

Solid Waste Management in Newfoundland and Labrador



Finishing
what we
started

December 31, 2019


Newfoundland
Labrador

TRANSMITTAL LETTER



Government of Newfoundland and Labrador
Department of Municipal Affairs and Environment
Provincial Solid Waste Management Strategy Review

December 31, 2019

Honourable Derrick Bragg
Minister of Municipal Affairs and Environment
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Email: MAEMinister@gov.nl.ca

Dear Minister Bragg:

On January 9, 2019, I was appointed to lead the first comprehensive review of the Provincial Solid Waste Management Strategy since its release in 2002. Today, I am pleased to submit my report entitled "Solid Waste Management in Newfoundland and Labrador: Finishing what we started."

As per my terms of reference, the report addresses seven topic areas, including waste diversion, regional waste management, standards and technology, economic and employment opportunities, public education, system governance, and legislation. The work of the review was supported by a comprehensive consultations process, involving an online public questionnaire, receipt of written submissions, meetings with various stakeholder groups and municipal authorities, and ongoing dialogue with officials of the provincial government, Multi-Materials Stewardship Board, and regional service boards.

Much progress has been made on the Strategy, and the communities involved are to be commended for accepting the challenges the Strategy presented. Unfortunately, implementation of the Strategy continues to be stalled in many areas of the province due to the absence of a plan supported by both government and affected communities. Concern over costs is driving most concern.

The report aims to address outstanding issues, while at the same time strengthening transparency and accountability of all key players involved. Consolidating the current eight waste management regions on the island portion of the province into two new regions is the preferred scenario to pursue at this time. Implementation of this model will enable all residents and businesses in each region to benefit with consistent modern waste management services and fees.

Labrador presents unique challenges for modern waste management. Larger municipalities should continue to lead waste management efforts in western and central Labrador, as should the Nunatsiavut Government and the five Inuit Community Governments in northern Labrador. The establishment of a regional waste disposal facility and regional service board in Southern Labrador will make operations there effective.

The goals of the Strategy remain relevant today, with the exception that the waste diversion goal be replaced with a more current waste management performance metric measuring waste disposal per capita in kilograms. New waste diversion programs and modifications to existing ones, along with more targeted and collaborative public awareness and education campaigns, as recommended in the report, can deliver significant reductions in waste going to landfills.

To maximize waste diversion efforts and address indiscriminate dumping and littering, we need to ramp up enforcement at multiple levels - provincial, regional and local. The report offers several recommendations to improve on things here.

Many landfills destined for closure under the Strategy are now reaching a critical point with landfill space and cover constraints, and solutions needed soon. There are challenges ahead, including the fact that new fees will result for many residents in the province. Strong leadership by all levels of government and regional service boards will be critical in moving the provincial waste management agenda forward.

If provincial and local governments are serious about ensuring waste is managed responsibly, then this report provides a foundation on which all public sector partners can collaborate. We can continue on the path of the Strategy, the overall well-being of the people of the province and the environment deserve no less.

I want to thank all who participated in the review process. Without their interest and contributions, this report would not have been possible.

I wish you and your government success in your future waste management deliberations.

Sincerely,



ANN MARIE HANN

Executive Advisor

Provincial Solid Waste Management Strategy Review



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EXECUTIVE SUMMARY

In releasing the Provincial Solid Waste Management Strategy in 2002, the provincial government aimed to address long-standing waste management issues and related environmental concerns, and provide residents of the province with access to quality waste management services at a reasonable cost. Good progress has been made in many areas of the Strategy since then, with 72% of waste disposal sites closed and 85% of open burning and incineration activity ceased. Over 83% of the population on the island portion of the province has access to new waste management services, including waste diversion programs and modern-day waste disposal facilities. A new regional landfill in Labrador West is also now in operation.

Such progress did not happen overnight or without issues or additional cost, and those communities involved are to be commended for meeting head-on the challenges they faced. Despite these efforts, implementation of the Strategy in several areas of the province continues to be stalled, primarily due to concern about implementation costs. Many respondents participating in the public questionnaire carried out as part of this review, while supportive of better waste management, are unwilling to pay more for it.

The reality is many landfills destined for closure under the Strategy are now reaching a critical point due to landfill space and cover constraints, and solutions needed soon. More costs are inevitable with new waste management systems. Consolidating waste management regions on the island portion of the province into two new regions is the preferred approach to pursue at this time, with such a model supporting the delivery of consistent modern waste management services and fees in each region.

Labrador, due to its smaller, dispersed population, and geographical and climatic issues, has unique challenges for modern waste management. Waste diversion takes on heightened importance, as consolidation of regions or construction of modern landfills are not always environmentally or economically practical. Larger municipalities should continue to lead waste management efforts in western and central Labrador, as should the Nunatsiavut Government and the five Inuit Community Governments in northern Labrador. The establishment of a regional waste disposal facility in Southern Labrador, governed by a new regional service board, will better serve residents there.

Overall, the goals of the 2002 Strategy remain relevant, with the exception that the waste diversion goal be replaced with a more current waste management performance metric measuring waste disposal per capita in kilograms. A specific target can be set once actions and the timing of same arising out of this report are determined.

Proposed new waste diversion programs and modifications to existing ones, along with more targeted and collaborative public awareness and education campaigns, as recommended in this report, can deliver significant reductions in waste going to landfills. Working with industry to establish an industry-led program for packaging and printed paper should be a priority. In addition to diverting a significant waste stream, industry funding will be available to fund necessary municipal services and infrastructure. The significant amount of organic waste ending up in landfills is a concern,



but having a comprehensive strategy for tackling this waste stream is important before implementation begins in earnest. Organics programs can be expensive, so this strategy must consider the potential role the private sector can play, as successfully demonstrated in other Canadian jurisdictions.

To maximize waste diversion efforts and address indiscriminate dumping and littering, enforcement needs to be effective at multiple levels - provincial, regional and local. The report discusses enforcement challenges and proffers several recommendations to improve on things.

Important, too, is the overall accountability of all waste management system players to achievement of the Strategy's goals. The Multi-Materials Stewardship Board (MMSB) is proposed to be the lead provincial authority overseeing the Strategy. A provincial interdepartmental waste management committee, chaired by the MMSB, will support an integrated and collaborative approach to Strategy implementation, including the review of new five-year strategic plans submitted for ministerial approval by regional service boards and waste management authorities, along with supporting annual business plans. The MMSB and relevant government departments can then align their own plans and funding commitments accordingly. Additionally, proposed advisory committees established in all regions of the province offer an important new mechanism for ongoing engagement between waste management authorities and local communities.

There is no reason this province cannot realize economic and employment success from its waste management sector, as has happened in other provinces. However, we need to be strategic about it. This report recommends that a stakeholder-driven provincial economic development and innovation strategy be developed along the same lines as other sector plans created under the provincial government's "The Way Forward."

Strong leadership by all levels of government and the regional service boards will be critical in moving the provincial waste management agenda forward. If the powers-at-be are serious about ensuring waste is managed responsibly, then this report provides a foundation on which public sector partners can collaborate and all major components of the Strategy either fully implemented or well advanced by 2025. Let's "finish what we started..."

CHAPTER 1

INTRODUCTION

1.1 Review Terms of Reference

On January 9, 2019, the Provincial Government announced it was undertaking a review of the 2002 Provincial Solid Waste Management Strategy (“Waste Management Strategy” or “Strategy”). The Terms of Reference for the review were released publicly on February 19, 2019. The deadline for the final report was December 31, 2019.

The Strategy and its implementation have not been reviewed comprehensively until now. As stated by the then Minister of Municipal Affairs and Environment when announcing the review, “...the goals remain to ensure the protection of the environment and to support the delivery of high quality waste management services at a reasonable cost. Through a review of the system, we will ensure the Strategy successfully addresses a broad scope of waste management issues and is both modern and efficient.”

The Terms of Reference outline the specific areas of action contained in the 2002 Strategy. These actions include: (a) increasing waste diversion; (b) establishing a regional approach to waste management; (c) utilizing modern standards and technology; (d) maximizing economic and employment opportunities; and (e) public education. Two additional areas of focus added included governance and legislation. Further detail is included in Attachment 1.1.

The provincial departments of Municipal Affairs and Environment (MAE) and Service NL, along with the Multi-Materials Stewardship Board (MMSB), provided administration, research and policy support. Mr. Sean Kelly was hired as an additional resource.

