanaimo has, pursuant to Solid Waste Disposal Local Service Establishment Bylaw No. 792, established the disposal of waste and noxious, offensive or unwholesome substances as a service;

AND WHEREAS the Regional District of Nanaimo is empowered to establish a scale of charges payable for depositing Residual Solid Waste at a Solid Waste Management Facility;

AND WHEREAS the Regional District of Nanaimo has, pursuant to *Waste Stream Management Licensing Bylaw No. 1386*, adopted to regulate the management of Municipal Solid Waste within the Regional District of Nanaimo pursuant to Section 25(3) of the *Environmental Management Act*;

AND WHEREAS the District operates Solid Waste Management Facilities for disposal of Residual Solid Waste and maintains a system to collect, remove and dispose of Residual Solid Waste and compels persons to make use of such system and the District wishes to regulate the Solid Waste Management Facilities and to establish a scale of charges payable by persons using the Solid Waste Management Facilities and compelling payment of the charges so fixed.

NOW THEREFORE, the Board of the Regional District of Nanaimo in open meeting assembled enacts as follows:

1. DEFINITIONS

In this bylaw, unless the context otherwise requires:

“Biomedical Waste” means waste as defined in the *Hazardous Waste Regulation* (British Columbia) as biomedical waste;

“Commercial Organic Waste” means compostable organic material including raw and cooked food waste from a commercial premise and includes but is not limited to:

- a) fruits and vegetables
- b) meat, fish, shellfish, poultry and bones thereof
- c) dairy products
- d) bread, pasta and baked goods

- e) tea bags, coffee grounds and filters
- f) soiled paper plates and cups
- g) soiled paper towels and napkins
- h) soiled waxed paper
- i) food soiled cardboard and paper
- j) egg shells

“Commercial Premise” means businesses and institutional facilities including educational and health care facilities described by the North American Industry Classification System, Canada 2002, amended or replaced and any successor Classification System thereunder, that generates commercial organic waste and includes but is not limited to:

- a) food wholesalers/distributors
- b) food and beverage stores
- c) hospitals
- d) nursing and other residential care facilities
- e) community food services
- f) accommodation services with food services
- g) food services and drinking places
- h) educational services with food services
- i) other facilities generating compostable organic material

“Compostable Organic Material” means vegetative matter, food processing waste, garden waste, kitchen scraps, and other organic wastes that can be composted;

“Composting Facility” means a facility that composts organic matter that may include biosolids to produce compost and holds a valid Facility License;

“Controlled Waste” means Solid Waste requiring special handling at the Solid Waste Management Facilities, and includes but is not limited to:

- a) Asbestos, dry or slurry
- b) Large dead animals

- c) Steel cables
- d) Contaminated soil
- e) Wood Waste

Special handling includes extra excavation, trenching, grinding, chipping, lining, extra cover and using extraordinary means to cover with other Solid Waste;

“Construction/Demolition Waste” means waste produced from the construction, renovation, and demolition of buildings, and other structures, but does not include waste containing or contaminated with asbestos, creosote, PCB treatments, any special waste or wood waste;

“Corrugated Cardboard” means recyclable waste from industrial, commercial or institutional sources which includes, but is not limited to containers or materials used in containers consisting of 3 or more layers of kraft paper material and having smooth exterior liners and a corrugated or rippled core, but excluding containers which are impregnated with blood, grease, oil, chemicals, food residue, wax; or have polyethylene, polystyrene, foil or other non-paper liners; or are contaminated with a material which will render the corrugated cardboard not marketable;

“Disposal Area” means those parts of a Solid Waste Management Facility currently involved in the landfilling or deposit of Solid Waste;

“Drop Off Area” means those areas of Solid Waste Management Facilities or Licensed Facilities where bins are provided for deposit of Municipal Solid Waste;

“Environmental Management Act” means the *Environmental Management Act* (British Columbia), as amended or replaced and any successor legislation and any regulations thereunder;

“Facility License” means a facility license issued by the Regional District pursuant to Regional District of Nanaimo *Waste Stream Management Licensing Regulatory Bylaw No. 1386*;

“Garden Waste” means uncontaminated vegetation removed from gardens, lawns, shrubs and trees and includes pruning from shrubs and trees to a maximum diameter of 50 mm.;

“General Manager” means a person appointed to the position of General Manager of the Regional District of Nanaimo;

“Gypsum” includes, but is not necessarily limited to new construction off-cuts or scraps and old wallboard that has been painted, covered in wallpaper, vinyl, ceramic tile, and lath and plaster and is removed during renovation and demolition, but excludes wallboard covered with asbestos;

“Hazardous Waste” means waste as defined in the *Hazardous Waste Regulation* (British Columbia) as hazardous waste except asbestos waste;

“Household Plastic Containers” means empty HDPE and LDPE plastic containers from a residential premise including milk jugs, margarine and yogurt containers and dish soap and laundry detergent bottles. Excluded are containers made of foam plastic such as Styrofoam, containers that held chlorine or ammonia-based products, motor oil containers, metal bottle lids or caps, spray nozzle heads and metal attachments;

“Drums” means plastic or metal barrels larger than 50 litres capacity made for holding liquids;

“Ignitable” means ignitable as defined in the *Hazardous Waste Regulation* (British Columbia);

“Improperly covered or secured load” means that a load that is not properly secured, either with a tarpaulin cover or tie-down apparatus to prevent any of the load escaping, or falling off of the haul vehicle;