1.2 Approach to Review

The release of the Terms of Reference set the stage for the review process and delineated the issues and topics. The intention of this report is to identify some of the key issues and challenges that have become a barrier to success and recommend actions necessary for the continued advancement of effective and efficient waste management across the province. The focus of the review is on strategic policy trends, challenges and opportunities, and not local operational issues per se.

Delivery of waste management services in the province involves a multitude of players, including regional service boards, municipalities, local service districts, local waste management committees, several provincial government departments, and the MMSB. Implementation affects every resident of the province and institutional, commercial, industrial and construction activities. Given the diversity of interests, a comprehensive public and stakeholder engagement strategy was employed to ensure all who wished had a full opportunity to be heard and have input into this report’s recommendations. Further details on the consultation process and feedback received are contained in Chapter 3.

1.3 Acknowledgments

The contributions of the residents of the province, and all groups and organizations who participated in the review process and took time to prepare and make submissions or otherwise engage in the process, is appreciated. Many thanks also go to personnel of the regional service boards, provincial departments of MAE and Service NL, the MMSB, and Mr. Kelly, who spent many hours supporting the work of the review. Without the extensive amount of participation and support and insights shared by so many, this report would not be possible.

1.4 Structure of Report

The structure of this report aligns generally with the outline of the review's terms of reference. Chapter 2 presents an overview of the 2002 Waste Management Strategy and the progress of implementation. Chapter 3 summarizes the feedback received during public and stakeholder consultations. Chapters 4-10 address the seven focus areas of the terms of reference, albeit with a slight reordering of some topics vis-à-vis the review's terms of reference. Finally, Chapter 11 presents a consolidation of all recommendations made throughout the various chapters.

1.5 Report Disclaimer

This report is intended for the exclusive use of the Government of Newfoundland and Labrador. Any other use of, or reliance on, this report by others is at their own risk.

The analyses conducted and the conclusions reached relied extensively on the information made available from relevant government and other public sector staff and major system operators, such as the regional service boards. There was no attempt to validate every item of information independently, instead relying on the providers to have verified accuracy in presenting information for consideration.

Attachment 1.1

Provincial Solid Waste Management Strategy Review Terms of Reference Focus Areas



Terms of Reference Focus Areas

A. Waste Diversion:

- Effectiveness of current waste diversion initiatives and funding programs;
- Opportunities to implement new waste diversion programs; for example:
 - targeting additional products for diversion (e.g., organics);
 - implementing disposal bans, mandatory recycling programs;
 - increasing waste diversion by the industrial, commercial and institutional sectors and multi-dwelling residential units; and,
 - expanding the extended producer responsibility approach to other waste products;

B. Regional Approach to Waste Management:

- Effectiveness of waste management systems overseen by regional service boards and regional authorities (e.g., Labrador);
- Consistency of waste management programs and services across the province (e.g., services, costs, fees, contributions to provincial waste management targets);
- Opting in or out of regional services - should choices be permitted;
- Financial sustainability of waste management systems regionally and provincially;
- Optimal approach(es) to setting fees and fee structures within and across regions and types of property ownership; and,
- Occupational health and safety performance of provincial waste management system;

C. Modern Standards and Technology:

- Sufficiency of operating practices utilized by regional service boards;
- Appropriateness of provincial environmental standards;
- Adequacy of compliance and enforcement activities;
- Examination of what constitutes “remote and isolated” communities, as pertains to implementation of the waste management strategy;
- Review of technologies relevant for rural and remote areas; and,
- Identification of opportunities for new technologies (e.g., waste to energy conversion; ability to reduce GHGs);

D. Economic and Employment Opportunities:

- Provincial and regional economic and employment benefits derived from implementing the solid waste management strategy; and,
- Potential for additional economic and employment opportunities;

E. Public Education:

- Effectiveness of public education programs;

F. Governance:

- Roles and interactions of the major partners in the system (e.g., government, regional service boards, municipalities, local committees, Multi-Materials Stewardship Board, Municipal Assessment Agency) to ensure the system on provincial and regional levels operates with maximum effectiveness and efficiency;
- Effectiveness of governance structures and human resource capacity to oversee successful implementation of the waste management system at the regional level;
- Provincial waste management system's overall planning and accountability frameworks, including data collection and reporting activities by regional service boards and government for performance measurement and compliance monitoring;
- Strategy goals and their continued relevance; and,
- Opportunities for greater cooperation across regions;

G. Legislative Review:

- Identification of potential policy, regulatory and legislative amendments required to support implementation of a modern waste management system in the province.

CHAPTER 2

PROVINCIAL SOLID WASTE MANAGEMENT STRATEGY

2.1 Strategy Highlights

The 2002 Provincial Solid Waste Management Strategy is contained in Attachment 2.1.

At the time of the launch of the Strategy, the general approach to waste management in the province had been to dump garbage into nearby unlined landfills situated across the province and oftentimes burn it in conical incinerators to reduce the volume. The Strategy offered a new long-term modern approach to waste management focused on reducing the total amount of waste, keeping it out of landfills by recycling and composting, and disposing of residual waste at approved second-generation landfills. As noted in Chapter 1, the Strategy highlighted five primary areas for action, including waste diversion, regional waste management, modern standards and technology, economic and employment benefits, and public education. The Strategy also recognized the importance of striking the right balance of environmental protection and system affordability.

The timeline set originally for implementation of the Strategy was 2010. By then, the province would have a reduction in waste going to landfills by 50 percent, the elimination of open burning and incineration, the number of landfills reduced by 80 percent, and new regional landfills on the island portion of the province operating under modern environmental standards. This timeline extended out to 2020 when government announced the details of the implementation plan and financing for the Strategy in 2007.

A key item of the Strategy is a regional approach to waste management. The Strategy originally delineated the province into 15 waste management regions (reduced to 12 regions with subsequent planning). The island portion of the province comprises eight regions and Labrador has four waste regions. Regional waste management authorities would oversee the delivery of waste management in each region on the island portion of the province. The work of these authorities would be directed by a board of directors comprised of elected local or indigenous officials from the region. Each authority would operate independently and be financially self-sufficient.

Regional waste management authorities would be responsible for the development and implementation of full modern regional waste management systems, including curbside collection and recycling programs and the supporting infrastructure to deliver waste materials to transfer stations or to a final disposal destination. The Strategy implementation plan released in 2007 indicated there would be three regional waste management facilities in the eastern, central and western regions as the only facilities on the island permitted to accept waste for final



Main Office, Central Regional Waste Management Facility, Norris Arm. Credit: Central Newfoundland Waste Management

disposal. Subsequently, the number of regional disposal sites was reduced to two (Norris Arm in central and Robin Hood Bay in eastern), with the western region taking the decision to transport its waste to Norris Arm. Remaining regions on the island would develop similar systems to support the transportation of waste to one of the two final disposal sites.

The Strategy is not prescriptive for Labrador and the isolated and remote areas of the province. These areas are intended to be dealt with on a localized basis, in recognition of their unique geographical and environmental challenges. The importance of these areas contributing to overall provincial waste management goals was not lost, however, as the Strategy articulated they would be required to increase waste diversion, improve waste disposal practices and eliminate incineration and open burning wherever possible.

Delivery of the Strategy is a partnership initiative involving local waste management authorities (e.g., regional service boards, municipalities), the provincial government, and the Multi-Materials Stewardship Board (MMSB). Regional boards and/or local authorities plan and deliver waste management services. Government's participation involves two departments, namely the Department of Municipal Affairs and Environment (MAE) for oversight of province-wide implementation, legislation/standards and infrastructure funding, and Service NL for compliance monitoring and enforcement. The provincial mandate of the MMSB supports waste diversion programming, public education and research.

2.2 Status of Strategy Implementation

As noted above, while the Strategy was released in 2002, it was not until 2007 that the provincial government announced a plan for implementing and financing it. Government agreed to finance major capital requirements through the federal gas tax fund and provincial municipal capital works program. Once fundamental infrastructure is established, the onus shifts to the regional service boards and other local waste management authorities manage. This includes responsibility for all related operating costs and ongoing system capital requirements (e.g., equipment replacement, new waste containment cells, and site reclamation).

Eight regional service boards on the island portion of the province are established under the **Regional Service Boards Act**. Only five boards are active currently:

- Northern Peninsula Regional Service Board, 2005
- Central Regional Service Board, 2008
- Eastern Regional Service Board, 2011
- Western Regional Service Board, 2013
- Burin Peninsula Regional Service Board, 2013
- Discovery Regional Service Board, 2013 (Bonavista Peninsula, not active)
- Coast of Bays Regional Service Board, 2015 (South Coast, not active)
- Baie Verte Peninsula-Green Bay Regional Service Board, 2018 (not active).

Labrador comprises the remaining four waste management regions, in western, central, southern and northern Labrador. No management changes have been proposed or instituted. See Attachment 2.2 for a map depicting all waste regions.

Substantial progress has been made on Strategy execution in the larger populated areas of the province. For example, many communities now offer curbside recycling and other waste diversion programs, and three materials recovery facilities at Robin Hood Bay (east), Norris Arm (central) and Corner Brook (west) are in place. In spite of the many waste diversion programs implemented and investments made, however, the rate of waste diversion has reached only 25 percent, or half of the Strategy’s provincial target.

Modern waste disposal facilities now operate at Robin Hood Bay and Norris Arm, and comprehensive waste transfer systems are in place in the three regions (i.e., east, central and west) that are sending waste to the final disposal sites. A new landfill operates in western Labrador, serving Labrador City and Wabush. As new landfills were constructed or upgraded, old ones, 170 (72%) of them, closed.



Entrance to Robin Hood Bay Landfill. Credit: City of St. John’s

Table 2.1 below highlights the progress made on the Strategy’s major goals. Originally, a total of \$150-\$200 million in capital investment was estimated as necessary to implement the full Strategy. As of March 31, 2019, \$202 million in public funds was spent.

Table 2.1 Provincial Waste Management Strategy Performance at March 31, 2019

Goal	Measured Against	Status
1. Reduce materials going to landfill by 50%	7%	25%
2. Reduce number of waste disposal sites by 80%	235	170 sites closed (72%)
3. Number of landfills eliminating open burning and/or incineration	175	149 sites (85%)
4. Phase-out unlined landfills <ul style="list-style-type: none"> • operationally closed • environmentally closed 	213	- 154 (72%) 136 (64%)
Population with access to a modern waste management system	-	83%

Source: Department of MAE

Attachment 2.1

2002 Provincial Solid Waste Management Strategy

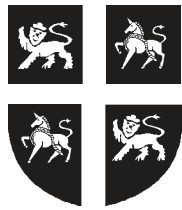




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NEWFOUNDLAND AND LABRADOR Waste Management Strategy



GOVERNMENT OF
NEWFOUNDLAND AND LABRADOR

Department of Environment

NEWFOUNDLAND AND LABRADOR
Waste Management Strategy

April 2002



MESSAGE FROM THE MINISTER



For generations, the people of our province have taken the simple solution to dealing with garbage – dump it into a landfill site or burn it. However, our current practices cannot continue. We need to move from simply dumping solid waste into landfill sites to developing long-term solutions which will benefit our environment, our communities, and our people. The process began with the public consultations on waste management conducted during the summer of 2001, and we are now about to embark on the next phase with the implementation of a Provincial Waste Management Strategy.

When the strategy is fully realized throughout Newfoundland and Labrador, the number of landfill sites will be greatly reduced, we will be diverting more of the waste actually going for disposal, and waste management sites will be operated according to up-to-date standards which minimize the impacts on our environment. While these are aggressive goals, I firmly believe they are achievable.

I extend sincere thanks to the members of the Waste Management Advisory Committee, Derm Flynn, Catherine Barrett, Jessie Bird and Priscilla Boucher, for their commitment, hard work and dedication in conducting public consultations. I also want to recognize my colleague, former Environment Minister Ralph Wiseman, whose leadership and guidance pioneered the development of this strategy.

Government is committed to addressing the waste management issues in our province. This strategy provides the framework to meet the challenge, and together, we will achieve modern waste management in Newfoundland and Labrador.

Kevin Aylward
MINISTER

EXECUTIVE SUMMARY

Each year, Newfoundlanders and Labradorians generate more than 400,000 tonnes of waste materials at a rate of approximately two kilograms per person per day. To date, the approach for handling this waste has been to simply send it to disposal to one of the 240 landfill sites throughout the province. However, long-term solutions are needed to address the challenge of effectively handling solid waste if we are to ensure the health and well-being of our communities and the protection of our environment.

Both Government and people of Newfoundland and Labrador must take responsibility for the management of our waste and to improve our waste practices. The planning and delivery of waste management is the direct responsibility of municipalities and communities, while the provincial government must provide the framework for waste management by setting policies, regulations and standards. Government recognizes it is now time to provide a new framework through the development of a provincial waste management strategy.

After conducting public consultations with the people of our province, we have developed a comprehensive, modern Provincial Waste Management Strategy. The strategy will enable us to divert 50 percent of the materials currently going to disposal by 2010, to reduce the number of waste disposal sites by 80 percent, to eliminate open burning at disposal sites by 2005 and phase out the use of incinerators by 2008, to phase out use of unlined landfill sites by 2010 and to implement full province-wide modern waste management by 2010.

The Provincial Waste Management Strategy is premised on five primary actions which will enable our province to have modern waste management. Those actions are: increasing waste diversion, establishing waste management regions, developing modern standards and technology, maximizing the economic and employment opportunities, and public education.

Government recognizes that the strategy must be implemented in a manner which successfully balances community and environmental health with economic capability. We are committed to continuing to work with communities to achieve our goals and to ensure that Newfoundland and Labrador has modern and effective waste management practices.

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INTRODUCTION

The handling of garbage – solid waste – has become an increasing concern in today's society. Effective solid waste management is a challenge for communities and governments throughout Canada, including Newfoundland and Labrador.

Each year in this province, it is estimated that Newfoundlanders and Labradorians generate more than 400,000 tonnes of waste materials a year at a rate of approximately two kilograms per person per day. This waste is sent to approximately 240 disposal sites which serve an estimated 654 communities. Many of these sites are at the end of their useful life, and there are approximately 50 aging teepee incinerators in use throughout the province.

Communities are seeing nuisance problems from poorly or improperly maintained landfill sites and concerns have been expressed that the many, unsightly dumps are not in keeping with the expectations of the province's growing tourism industry. Many of the landfill sites experience problems with uncontrolled burning at the sites, smoke, vermin, odours and excessive wind borne litter.

Waste management is the responsibility of everyone – individuals, communities, businesses, industries, and government. The planning and delivery of waste management is the direct responsibility of municipalities and communities, while the provincial government must provide the framework for waste management by setting policies, regulations and standards. Government recognizes it is now time to provide a new framework through the development of a provincial waste management strategy.

OUR ACTIONS TO DATE

Over the past several years, Government has taken steps to respond to the challenge of waste management. These actions provide the foundation for the provincial waste management strategy:

- In 1994, Government instituted a ban on disposal of untreated sewage sludge and oil contaminated soil in landfills in the eastern region, later expanding this ban to other areas of the province.
- In 1996, Government established the Multi-Materials Stewardship Board to develop, implement, and manage a variety of waste diversion programs in Newfoundland and Labrador in accordance with Government priorities.

Newfoundland and Labrador Waste Management Strategy

- In 1997, the deposit refund program for beverage containers, the first province-wide waste diversion program, was initiated. To date, this program has been successful in diverting approximately 60 per cent of the beverage containers from landfills, has led to the establishment of 37 Green Depots and has created more than 200 full and part time jobs.
- In 1997, Government established the Newfoundland and Labrador Waste Management Trust Fund. The Trust Fund provides financial assistance to aid in the development and implementation of waste management initiatives in the province. It is governed by provincial waste management regulations and administered by the Multi-Materials Stewardship Board under direction of the Minister of Environment. The principal source of funds for the Trust Fund is surplus revenues from the province's beverage container deposit refund system.
- In April 1999 and October 2000, proposals to the Trust Fund for a variety of waste management initiatives resulted in funding for education and information projects, cleanups, school recycling programs, pilot projects on waste diversion and for municipalities to investigate the practicality of regional waste management systems.

GOVERNMENT'S COMMITMENT

In the March 13, 2001 Speech from the Throne, Government articulated its intention to develop a long-term provincial strategy to address waste management and to seek the views of individuals, communities and other interested parties on that strategy. For the public consultation component, the Minister of Environment appointed an independent four-person Waste Management Advisory Committee in May 2001.