“Land Clearing Waste” means stumps, tops, limbs and whole trees generated from the clearing of land and the small scale harvesting of merchantable timber but does not include garden waste;

“Licensed Facility” means a facility holding a Facility License issued by the Regional District;

“Medical Facility Waste” means municipal solid waste originating from a hospital or health care facility that does not contain biomedical waste and does not require special handling;

“Metal” means recyclable ferrous and non-ferrous metallic materials which include, but are not limited to: sheet metal, siding, roofing, rebar, flashings, pipes, window frames, doors, furnaces, duct work, wire, cable, bathtubs, fencing, bicycle frames, automotive parts, machinery, appliances, garbage cans, metal furniture, tire rims and metal cans. It does not include metal that is incorporated into a product or packaging, such as a couch, that does not compose more than 50% of the product weight and that cannot be readily separated from the non-metallic components;

“Municipal Solid Waste” means refuse that originates from residential, commercial or institutional sources;

“Organic Waste” means compostable organic material including raw and cooked food waste from a commercial and residential premise and includes but is not limited to:

- a) fruits and vegetables
- b) meat, fish, shellfish, poultry and bones thereof
- c) dairy products
- d) bread, pasta and baked goods
- e) tea bags, coffee grounds and filters

- f) soiled paper plates and cups
- g) soiled paper towels and napkins
- h) soiled waxed paper
- i) food soiled cardboard and paper
- j) egg shells

“Prohibited Waste” means a waste prohibited from disposal under Schedule ‘C’ hereto;

“Radioactive Waste” means a nuclear substance as defined in the *Nuclear Safety and Control Act* (Canada) in sufficient quantity or concentration to require a license for possession or use under that Act and regulations made under that Act;

“Reactive Waste” means waste which:

- (a) is explosive, oxidizing, or so unstable that it readily undergoes violent change in the presence of air or water;
- (b) generates toxic gases, vapours or fumes by itself or when mixed with water; or
- (c) polymerizes in whole or in part by chemical action and causes damage by generating heat or increasing in volume;

as defined in the Special Waste Regulations of the *Waste Management Act* (British Columbia);

“Recyclable Paper” means recyclable fibers, including: newspapers and inserts, magazines, telephone directories, catalogues, all office papers, envelopes, boxboard, paper bags and junk mail. It does not include: paper contaminated with food or grease, paper napkins, paper towels, tissue paper, composite paper products (e.g. paper adhered to plastic and/or metal such as tetrapaks), gable-top containers (e.g. milk cartons), waxed cardboard, wax paper, photographs and carbon paper;

“Regional District” means the Regional District of Nanaimo;

“Residential Premise” means a single family dwelling unit or a multi-family dwelling unit including townhomes, apartments and mobile homes in mobile home parks;

“Residual Solid Waste” means that portion of Municipal Solid Waste for which no management option exists except disposal at the Solid Waste Management Facilities but does not include Prohibited Waste;

“Roll-off Bin” means an interchangeable container that can be separated from a hauling truck through the use of a mechanism integrated into the frame of the hauling truck;

“Solid Waste Management Facilities” means the Regional Landfill and Church Road Transfer Station, and other facilities the Regional District may establish from time to time;

“Stewardship Materials” means any waste or recyclable materials included in an approved stewardship plan as defined in the Recycling Regulation of the *Environmental Management Act* (British Columbia);

“Tires” means all rubber tires;

“Wood Waste” means wood waste from construction and/or demolition that has been separated from other construction/demolition waste. The wood may be painted, but cannot have tile, gypsum, glue, carpet, dirt or soil or other non-wood materials attached.

2. CONDITIONS OF USE

- 2.1 No person shall deposit Municipal Solid Waste at a Solid Waste Management Facility, except in accordance with this bylaw.
- 2.2 No person shall deposit a Prohibited Waste at a Solid Waste Management Facility.
- 2.3 At least 24 hours notice must be given to the General Manager prior to disposal of Controlled Waste.
- 2.4 Loads of Gypsum delivered in roll-off bins will not be accepted at the Church Road Transfer Station.
- 2.5 Loads of garden waste delivered in roll-off bins will not be accepted at the Regional Landfill or the Church Road Transfer Station.
- 2.6 Loads of wood waste delivered in roll-off bins will not be accepted at the Regional Landfill or the Church Road Transfer Station.
- 2.7 Loads of corrugated cardboard delivered in roll-off bins will not be accepted at the Regional Landfill or the Church Road Transfer Station.
- 2.8 No person shall salvage or remove material deposited at the Solid Waste Management Facilities.
- 2.9 No person shall loiter at the Solid Waste Management Facilities.
- 2.10 No person shall leave their vehicle unattended at the Solid Waste Management Facilities.
- 2.11 Any person entering the Solid Waste Management Facilities shall proceed directly to the weigh scale and then leave the Solid Waste Management Facilities without delay after unloading.
- 2.12 Persons entering the Solid Waste Management Facilities do so at their own risk. The Regional District accepts no liability whatsoever for damage and/or injury to persons or property at the Solid Waste Management Facilities.

- 2.13 Children under 13 years of age, and pets shall not be permitted at the Solid Waste Management Facilities except inside a vehicle.
- 2.14 No person shall deposit Municipal Solid Waste that does not originate from within the Regional District boundaries at a Solid Waste Management Facility.
- 2.15 Despite section 2.14, the Board may authorize deposit of Municipal Solid Waste from another regional district upon request from a regional district Board of Directors.