Public Consultations

Chaired by Derm Flynn, then president of the Newfoundland and Labrador Federation of Municipalities, the committee conducted public consultations throughout the province during the summer of 2001. The committee prepared a final report, *A Call to Action On Environmental Protection*, which provided an overview of the information received during the public consultations and outlined recommendations for Government on how to proceed with modern waste management. It was presented to Government in October 2001.

Newfoundland and Labrador Waste Management Strategy

The Waste Management Advisory Committee report stated that “there was a general recognition that our present ways of handling waste must change, for the health of our environment and communities.” It reported there is strong public support for developing and implementing a provincial waste management strategy. In particular, the committee identified several themes which emerged from the consultations and were used to design a provincial strategy:

- increase the amount and types of materials recycled;
- combine community resources to make waste management affordable;
- Government's commitment to modern waste management must not waver; and
- provide public information on the importance of modern waste management.

OUR GOALS

The provincial waste management strategy will enable Government to achieve the following goals:

- divert 50 percent of the materials currently going to disposal by 2010;
- reduce the number of waste disposal sites by 80 percent;
- eliminate open burning at disposal sites by 2005 and phase out the use of incinerators by 2008;
- phase out use of unlined landfill sites by 2010; and
- full province-wide modern waste management by 2010.

These goals will be achieved through five primary actions which embody the provincial waste management strategy:

1. Increase Waste Diversion
2. Establish Waste Management Regions
3. Develop Modern Standards and Technology
4. Maximize Economic and Employment Opportunities associated with waste management
5. Public Education

THE ROLE OF MULTI-MATERIALS STEWARDSHIP BOARD

The Multi-Materials Stewardship Board (MMSB) has been a key component in Government's waste management initiatives, and it will play an integral role in implementing and achieving modern waste management. Specifically, MMSB will:

- continue to develop, manage and administer waste diversion programs and negotiate stewardship agreements;
- act as the selling agent for recycled materials, in addition to beverage containers, as needed for the programs they administer directly
- continue to develop and manage provincial public information and awareness programs on waste management; and
- through the Newfoundland and Labrador Waste Management Trust Fund, continue to fund waste management information and education programs and pilot demonstration projects.

ACTION ITEM 1: INCREASE WASTE DIVERSION

WHAT IS WASTE?

Waste materials are generated from three main sources: residential, institutional, commercial and industrial, and construction and demolition.

Residential Waste: solid waste material generated, diverted or disposed from residential dwellings, primarily private homes. It is estimated that 34 percent of the solid waste in the province is generated from this source.

Institutional, commercial and industrial (ICI) waste: waste material generated, diverted or disposed of from institutional, commercial and industrial establishments such as manufacturing, transportation, retail, wholesale and warehousing, commercial (e.g., restaurants and banks) and non-commercial (e.g., health and education) services. This type of waste accounts for approximately 60 percent of the solid waste in the province.

Construction and demolition (C&D) waste: solid waste material from residential and commercial construction, renovation, demolition and land-clearing, as well as road and bridge construction waste (concrete and asphalt). Approximately six percent of the solid waste in the province comes from this source.

Most of the waste generated in Newfoundland and Labrador is classified as paper and organic. The remainder is classified as plastic, glass, and inorganic. The table below outlines the percentage of each type of waste generated in the province.

MATERIAL TYPE	PER CENT OF TOTAL WASTE
Paper	37
Organic	30
Metal	9
Plastic	8
Glass	6
Inorganic	4
Other	6

WHAT IS WASTE DIVERSION?

While waste cannot, in practical terms, be completely eliminated, the amount of waste going for disposal can and must be reduced. Many jurisdictions across Canada have adopted the proven approach of waste diversion as a method for reducing the amount of material going for disposal. Successful waste diversion removes volumes of specific types of material from the waste stream and is based on the widely accepted hierarchy of waste management: reduce, reuse, recycle, recovery, and disposal.

Reduce: decrease the amount of waste created in the first place; it can be achieved through reduction in use of once-through, disposable and limited use products, production of more durable goods, and elimination of excess packaging.

Reuse: reuse materials and products rather than discard them can displace the need for new production; for example, beverage containers, rechargeable batteries, and reusable laser-printer cartridges.

Recycle: reprocess or recycle waste materials into another usable form displaces the need for new material in production of consumer goods; for example, recycling newsprint, bond paper and cardboard can displace some of the original fibre used to make new paper products.

Recovery: gain some useful benefit (materials or energy) from waste; for example, most organic material can be broken down through decomposition to form a rich soil-like material, compost, which can be used to enrich soil or as a cover material on disturbed land.

Disposal: final placement of waste material with no economic or environmental benefits achieved.

ACHIEVING WASTE DIVERSION

Many of the materials currently treated as waste in Newfoundland and Labrador are valued elsewhere as resources and raw materials for new businesses and employment. In Nova Scotia, for example, materials such as paper, newspaper, glass, plastics, tins, and cardboard are separated at source (whether household, business, or institution), collected and either used by a business in the province or marketed outside the province. To achieve a 50 percent reduction in the amount of materials going to disposal, province-wide waste diversion programs based on the waste management hierarchy

Newfoundland and Labrador Waste Management Strategy

will be established. These programs will apply to materials from all waste sources: residential, industrial, commercial, institutional, and construction and demolition. Initially, these programs will be directed toward materials comprising a large volume of the waste generated in the province and which have an identified market or use such as paper, corrugated cardboard, newsprint and bond paper; organic material, used tires, and used oil. However, as market research continues, programs for other materials will be considered. Research will also investigate the reduction of waste entering the province in the form of packaging and transportation containers.

Government recognizes that it is important to lead by example. All departments, and institutions, Crown corporations, and agencies receiving a significant portion of their funding from the provincial government will be required to provide a waste management plan indicating procedures, programs and resources that are or will be in place to meet the waste management strategy and province-wide waste diversion policies.

THE STRATEGY

- **Disposal Bans**
In the short term, Government will implement disposal bans on tires, oil, corrugated cardboard, newsprint, bond paper, and organic material. For the long-term, Government will research the possibility of disposal bans for other materials, including household hazardous waste products.
- **Diversification Programs**
Within the next 12 months, Government, in conjunction with MMSB, will implement a program for recovery of used oil. MMSB will continue to research waste diversion programs for other materials, such as paint products.
- **Enhance Green Depots**
The system of Green Depots throughout the province provides the foundation for enhancing and expanding household waste diversion, primarily through recycling. MMSB will continue to work with the Recycling Depot Operators Association of Newfoundland and Labrador and with the Green Depots to enhance their capabilities and participation in waste diversion programs.
- **Research New Waste Diversion Programs**
MMSB will continue to be the lead agency for research and work to identify markets for waste materials and provide this information to Government and Regional Waste Management Authorities. MMSB will also continue discussions

Newfoundland and Labrador Waste Management Strategy

with other provinces, primarily the other Atlantic provinces, on inter-provincial cooperation and waste diversion programs, including associated economic opportunities.

- **Departmental Plans**

Within the next 24 months, provincial government departments and institutions, Crown corporations, and agencies will develop waste management plans in accordance with the provincial strategy.

ACTION ITEM 2: A REGIONAL APPROACH TO WASTE MANAGEMENT

WHAT IS REGIONAL WASTE MANAGEMENT?

A regional waste management system is a formal partnership among incorporated communities, Local Service Districts and unincorporated areas to provide integrated waste management services. Establishing regional waste management systems enables communities to pool resources and to accomplish together what is difficult to do individually. This approach also helps to dramatically reduce the number of waste disposal sites.

Typically, a waste management system includes the collection, diversion (reuse, recycling, recovery/composting), and disposal of the municipal waste for the communities in the region. However, each region does not necessarily have a disposal facility. The use of transfer stations, facilities for the temporary delivery and storage of waste before it is transported to a final disposal site, is common in many Canadian provinces.

In Newfoundland and Labrador, as indicated during the public consultations, communities are recognizing that modern waste management is best achieved through regional cooperation. Many communities have voluntarily combined interests to conduct preliminary feasibility studies on a regional approach to waste management, with funding from the Newfoundland and Labrador Waste Management Trust Fund. These initiatives provide a foundation for the regional component of the provincial waste management strategy.

REGIONAL WASTE MANAGEMENT SYSTEMS

To determine the number of waste management regions and the number and location of final waste disposal sites for Newfoundland and Labrador, several factors were considered: the distribution of our population; geographic distances and transportation infrastructure; capital and operating costs of waste management facilities; information on waste generation; and the experiences of the other Atlantic provinces.

To reduce the number of waste disposal sites in the province by 80 percent, 15 waste management regions will be established (see Appendix A for detailed maps). All communities in an area whether an incorporated municipality, a Local Service District, or an unincorporated community, will be part of a waste management region.

Newfoundland and Labrador Waste Management Strategy

Each regional waste management system will have both waste diversion and waste handling facilities, services and operations. These systems will provide communities in the identified regions with waste separation and collection; central composting; recyclables collection centres; specific disposal sites for construction and demolition debris and metals; and household hazardous waste management and disposal facilities.

With a focus on waste diversion, not every region will require a final waste disposal site. Residual waste will go to one of several provincial final waste disposal facilities. The regional waste management systems will transport residual waste from the region via a transfer station for disposal to the nearest final waste disposal facility. Transfer stations will be enclosed facilities with controlled access and may include other waste management activities such as recyclables sorting and storage. Residual waste may be delivered directly to the final waste disposal facility from within the host region.

The basis for operations in any given region, with or without a disposal facility, will be:

- require source separation to meet provincial waste diversion programs and the requirements of the regional authority;
- collection from individual households (i.e., curbside collection);
- delivery of materials to the regional sorting, composting or disposal facility as appropriate;
- processing and transportation of recyclables to major shipping points or markets;
- provision of practical diversion/disposal means for bulky materials and C&D materials; and
- provision of a scheduled opportunity, at least once a year, to dispose of household hazardous waste.

A Technical Advisory Committee will be established to assist communities with waste management planning. Each region will also have a coordinator to actively promote waste diversion through ongoing research into additional diversion opportunities, monitoring waste management operations, and developing and delivering public information and education programs in the region.

REGIONAL WASTE MANAGEMENT AUTHORITIES

Regional waste management systems will be designed, financed and operated by Regional Waste Management Authorities (RWMA). A RWMA will be established as a legal, incorporated entity operated by a board of directors with representation from the municipalities, Local Service Districts and unincorporated communities in the waste management region.

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A Regional Waste Management Authority will be able to:

- provide a solid waste management service, including the collection and disposal of solid waste;
- construct, acquire, establish, control, manage, and operate solid waste collection, recycling and disposal facilities;
- finance its undertakings;
- assess, charge and collect fees for services; and
- engage and pay personnel

Each RWMA will prepare for Government's approval a business plan, an operations plan and environmental assessments for the regional waste management system. Plans must include an assessment of environmental risk, an environmental management system that outlines policies and practices that will be used; a closure plan; and a regional communication and education program. Facilities must be designed to be able to meet the needs of the region for a minimum of 50 years.

ISOLATED AREAS

Given the geographic make-up of Newfoundland and Labrador, Government recognizes it is impossible for all communities to participate in a regional approach to waste management. For isolated areas, community disposal sites will remain in operation, however, emphasis will be on improving existing disposal sites and enhancing opportunities for diversion. Isolated communities will be expected to contribute to the goal of 50 percent reduction of waste sent to disposal.

As indicated during the public consultations, geographically isolated communities have a strong interest in improving waste management practices and in participating in province-wide diversion programs. Government recognizes that alternative approaches must be developed for these communities and is committed to working with isolated areas to:

- provide information and education on modern waste management;
- assist with recyclables storage and transportation assistance (financial and/or physical);
- investigate the possibility of an annual collection of white goods, scrap vehicles and other metals in isolated areas through a public/private partnership; and
- assist with development of economic and effective community composting in isolated communities.

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The waste disposal alternatives for isolated communities will be determined on a community by community basis, in order to address immediate, local environmental conditions and considerations. While the goal is to eliminate incineration as a means of disposal, Government recognizes that incineration may remain in use in isolated communities, as a last resort following waste diversion.

THE COST OF REGIONAL WASTE MANAGEMENT

Each year in Newfoundland and Labrador, approximately \$21 million is spent on waste collection and disposal. However, the investment in waste management has not kept pace with the increasing amounts and types of waste. Implementing modern waste management initially requires significant financial investment to build the necessary infrastructure. In addition, there will be significant costs to close obsolete disposal sites and equipment.

The cost of modern waste management was discussed during the public consultations. Individuals and communities recognize that implementing a modern waste management strategy will increase waste management costs. However, it is also recognized that not changing waste management practices will have even greater costs – financial and environmental.

The total capital cost of the provincial waste management strategy, phased-in over a number of years, is estimated to be \$150-\$200 million. The capital costs for new waste management infrastructure may be financed through a combination of public-private partnerships, private sector ownership and operation, and municipal, provincial, and federal cost-sharing. Operating costs will be offset through taxes, tipping fees and revenues from waste diversion.

Each region will operate financially on a stand-alone basis, with operations funded from the households, businesses, and institutions in the region through taxes, tipping fees and revenues from regional and/or provincial waste diversion programs. Waste Management Authorities may set differential tipping fees to encourage waste diversion, with higher fees for unsorted waste and low fees for recyclables that can be marketed or are part of a province-wide diversion program.

THE STRATEGY

- **Establish Regional Waste Management Systems and Final Waste Disposal Sites**
Government will immediately begin to prioritize the establishment of the 15 Regional Waste Management Systems and the final waste disposal sites. Initial focus will be those regions facing crisis situations.
- **Regional Coordinators**
As the Regional Waste Management Systems are established, regional coordinators will be hired and trained. MMSB will fund a waste management coordinator position in each waste management region for up to two years.
- **Isolated Areas**
Government will work with isolated areas to develop programs and alternatives to meet the provincial waste management goals. MMSB will also research waste disposal alternatives for isolated communities.
- **Financing Options**
Government will investigate funding options for modern waste management, including public-private partnerships, private sector ownership and operation, and cost-shared federal-provincial-municipal agreements.

ACTION ITEM 3: MODERN STANDARDS AND TECHNOLOGY

Even with maximum waste diversion, there will always be a need for waste disposal. However, the goal of modern waste management is to reduce the number of waste disposal sites, and to ensure that those sites are operated in a manner that minimizes the environmental impacts.

Government will provide the standards and regulations to govern the design, construction and operation of waste management systems and facilities. Incineration and unlined landfill sites will not be acceptable means of disposal, except in those isolated areas where no alternatives exist. The new standards and regulations will be based on the experiences of the Atlantic provinces in combination with research and technological advancements in waste disposal. All new waste disposal sites must operate according to those standards and regulations by 2010.

Government will finalize the standards, guidelines, and regulations within the next six to 12 months. For planning purposes the minimum requirements for new facilities are outlined below.

Landfill Sites and Transfer Stations:

- an approved site development and operation plan, including an environmental management system and a closure plan;
- a properly designed and constructed impermeable liner system with a leachate collection system, and an approved leachate management (disposal or treatment) system;
- trained supervisory personnel on site during operating hours;
- an approved plan to prevent the disposal of hazardous waste;
- daily cover of waste;
- no burning; and
- adequate insurance and performance bond (if applicable).

Composting Facility (In-vessel Format):

- operations are within enclosed buildings;
- composting facility must be supported and operated according to an approved operations plan including an environmental management plan and closure plan;
- receiving, tipping and composting areas will be within an enclosed structure, on impermeable pads and have odour control systems;
- curing areas may be enclosed or open but in all cases, underlain by an impermeable pad; and
- all areas will have leachate management, surface water management, and groundwater management systems.

Composting Facility (Open Windrow/Static Piles Format):

- operation typically includes leaf, yard waste and brush;
- composting facility must be supported and operated according to an approved operations plan including an environmental management plan and closure plan;
- the facility will be located will be a minimum distance from any water course or water body, fresh or salt water;
- receiving, tipping, composting and curing areas will be underlain by an impermeable surface;
- all parts and areas of the composting operation will have leachate, groundwater and surface water management systems; and
- measures must be implemented to minimize or prevent odours becoming a nuisance issue.

Construction and Demolition/Bulky Items Diversion/Disposal Site:

- an approved site development and operation plan, including an environmental management system and a closure plan;
- trained supervisory personnel on site during operating hours;
- a properly designed and constructed internal drainage system;
- an approved monitoring plan;
- adequate storage area for recyclable materials;
- an approved plan to prevent the disposal of hazardous waste; and
- adequate insurance and performance bond (if applicable).