3. CHARGES

- 3.1 Every person depositing municipal solid waste at the Solid Waste Management Facilities shall pay to the District the applicable charges set out in Schedule 'A' hereto.
- 3.2 Notwithstanding 3.1, customer charge accounts may be established in accordance with Policies and Procedures in Schedule 'B'.

4. VIOLATIONS AND PENALTIES

- 4.1 No person shall do any act or suffer or permit any act or thing to be done in contravention of this bylaw.
- 4.2 Every person who contravenes this bylaw, by doing any act which the bylaw forbids, or omitting to do any act which the bylaw requires is guilty of an offence and is liable, on summary conviction, to a fine of not less than TWO HUNDRED DOLLARS (\$200.00) and not more than TEN THOUSAND DOLLARS (\$10,000.00). A separate offence shall be deemed to be committed upon each day during and in which the contravention occurs or continues.
- 4.3 The General Manager may prohibit a person who contravenes this bylaw from depositing Municipal Solid Waste at the Solid Waste Management Facilities.
- 4.4 Any waste received in contravention of the bylaw or instructions provided by the RDN at the solid waste facilities may be subject to a cost recovery fee for contamination cleanup or proper disposal.

5. REPEAL

- 5.1 "Regional District of Nanaimo Solid Waste Management Bylaw No. 1428, 2005" is hereby repealed.

6. TITLE

- 6.1 This bylaw may be cited as “Regional District of Nanaimo Solid Waste Management Regulation Bylaw No. 1531, 2007”.

Introduced and read three times this 27th day of November, 2007.

Adopted this 27th day of November, 2007.

CHAIRPERSON

SR. MGR., CORPORATE ADMINISTRATION

Chairperson

Sr. Mgr., Corporate Administration

Schedule 'A'

Charges and Procedures for use of Solid Waste Management Facilities effective April 1, 2016.

1.	Solid Waste, excluding Controlled Waste	Flat Rate	51 kg or greater
a.	Municipal solid waste, construction/demolition waste, roofing waste (asphalt/tar/gravel), medical facility waste, or material recovery facility waste	\$6.00/0-50kg	\$125.00/tonne
b.	Municipal solid waste (containing recyclables) with offence	\$6.00/0-50kg	\$250.00/tonne
c.	Construction/Demolition waste (containing recyclables) with offence	\$6.00/0-50kg	\$360.00
d.	Weighing service	\$20.00 flat rate	
e.	Surcharge for improperly covered or secured loads	\$20.00 flat rate	
f.	Surcharge for mattresses and hide-a-beds	\$10.00 flat rate	

2.	Recyclables	Flat Rate	51 kg or greater
a.	Organic waste	\$6.00/0-50kg	\$110.00/tonne
b.	Organic waste (containing mixed solid waste or recyclables) with offence	\$6.00/0-50kg	\$250.00/tonne
c.	Garden waste	\$6.00/0-100kg	\$55.00/tonne
d.	Wood waste including wood roofing	\$6.00/0-50kg	\$250.00/tonne
e.	Gypsum (Church Road Transfer Station only)	\$6.00/0-50kg	\$250.00/tonne
f.	Metal recycling, metal appliances with ODS (ozone depleting substance)	\$6.00/0-500kg	\$55.00/tonne
g.	Corrugated cardboard	\$6.00/0-50kg	\$55.00/tonne
h.	Miscellaneous recyclables including: household plastics, metal food and beverage containers, vehicle batteries and oil filters	\$6.00 flat rate	
i.	Surcharge for ODS containing appliances	\$15.00 flat rate	

3.	Controlled Waste	Flat Rate	51 kg or greater
a.	Contaminated soil, grit and screenings and bio-solids	\$6.00/0-50 kg	\$125.00/tonne
b.	Controlled waste (misc.) including large dead animals	\$6.00/0-50 kg	\$250.00/tonne
c.	Food processing waste and treatment works		\$250.00/tonne
d.	Steel cable		\$500.00/tonne
e.	Asbestos waste	\$30.00/0-50 kg	\$500.00/tonne

4. Any load containing Prohibited Waste will be charged all costs associated with any special handling or removal of the Prohibited Waste in addition to the volume rates above.
5. Where the charge is based on weight, it shall be based on the difference in weight between loaded weight and the empty weight of the vehicle.
6. In the event that the scales provided are not operational, weight shall be estimated by the Scale Clerk employed by the Regional District of Nanaimo.
7. All charges payable under this bylaw shall be paid prior to leaving the site.
8. Surcharges are in addition to the per tonne rate posted for the material type.

Chairperson

Sr. Mgr., Corporate Administration

Schedule 'B'

POLICIES AND PROCEDURES

Customer Charge Accounts and Collections

PURPOSE: To establish guidelines for the granting of customer credit and for the collection of customer accounts.

POLICY: Customer accounts will be established only in circumstances where the customer will be a regular user of Regional District services. All other requests for products and or services must be prepaid.