Site Closure

- an assessment of rodent populations and the development of an appropriate control program;
- cleanup of all litter and wind blown debris;
- blocking of all vehicle and road access to the site;
- removal, for recycling, all metals and residual bulk waste;
- grading and compacting of site in preparation for final capping;
- construction of drainage ditches as required;
- all refuse to be covered with a minimum of one metre of fill of low permeability and graded to prevent ponding or seepage and to encourage surface drainage; and
- a plan is to be provided to monitor leachate migration and mitigate any negative effects.

RESEARCH OPPORTUNITIES

For the most part, solutions to the province's waste management problems can be readily identified based on modern environmental and engineering approaches and on the experience in other jurisdictions. There are, however, solutions required for problems resulting from Newfoundland and Labrador's geology and geography and low population densities. For example, much of the land mass has limited overburden suited for use as cover material for landfills. There is a pressing need for new technologies to meet the needs of such areas.

The treatment of leachate from either new regional landfills or from existing sites that are closed during the regionalization process is also an area that requires research to develop optimal solutions for this province. In addition, waste diversion, such as recycling and composting, in areas of low population require applied research to yield economically viable solutions.

Both Memorial University of Newfoundland and the environmental industry have a role to play in developing solutions suited to our needs. Such solutions may also be applicable in other areas with similar constraints and therefore export opportunities may result.

Government will encourage and support research into appropriate solutions for the province's waste management problems.

THE STRATEGY

- **Finalize Waste Disposal Standards and Regulations**
Government will finalize waste management standards and regulations within the next six to 12 months. Government will also conduct periodic reviews of the standards and regulations as necessary.
- **Research New Disposal Technologies**
Government will encourage and support the research, development and use of new disposal technologies.
- **Develop Standards for Closing Landfill Sites**
Government develop standards for the closure and clean-up of existing landfill sites within the next 12 to 18 months.

ACTION ITEM 4: MAXIMIZE ECONOMIC AND EMPLOYMENT OPPORTUNITIES

In recent years, waste management initiatives have been a source of economic growth in all provinces, creating thousands of jobs nationally. Modern waste management creates direct employment and stimulates the development of new businesses. Economic opportunities associated with waste management include materials collection and transportation, processing and marketing recyclable materials, the design and operation of waste management facilities, and the production of new products from reclaimed materials.

In Newfoundland and Labrador, it is estimated 120 people are currently employed in local government waste management. There are 42 waste management businesses operating in the province, employing 345 full and part-time employees. In addition, the beverage container deposit refund program directly supports the operation of 37 Green Depots, 26 satellite depots, five mobile units and more than 200 full and part time jobs. The provincial waste management strategy will create more employment opportunities and encourage economic development.

A goal of the waste management strategy is to dramatically reduce the number of disposal sites and to build and operate modern waste management facilities. The need for new facilities will create employment and economic opportunities throughout the province. In addition, there will be new business and employment opportunities associated with the wide range of services needed to support waste management operations, including hazardous waste disposal, environmental monitoring and testing, and development and delivery of public information programs.

Government will work to maximize the economic and employment benefits of waste management. The provincial waste management strategy will create direct long-term employment in each of the 15 regional waste management systems. Approximately 20 to 30 people will be employed in each region with the majority of jobs involved in the operation of regional waste management facilities. When fully implemented, the waste management strategy will have created approximately 450 direct jobs throughout Newfoundland and Labrador.

In addition to direct operation jobs, the waste management strategy will create economic and business opportunities in the areas of training, operational support, and research and development. There is also considerable opportunity for the private sector to become involved in the development and implementation of the strategy either directly or through public private partnering. Government will work in partnership with business,

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industry associations, post-secondary institutions, and the federal government to initiate and support directed research and development into value added products from diverted materials through funding, and pilot and/or demonstration projects.

THE STRATEGY

- **Maximize Economic and Employment Benefits**
Government will work to maximize economic and employment benefits with a focus on stimulating regional benefits. In addition, Government will develop requirements to ensure that waste management incorporates a Newfoundland and Labrador content.

ACTION ITEM 5: PUBLIC EDUCATION

Achieving modern, provincial waste management will require a significant change in attitude among Newfoundlanders and Labradorians with regard to the handling of waste. The response to the recent public consultations indicate the people of the province recognize that current waste management practices must change. However, it was also emphasized that a strong and ongoing information and education program is required to achieve the necessary changes in attitude and behaviour toward waste management.

Government recognizes individuals, community and municipal leaders, business, and institutions must be provided with information to understand the concept, goals and actions of modern waste management. MMSB will develop and manage a province-wide public education campaign, expanding on its current programs and activities. Regional Waste Management Authorities will also be required to develop and implement public information plans.

As the strategy is implemented, all stewardship agreements negotiated under the strategy must include an educational component. In addition, Government agencies will incorporate waste management information into publications and field investigations as appropriate.

THE STRATEGY

- **Develop Public Education Campaign**
MMSB will develop a provincial public education campaign. In addition, MMSB in conjunction with the regional coordinators will develop regional public education campaigns.



CONCLUSION

The current approach to waste management in Newfoundland and Labrador, disposing of unsorted waste into a landfill site, must change. Modern, provincial waste management is necessary and Government is committed to implementing the strategy.

Our goals for waste management are aggressive, yet achievable. As the provincial waste management strategy is implemented, we will divert 50 percent of the materials going to disposal, the number of waste disposal sites will be reduced, and open burning, incineration, and the use of unlined landfill sites will be phased out.

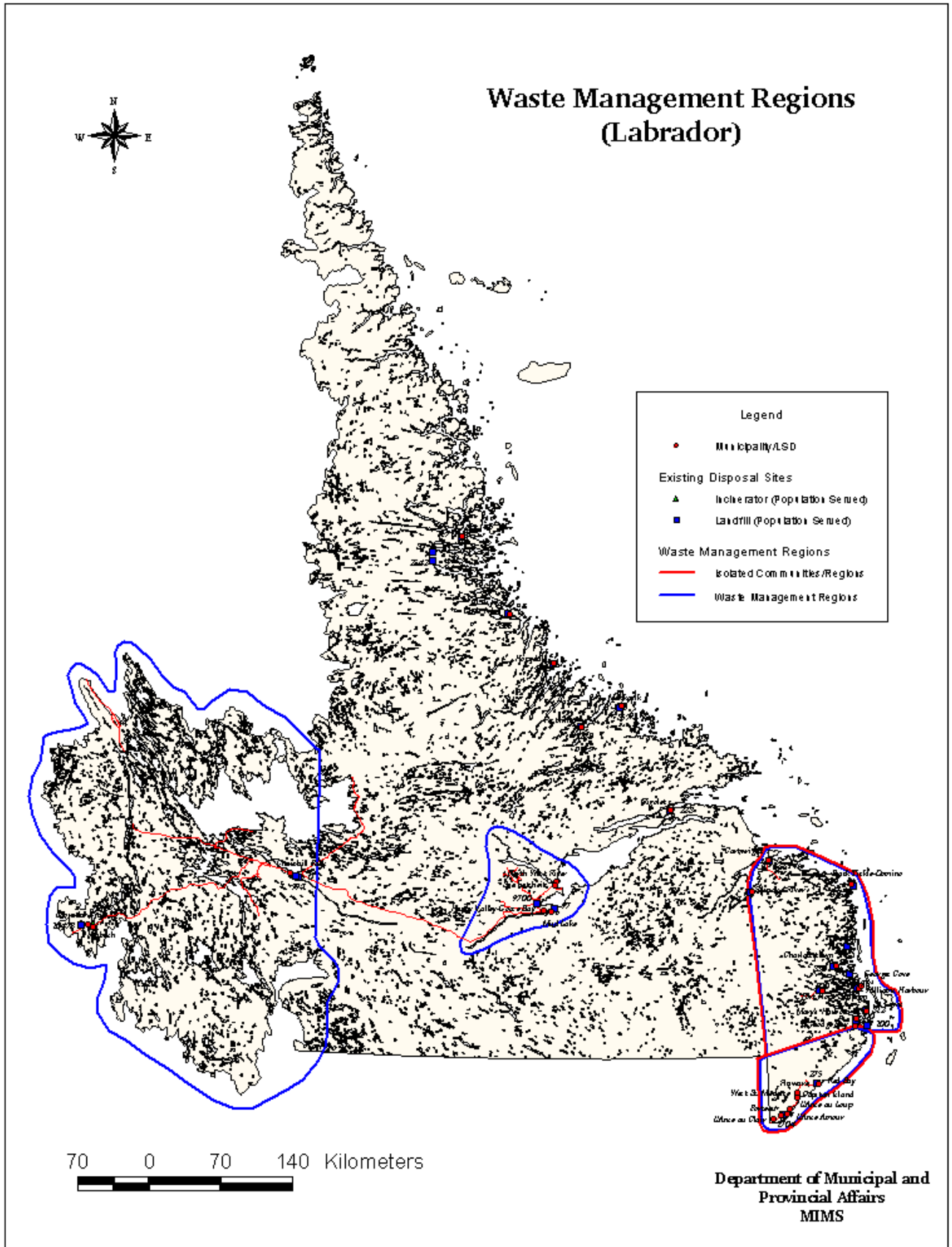
Government is committed to achieving these goals. It will be accomplished through increasing waste diversion, establishing waste management regions, developing modern standards and technology, maximizing the economic and employment opportunities, and public education.