PROCEDURES:

- (1) Any individual or organization wishing to establish a charge account with the Regional District of Nanaimo shall complete an **Application for Credit** as provided by the Regional District.
- (2) Exemptions from (1) above will be limited to:
 - Province of British Columbia, departments or agencies clearly identified.
 - Government of Canada, departments or agencies clearly identified.
 - Other Municipalities, Regional Districts, Towns and Villages.
- (3) Completed **Applications for Credit** will be forwarded to the originating department for recommendation and then to the accounts receivable department for verification of references and credit history.
- (4) Verified **Applications** may be approved by either the General Manager, Finance & Information Services or Deputy Treasurer. The originating department and the customer will be advised of the approval date, and charges may be accepted immediately after the approval date.
- (5) Customer invoices will be generated monthly, and will be payable upon receipt by the customer.
- (6) Customers with accounts in arrears after 30 days will be contacted requesting payment within seven working days. Failure to remit within seven days will result in a rescinding of credit and the account will be C.O.D. only.
- (7) Upon full payment of all outstanding balances a customer account may be reinstated at the discretion of the General Manager, Finance & Information Services or Deputy Treasurer.
- (8) Any customer account falling 30 days past due a second time and which is not fully paid immediately (7 working days) upon request, will be placed on C.O. D. permanently.
- (9) Any variations or exceptions to the above noted policies and procedures must have the written approval of the General Manager, Finance & Information Services or Deputy Treasurer.
- (10) At the discretion of the General Manager, Finance & Information Services, customers with accounts in arrears after 60 days will be contacted and advised that they will not deposit any further solid waste on or at the Solid Waste Management Facilities until the charge and interest owing thereon is paid in full.

Chairperson

Sr. Mgr., Corporate Administration

Schedule 'C'

"Prohibited Waste"

The following gaseous liquids and municipal solid wastes are not acceptable for disposal at a Solid Waste Management Facility and include, but are not limited to:

1. At the Regional Landfill:
 - (i) Biomedical Waste;
 - (ii) Commercial Organic Waste;
 - (iii) Concrete or asphalt pieces, or rocks greater than 0.03m³ or 70 kg;
 - (iv) Corrugated Cardboard;
 - (v) Drums;
 - (vi) Garden Waste;
 - (vii) Gypsum;
 - (viii) Hazardous Waste;
 - (ix) Household Plastic Containers;
 - (x) Ignitable Wastes;
 - (xi) Land Clearing Waste;
 - (xii) Liquids, except as permitted herein;
 - (xiii) Metal;
 - (xiv) Motor vehicle bodies and farm implements;
 - (xv) Municipal Solid Waste that is on fire or smouldering;
 - (xvi) Radioactive Waste;
 - (xvii) Reactive Wastes;
 - (xviii) Recyclable Paper;
 - (xix) Stewardship Materials:
 - (xx) Special waste, as defined in the *Special Waste Regulation* (British Columbia) except asbestos ;
 - (xxi) Tires;
 - (xxii) Wood Waste

2. At Church Road Transfer Station:

- (i) Biomedical Waste;
- (ii) Bulk loads of Demolition Waste 5m³ or greater
- (iii) Burnt Demolition Waste;
- (iv) Commercial Organic Waste;
- (v) Concrete or asphalt pieces, or rocks greater than 0.03m³ or 70 kg;
- (vi) Controlled Waste; except as animal carcasses by a government agency with written authorization from the General Manager;
- (vii) Corrugated Cardboard;
- (vi) Garden Waste;
- (vii) Gypsum;
- (viii) Hazardous Waste;
- (ix) Household Plastic Containers;
- (x) Ignitable Wastes;
- (xi) Land Clearing Waste;
- (xii) Liquids, except as permitted herein;
- (xiii) Metal;
- (xiv) Motor vehicle bodies and farm implements;
- (xv) Municipal Solid Waste that is on fire or smouldering;
- (xvi) Radioactive Waste;
- (xvii) Reactive Wastes;
- (xviii) Recyclable Paper;
- (xix) Special waste, as defined in the *Special Waste Regulation* (British Columbia) except asbestos;
- (xx) Stewardship Materials;
- (xxi) Tires;
- (xxii) Wood Waste.

Chairperson

Sr. Mgr., Corporate Administration

Schedule 'D'

Charges and procedures for use of Regional Landfill for disposing of Controlled Waste and Municipal Solid Waste which originates from the Cowichan Valley Regional District and the Comox Valley Regional District, effective July 1, 2017, are:

1.	Controlled waste originating Cowichan Valley RD	Flat rate	51 kg or greater
a.	Waste asbestos	\$30.00/0-50 kg	\$600.00/tonne
b.	Large dead animals	\$20.00/0-50 kg	\$300.00/tonne
c.	Invasive plant species	\$20.00/0-50 kg	\$300.00/tonne

2.	Solid waste under the direct control of the Cowichan Valley Regional District *	Tonne Rate
a.	Municipal solid waste	Tonne rate includes a 20% premium over the current Schedule 'A' rates

Solid waste acceptance is contingent upon:

- 1) Prior written notice from Cowichan Valley Regional District to the General Manager explaining the reasons for, and the anticipated duration, of contingency landfilling;
- 2) The General Manager's acknowledgement of acceptance; and,
- 3) Any conditions the General Manager may specify with respect to the duration, requirements regarding acceptance or reporting.

3.	Controlled waste originating Comox Valley RD**	Flat rate	51 kg or greater
a.	Waste asbestos	\$30.00/0-50 kg	\$600.00/tonne

**Asbestos waste acceptance is approved until December 31, 2017 with provision to extend the agreement for one year.

REGIONAL DISTRICT OF NANAIMO

BYLAW NO. 1591

(Consolidated for convenience only to include up to 1591.08)

**A BYLAW TO PROVIDE FOR THE
COLLECTION OF GARBAGE, FOOD WASTE AND
RECYCLABLE MATERIALS WITHIN THE
REGIONAL DISTRICT OF NANAIMO**

WHEREAS pursuant to “Recycling and Compulsory Collection Local Service Establishment Bylaw No. 793, 1989”, the Regional District of Nanaimo is authorized to provide a service for the collection of garbage and recyclable materials;

AND WHEREAS the Board of Directors of the Regional District of Nanaimo has determined that a Regional Collection Service should be established and provided to certain areas and classes of land within the District;

NOW THEREFORE the Board, in open meeting assembled, enacts as follows:

1. **DEFINITIONS**

For the purposes of this bylaw, unless the context otherwise requires:

“**Apartment Building**” means a building having entrances to Dwelling Units on multiple levels and in which five (5) or more Dwelling Units are located.

“**Approved Disposal Site**” means a site for the deposit and disposal of Garbage, Residential Food Waste and/or Recyclable Materials, which is either owned and operated by the District or licensed by the District under Bylaw No. 1386.

“**Board**” means the governing and executive body of the Regional District of Nanaimo.

“**Bi-Weekly Collection Service**” means scheduled collection of Garbage or Recyclable Materials every-other-week.

“**Collection Period**” means a period of regular collection, Weekly or Bi-Weekly as set out in this Bylaw.

“**Commencement Date**” means the date established for billing purposes under paragraph 5(2)(g).

“**Commercial Waste**” means all refuse and waste and accumulation of waste and abandoned material resulting from the operation of a trade or business including paper boxes and packing cases, wrapping material, wrappings and all materials of like nature, other than Garbage.

“Composting Facility” means a facility under contract to the Regional District to accept Residential Food Waste that composts organic matter to produce compost and holds a valid Waste Stream Management License issued under Bylaw No. 1386.

“Contractor” means the person or persons under contract to the District to collect Garbage, Residential Food Waste and Recyclable Materials on behalf of the Regional District of Nanaimo.

“District” means the Regional District of Nanaimo.

“Dwelling Unit” means one or more rooms for residential occupancy connected together with facilities for living, sleeping, cooking and having a separate entrance, and includes a Manufactured Home as defined within this Bylaw.

“Food Waste” means compostable food waste, and other material acceptable at the Composting Facility, generated within the Service Area including, without limitation:

- a) fruits and vegetables
- b) cooked and raw foods
- c) meat, fish, shellfish, poultry and bones thereof
- d) dairy products
- e) bread, pasta and baked goods
- f) tea bags, coffee grounds and filters
- g) soiled paper plates and cups
- h) soiled paper towels and napkins
- i) soiled waxed paper
- j) food soiled cardboard and paper
- k) egg shells
- l) Food Waste excludes Yard and Garden Waste

“Food Waste Container” means the container described in Schedule ‘C’ of this bylaw and provided to owners from time to time of Residential Premises specifically for the collection and disposal of Residential Food Waste, and when set at the Curbside for collection not weighing more than fifty (50) pounds (23 kilograms) gross weight.

“Garbage” means discarded matter and includes refuse, waste, noxious, offensive and unwholesome materials, but does not include Residential Food Waste, Recyclable Materials, Commercial Waste or unacceptable waste as set out in this bylaw.

“Garbage Container” means a container of not more than 100 litres capacity, of not more than fifty (50) pounds (23 kilograms) gross weight, and having a waterproof cover; or plastic bags of not less than two (2) mil thickness, of not more than fifty (50) pounds (23 kilograms) gross weight, with a maximum measurement of 26” by 36” when filled.

“General Manager” means a person appointed to the position of General Manager.

“Holiday” means New Years Day, Good Friday, Victoria Day, Canada Day, B.C. Day, Labour Day, Thanksgiving Day, Remembrance Day, Christmas Day, Boxing Day, or any other day proclaimed by the Parliament of Canada or the Legislature of British Columbia as a public holiday.

“Manufactured Home” means any structure, whether ordinarily equipped with wheels or not, that is designed, constructed or manufactured to be moved from one place to another by being towed or carried, and which is used as a Dwelling Unit.

“Materials for Collection” means all Recyclable Materials, Food Waste, and Garbage that are placed at the curbside by the occupants of Residential Premises.

“Manufactured Home Park” means land used or occupied by a person to provide spaces for accommodating one or more Manufactured Homes owned or being purchased by other persons where a charge or rental is imposed for the use of that space, and the Manufactured Home is assessed and taxed in the name of its owner or purchaser.

“Multi-Family Dwelling Unit” means a Dwelling Unit located in a building or combination of buildings, or a Manufactured Home Park, which comprises five or more Dwelling Units, but does not include a resort, an Apartment Building or a Dwelling Unit in a Multi Level Entry Building.

“Multi Level Entry Building” means a building in which five (5) or more Dwelling Units are located used for residential purposes, or a combination of residential and non-residential uses where one or more Dwelling Units are located above or below another Dwelling Unit or above or below a unit used for a non-residential use.

“Private Collection Service” means a collection service which is not operated by the Contractor for the District, and includes any commercial containerized collection service or a Commercial Waste collection service.

“Recyclable Materials” means materials accepted at a Recycling Facility and includes but is not limited to:

- (a) newsprint
- (b) metal food and beverage containers
- (c) aluminum foil

- (d) mixed waste paper
- (e) empty HDPE containers
- (f) empty LDPE containers
- (g) old corrugated cardboard
- (h) old directories
- (i) old magazines
- (j) textiles
- (k) or such materials designated from time to time by the Regional District.

“Recycling Container” means the multi-material Recycling Container described in Schedule ‘B’ of this bylaw and when set at the Curbside for collection not weighing more than fifty (50) pounds (23 kilograms) gross weight.