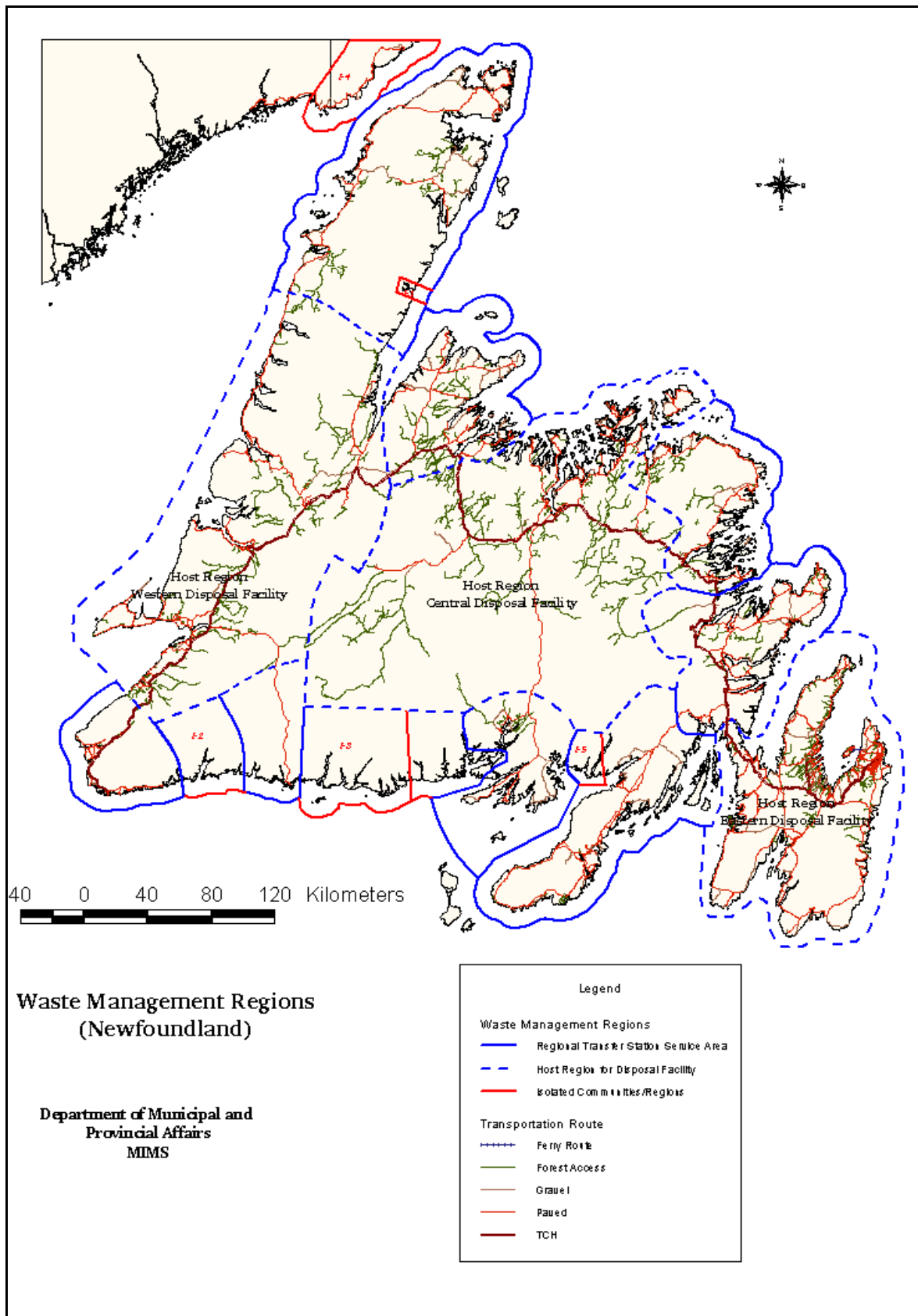
All Newfoundlanders and Labradorians have a role to play in waste management. While Government is responsible for implementing a provincial waste management strategy and for setting the standards, guidelines and policies for waste management, it is the people who will ultimately implement modern waste management by changing attitudes and behaviours towards the handling of solid waste.

APPENDIX I

(See Next Page)

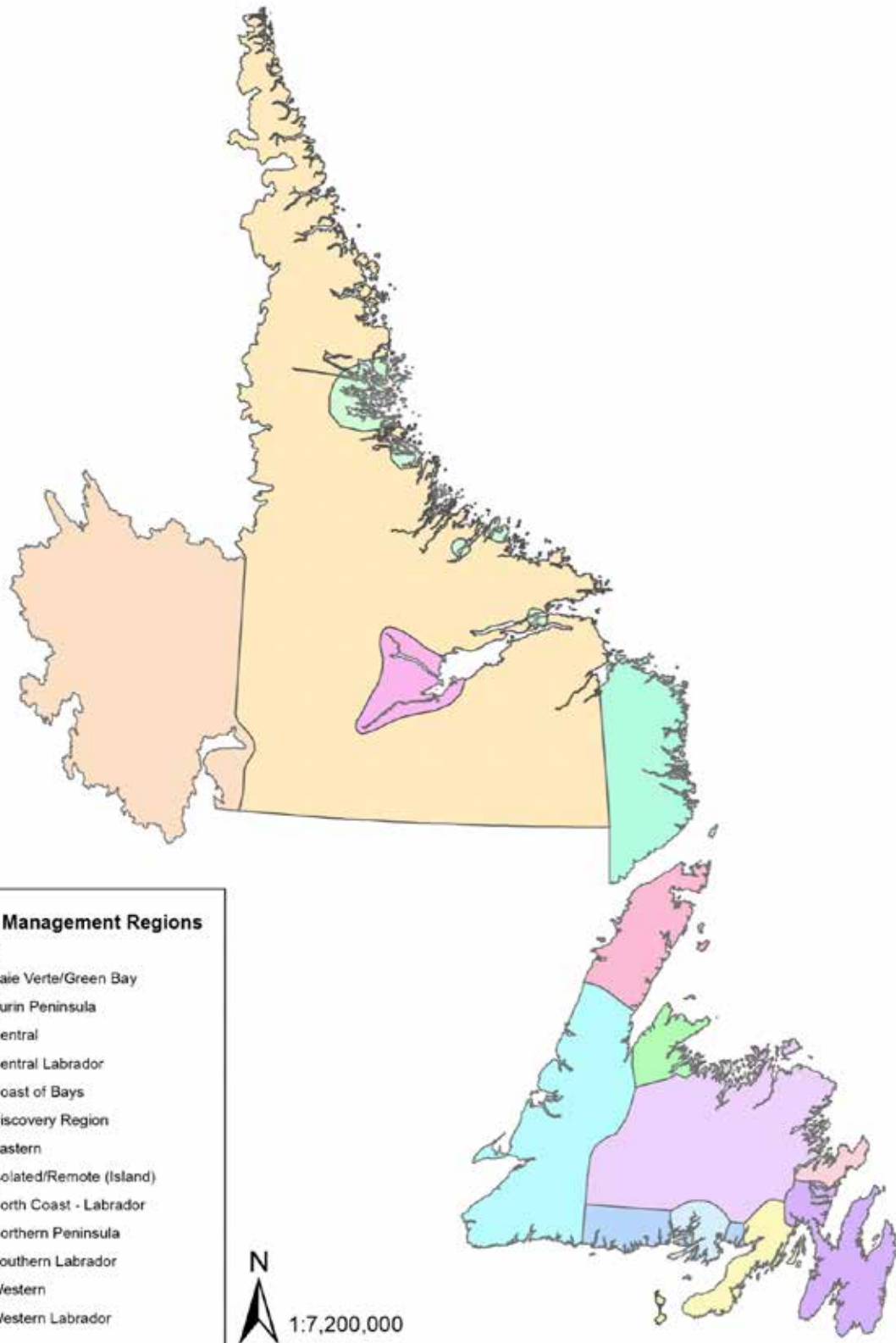






Attachment 2.2

Map and Description of Waste Management Regions in Newfoundland and Labrador



Eight (8) Regions on the Island:

1. Northern Peninsula Region

The Northern Peninsula Waste Management Region spans from River of Ponds in the west to Englee in the east and extends to Quirpon in the north.