“Recycling Facility” means a facility for the receiving, processing, handling, separating and marketing of Recyclable Materials and holding a current Waste Stream Management License issued under Bylaw No. 1386.

“Recycling Only Service” means collection of Recyclable Materials only from those Residential Premises not receiving Garbage and Food Waste collection service as at the commencement of the 2010 collection contract.

“Regional Collection System” means the Regional Collection System established under Section 2(1).

“Residential Food Waste” means Food Waste generated by the occupants of Residential Premises

“Residential Garbage” means Garbage generated by the occupants of Residential Premises.

“Residential Premises” means a Single Family Dwelling Unit or a Multi-Family Dwelling Unit.

“Service Area” means that portion of the Regional District of Nanaimo situated on Vancouver and Gabriola Island but excluding the City of Nanaimo.

“Single Family Dwelling Unit” means a single family detached dwelling and each Dwelling Unit of a duplex, triplex or quadruplex and a Manufactured Home not situated in a Manufactured Home park.

“Weekly Collection Service” means the scheduled collection of Food Waste on a weekly basis.

“Yard and Garden Waste” means all organic material produced by a yard or garden including grass clippings, hedge and tree pruning material, weeds and material from flower beds and vegetable gardens.

2. **PROVISION OF SERVICE**

(1) **Establishment of Collection System**

There is hereby established throughout the Service Area a Regional Collection System for the collection, removal and disposal of Residential Garbage, Residential Food Waste and Recyclable Materials.

(2) **Mandatory Service**

Every owner or occupier of Residential Premises located within the Service Area, and provided with service under Section 2(3), shall use the Regional Collection System for the collection, removal and disposal of all Residential Garbage, Residential Food Waste and Recyclable Materials generated in their Residential Premises.

(3) **Provision of Service**

(a) The Regional District of Nanaimo is hereby authorized to collect or provide for the collection of Residential Garbage from Residential Premises within the Service Area except within the Town of Qualicum Beach.

(b) The Regional District of Nanaimo is hereby authorized to collect or provide for the collection of Recyclable Materials from Residential Premises within the Service Area.

(c) The Regional District of Nanaimo is hereby authorized to collect or provide for the collection of Residential Food Waste from Residential Premises within the Service Area.

(4) **Alternate Service**

(a) Owners or occupiers of Residential Premises, having Garbage for disposal in any one Collection Period which exceeds the limitations set out in Subsection 4(1)(a)(vi) shall make their own arrangements for disposal at an Approved Disposal Site.

(b) Owners and occupiers of a Multi-Family Dwelling Unit such as a Manufactured Home located in a Manufactured Home Park where the owner had in place on July 1, 1994, an alternative program to collect Garbage and provide for recycling of Recyclable Materials, may continue to make use of such alternative programs and the charge for service to such class of person shall be nil while the alternative program remains in effect.

(c) Owners or occupiers of Residential Premises where there is a proven inability by the Contractor to provide the service to the Residential Premises, shall make their own arrangements for disposal at an Approved Disposal Site and the charge for service to such class of person shall be nil while the alternative program remains in effect.

3. **PREPARATION OF MATERIALS FOR COLLECTION**

(1) **Unacceptable Waste**

- (a) No person shall place any of the following items in a Garbage Container for collection by the Regional Collection System:
 - (i) explosives
 - (ii) raw sewage or septic tank sludge
 - (iii) highly flammable material
 - (iv) dangerous or highly offensive wastes
 - (v) oversized items of any kind exceeding two (2) feet in any dimension
 - (vi) dead animals
 - (vii) demolition or construction waste
 - (viii) Yard and Garden Waste
 - (ix) rocks
 - (x) hot ashes
 - (xi) Recyclable Materials
 - (xii) Food Waste
- (b) No person shall place items other than Recyclable Materials in a Recycling Container.
- (c) No person shall place items other than Food Waste in a Food Waste Container.

(2) **Wet Garbage**

Wet Garbage shall be drained of excess moisture and wrapped in a suitable waterproof material before being placed in any Garbage Container.

(3) **Liquids**

No liquid in free form shall be allowed in any Garbage or Food Waste Container.

(4) **Greases**

No solids or greases which may adhere to the garbage collection vehicle body, shall be put or placed in any Garbage Container unless wrapped in a waterproof covering or placed in a closed container.

4. **SYSTEM OPERATION**

(1) **Residents' Responsibility**

- (a) Every owner or occupier of Residential Premises served by the Regional Collection System shall:
 - (i) place Garbage in Garbage Containers, Food Waste in approved Food Waste Containers, and Recyclable Materials in Recycling Containers, in accordance with this bylaw;
 - (ii) by 8:00 a.m. on the day designated for their Residential Premises for collection, place their Garbage Containers, Food Waste Containers, and Recycling Containers in full view and as close as possible to the edge of the travelled way serving the premises, without obstructing traffic;
 - (iii) where their premises are served by lane collection, place Garbage Containers, Food Waste Containers, and Recycling Containers so that they are accessible from the lane so that the collection worker will not be required to enter upon private property, open gates, climb or descend stairs, or lift containers over fences for emptying;
 - (iv) tie, or otherwise seal, to prevent spillage or entry of water, any plastic bags placed for collection;
 - (v) place tags, as described in Schedule 'A', on extra Garbage Containers so that they are clearly visible to collection workers;
 - (vi) set out for collection, no more Garbage Containers than three (3) for Bi-Weekly Collection Service;
 - (vii) remove all Garbage Containers, Food Waste Containers, and Recycling Containers from the public street or lane, after emptying, on the same day that the service is provided.
- (b) Garbage Containers, Food Waste Containers, and Recycling Containers shall at all times be kept on the premises which they are intended to serve, and shall at no time be kept or encroach upon or project over any street, lane or public place, except for the purposes of subsection 4(1)(a)(ii) or 4(1)(a)(iii) of this bylaw.
- (c) Every owner or occupier of Residential Premises served by the Regional Collection Service shall keep all Garbage Containers, Food Waste Containers and Recycling Containers in good condition and shall replace any which become damaged or dangerous to persons handling them.

(2) **Storage and Removal of Garbage, Residential Food Waste and Recyclable Materials**

Every owner or occupier of Residential Premises served by the Regional Collection Service shall store all Garbage, Food Waste and Recyclable Materials in suitable containers and all such Garbage, Food Waste and Recyclable Materials shall be put out for collection at least once in every Collection Period.

(3) **Use of Recycling Containers**

No person shall use a Recycling Container for any purpose other than the deposit and accumulation of Recyclable Materials and, not without limiting the generality of the foregoing, no person shall deposit Garbage in a Recycling Container.

(4) **Scavenging**

(a) No person, except an occupier of the Residential Premises to which a Recycling Container was distributed, shall remove from a Recycling Container, or from an area adjacent to a Recycling Container, any recyclable material prior to its collection by the Contractor.

(b) No person, except an occupier of the Residential Premises to which a Food Waste Container was distributed, shall remove from a Food Waste Container, or from an area adjacent to a Food Waste Container, any Residential Food Waste prior to its collection by the Contractor.

(5) **Frequency of Collection**

There shall be no regularly scheduled collection on Saturdays, Sundays or statutory holidays.

5. **ADMINISTRATION**

(1) **Administration**

The General Manager is authorized to administer this bylaw.

(2) **Fees**

(a) The fees and charges shown on Schedule 'A' to this bylaw are hereby imposed and levied on the owners of Residential Premises.

(b) Within the Electoral Areas of the District the fees and charges shall be billed annually in advance on or about June 1st each year and shall be due as payable as shown on the billing form.

(c) Each month the District will bill the City of Parksville, the Town of Qualicum Beach and District of Lantzville the charges shown on Schedule A times the number of Residential Premises identified as being served by the Regional Collection Service within their respective jurisdictions. The amount billed shall be due and payable to the District within thirty days of the receipt of a bill.

(d) The City of Parksville, Town of Qualicum Beach and District of Lantzville shall confirm on or before the 1st of each month, the number of Residential Premises within their jurisdictions receiving the service identified in Section 2 of this Bylaw.

(e) The fees and charges billed by the District may be included on a common form with other rates or items which may be billed by the District.

- (f) Subject to paragraph 5(2)(g) the fees and charges payable under paragraph 5(2)(a) will apply to new Residential Premises upon the earlier of occupancy, the issuance of an occupancy permit or where there is evidence that the premises are available for occupancy.
- (g) Where in respect of Residential Premises within the Electoral Areas of the District, the date determined under paragraph 5(2)(f) (the Commencement Date) results in a billing period shorter than the annual billing period, the charges for such shorter period in respect of such Residential Premises shall be calculated, levied and collected on the following basis:
 - (i) If the Commencement Date occurs between the first day and the fifteenth day of the month, the annual rate shall be applied on a pro rata basis from the first day of the month.
 - (ii) If the Commencement Date occurs between the fifteenth day and the last day of the month, the annual rate shall be applied on a pro rata basis from the first day of the following month.
- (h) To encourage prompt payment of fees and charges levied under paragraph 5(2)(b), the Board shall establish annually an adjustment to the rates and the adjustment will apply provided fees and charges billed are paid in full, including all arrears then outstanding, into the office of the District on or before the close of business on the date set out in the billing form.
- (i) No complaint of an error in any charge for rates or charges billed under this Bylaw shall be considered and no adjustment of any such error shall be made after a period of one year has elapsed since the end of the period for which such user rates or charges were billed. After the termination of this period all such user rates or charges shall be deemed to have been properly and correctly made.
- (j) A charge imposed under this bylaw which remains unpaid on December 31 in any year shall be deemed to be taxes in arrears on the land or real property on which the charge was imposed, and may be recovered as provided in the *Local Government Act*.

(3) **Right of Entry**

The General Manager or other such representatives as may, from time to time, be duly authorized and appointed by the District, and Peace Officers shall have the right to enter at all reasonable times upon any property subject to the provisions of this bylaw, for the purposes of ascertaining whether any requirement of this bylaw or the regulations in this bylaw are being observed.

(4) **Violation**

Any person who violates any provision of this bylaw or who suffers or permits any act or thing to be done in contravention of, or in violation of any of the provisions of this bylaw, commits an offence and is punishable in accordance with the Offence Act.

(5) **Penalty**

Any person who violates any of the provisions of this bylaw shall, upon summary conviction thereof, be liable to a penalty of not more than Two Thousand (\$2,000.00) Dollars and costs. Where an offence against this bylaw is of a continuing nature, it shall be lawful to impose a fine or penalty not exceeding Five Hundred (\$500.00) Dollars and costs for each day such offence is continued by the offender.

6. **CITATION**

This bylaw may be cited as “Regional District of Nanaimo Solid Waste and Recycling Collection Service Rates and Regulations Bylaw No. 1591, 2010”.

7. **REPEAL**

“Regional District of Nanaimo Garbage and Recyclable Materials Collection Bylaw No. 1009, 1996” and amendments, Bylaws No. 1009.01, 1009.02, 1009.03, 1009.04, 1009.05, 1009.06, 1009.07, 1009.08, 1009.09, 1009.10, 1009.11 and 1009.12 are hereby repealed.

Introduced and read three times this 27th day of April, 2010.

Adopted this 27th day of April, 2010.

CHAIRPERSON

SR. MGR., CORPORATE ADMINISTRATION

Chairperson

Sr. Mgr., Corporate Administration

SCHEDULE 'A'

BYLAW NO. 1591

User Fees associated with Collection of Garbage, Food Waste and Recyclable Materials

The rates in this schedule apply to the jurisdictions as outlined in the body of this bylaw.

Service Area	Prompt Payment Rate (Rates rounded for convenience)	Payment after Due Date (Rates rounded for convenience)	Other Charges
Electoral Areas ⁽¹⁾	\$130.22	\$144.69	
City of Parksville ⁽¹⁾	\$130.22	\$144.69	
District of Lantzville ⁽¹⁾	\$130.22	\$144.69	
Town of Qualicum Beach ⁽²⁾	\$85.83	\$95.37	
Recycling Only ⁽³⁾	\$24.10	\$26.78	
Tags for set out of additional Garbage Containers (excluding Town of Qualicum Beach)	-	-	\$3.00 per garbage container
Green Bin food waste containers			\$27.50 ⁽⁴⁾ each

Explanation of Service Level Container Limits included in Basic Rate

(1) Service Level Basic Rates Container Limits =

The basic rate will include up to one container of Residential Garbage per collection period (one container per two weeks), one container of Residential Food Waste per collection period (one container per week), and unlimited Recyclable Materials per collection period.

(2) Service Level Basic Rates Recycling and Food Waste Collection for Town of Qualicum Beach =

The basic rate will include up to one container of Residential Food Waste per collection period (one container per week), and unlimited Recyclable Materials per collection period.

(3) Service Level Basic Rates Recycling Only Collection =

The basic rate includes unlimited Recyclable Materials only per collection period.

(4) \$27.50 charge for Green Bin food waste container includes taxes.

Schedule `B' to accompany "Regional District of Nanaimo Solid Waste and Recycling Collection Service Rates and Regulations Bylaw No. 1591, 2010".

Chairperson

Sr. Mgr., Corporate Administration

SCHEDULE 'B'

MULTI-MATERIAL RECYCLING CONTAINER

A. BLUE BOX MAXIMUM REQUIREMENTS

Dimensions

Each container must measure no more than (Outside Dimensions):
20" x 16" x 16" (L x W x H)

Each container must have a rated capacity of approximately 80 litres.

Colour:

Each container must be Dark Blue with White Lettering

Special:

Each container must contain silicon rubber die hot stamps:

On both sides "ZERO WASTE RDN" and on both ends "universal recycling logo" together with Regional District of Nanaimo recycling logo in contrasting colour to the colour of the container and must be no less than 1-1/2" in height.

General:

Each container must be rectangular in shape and designed for a multi-material curbside collection program.

Each container must have a rated capacity of no less than 80 lbs.

Each container must have a 10 oz. capacity within the container to accumulate spillage when stored in the home, with four bottom vent holes in centre of raised levels to drain excess accumulation of rain or snow melt when stored outside.

Each container must have an anti-slide bottom pattern to resist wind blow-away.

Each container must have enclosed handles for safety and cleanliness.

Weight:

Each container must be no heavier than fifty (50) lbs (23 kilograms) when placed at the curb.

Example:

An example of an approved "Blue Box" recycling container is Norseman Plastics Product ID NPL 250 or NPL 259.

Chairperson

Sr. Mgr., Corporate Administration

SCHEDULE 'C'

FOOD WASTE CONTAINER

A. CURBSIDE CONTAINER MAXIMUM REQUIREMENTS

Dimensions

Each container must measure no more than (Outside Dimensions):
12" x 11" x 27" (L x W x H)

Each container must have a rated capacity of approximately 50 litres.

Colour:

Green with "Zero Waste – Beyond Composting" logo hot-stamped on front.

General:

Each container must have a latching lid, 360 degree double rim closure (to enhance lid seal), and handles for ease of transport by resident and for collection workers.

Curbside Weight:

Each container must be no heavier than fifty (50) lbs (23 kilograms) when placed at the curb.

Appendix K: Plan Alignment

The following key initiatives are supported by the plan. This list will be updated when the RDN is made aware of changes to these initiatives and the RDN will update the PMAC and the Board:

- Climate Leadership Plan
- BC Energy Plan
- BC Bioenergy Strategy
- BC air quality objectives
- EPR programs under the Recycling Regulation (EMA)
- Organic Matter Recycling Regulation (EMA)
- Reviewable Projects Regulations (Environmental Assessment Act)
- Landfill Gas Management Regulation (EMA)
- Landfill Criteria
- Integrated Resource Recovery
- Develop with Care
- A Guide to Green Choices – Ideas and Practical Advice for Land Use Decisions in BC Communities

Federal Alignment

- Canadian Council of Ministers of Environment Canada-wide Action Plan for EPR

Regional Plans

- Regional Growth Strategy – Regional District of Nanaimo
- Regional District of Nanaimo Strategic Plan 2016-2020