2. Western Region

The Western Newfoundland Waste Management Region spans from Bellburns in the north to Ramea in the south and extends east to White Bay.

3. Baie Verte-Green Bay Region

The Baie Verte-Green Bay Waste Management Region includes all communities on the Baie Verte Peninsula and in Green Bay South, spanning from Westport in the west to Brighton in the east. This region also includes Little Bay Islands.

4. Coast of Bays Region

The Coast of Bays Waste Management Region includes the Connaigre Peninsula, spanning from the Head of Bay d'Espoir in the north to Harbour Breton in the south. This region also includes the communities of McCallum, Gaultois and Rencontre East.

5. Burin Peninsula Region

The Burin Peninsula Waste Management Region spans from Grand le Pierre and Monkstown in the north to Point May and Lamaline in the south.

6. Central Region

The Central Newfoundland Waste Management Region spans from Buchans in the west to Terra Nova National Park in the east and extends north to Twillingate. This region also includes Change Islands and Fogo Island.

7. Discovery Region

The Discovery Waste Management Region includes the entire Bonavista Peninsula, spanning from Port Blandford in the west to the Town of Bonavista in the east.

8. Eastern Region

The Eastern Newfoundland Waste Management Region includes the Avalon Peninsula and all communities from Whitbourne to Clarenville. This region also includes all communities from Burgoyne's Cove to Swift Current as well as Random Island.

Four (4) Regions in Labrador:

1. Western Labrador Region

The Western Labrador Waste Management Region includes all communities in the western area of Labrador including the towns of Labrador City and Wabush.

2. Central Labrador Region

The Central Labrador Waste Management Region includes the communities of Happy Valley – Goose Bay, Mud Lake, North West River and Sheshatshiu.

3. Northern Labrador Region

The Northern Labrador Waste Management Region includes the north coast of Labrador, spanning from Rigolet in the south to Nain in the north.

4. Southern Labrador Region

The Southern Labrador Waste Management Region includes the southeast coast of Labrador, spanning from L'Anse au Clair in the south to Cartwright in the north.



CHAPTER 3

WHAT WE HEARD FROM CONSULTATIONS

3.1 Overview

Given the diversity of interests associated with waste management, a comprehensive public and stakeholder engagement strategy was employed.

The review process commenced with detailed briefings with the provincial departments of Municipal Affairs and Environment (MAE) and Service NL, and the Multi-Materials Stewardship Board (MMSB). Extensive and ongoing dialogue continued throughout the review period.

Site visits occurred at many landfills throughout the province as well as the three material recovery facilities located in St. John's, Norris Arm and Corner Brook. Meetings with the five established regional service boards on the island portion of the province and the major municipalities in Labrador also occurred. In many regions of the province without functioning regional service boards, meetings and discussions were held with representatives of local municipalities and waste management committees. Outreach to indigenous groups located in Labrador and at Conne River occurred. Supplementing this outreach was participation in several provincial, regional or sector forums hosted by Municipalities Newfoundland and Labrador, Association of Municipal Professional Administrators, MMSB and the Newfoundland and Labrador Environmental Industry Association.



Regional municipal meeting in Baie Verte

In addition to the above-noted activities, the public and local governments, stakeholder and business groups had an opportunity to provide written input through a 12+ week online consultation launched on June 26, 2019 through the provincial government's portal, engageNL.ca.

A Discussion Guide with Questionnaire was used for the public consultation. The process was widely promoted. The consultation documentation was distributed through such activities as a government news release, posting on the MAE website, direct circulation to every municipality, local service district, and unincorporated community with addresses on file with MAE, and emailing to all indigenous governments and over 20 stakeholder organizations.



Ann Marie Hann participating in Municipalities Newfoundland and Labrador Regional Forum

A summary of the feedback received during the consultation phase is presented below in two parts: Public Questionnaire Results and Stakeholder Submissions and Feedback.

3.2 Public Questionnaire Results

Participant Profiles

The public questionnaire received 107 responses. The following are the characteristics of the respondents:

- Eighty participants (75%) are private citizens; eighteen (17%) are local government or waste management authorities, six are business owners (6%), two are non-profit organizations (2%) and one respondent (1%) is classified as "Other."
- Of the 80 private citizens:
 - Thirty-seven (46%) are between the ages of 35-54 and twenty-one (26%) are between the ages of 55-64. Twelve (15%) are ages 18-34 and ten (13%) are over 65 years of age.
 - Forty-five (56%) respondents are employed full time. Nineteen (23%) are retired and six (8%) employed part-time. Two (3%) are self-employed, one (1%) unemployed, one (1%) a student and six (8%) classified as "Other."
 - Forty-four (55%) have 1-2 people living in the residence, while thirty-one (39%) have 3-4 people, and five (6%) have over five.

- Ninety-two participants (85%) live in either the Western waste management region (47) or Eastern region (45). Seven (7%) are from the Central region, three (3%) from the Northern Peninsula, two (2%) from Baie-Verte Peninsula-Green Bay, and one each from the Discovery and Coast of Bays regions and Labrador.
- Figures 3.1 and 3.2 indicate the type of communities where respondents reside:

Figure 3.1 Population of Community

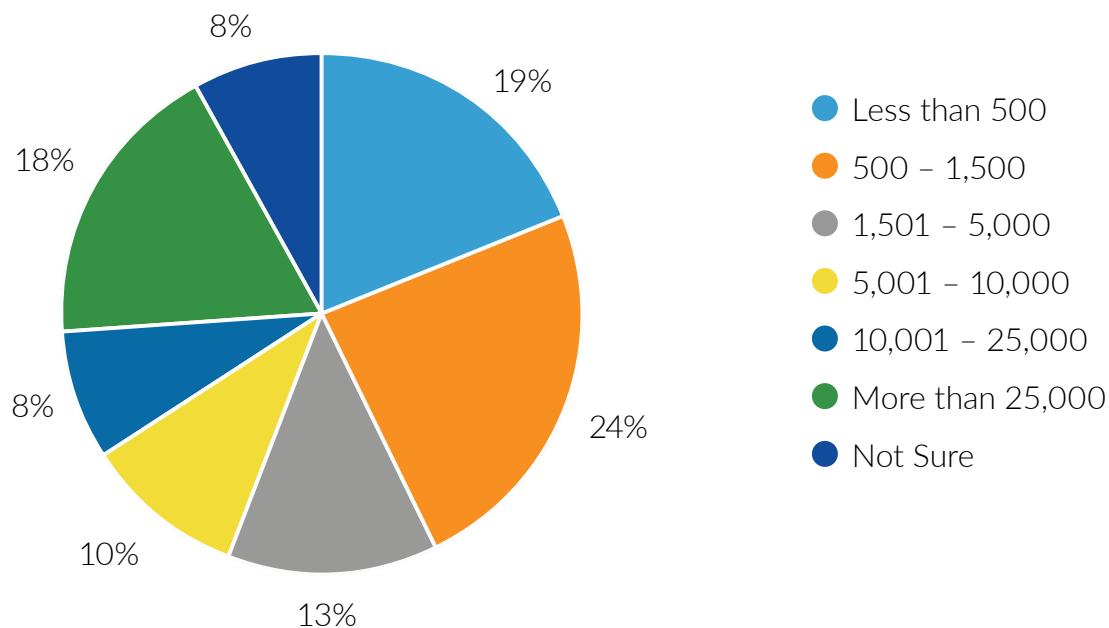
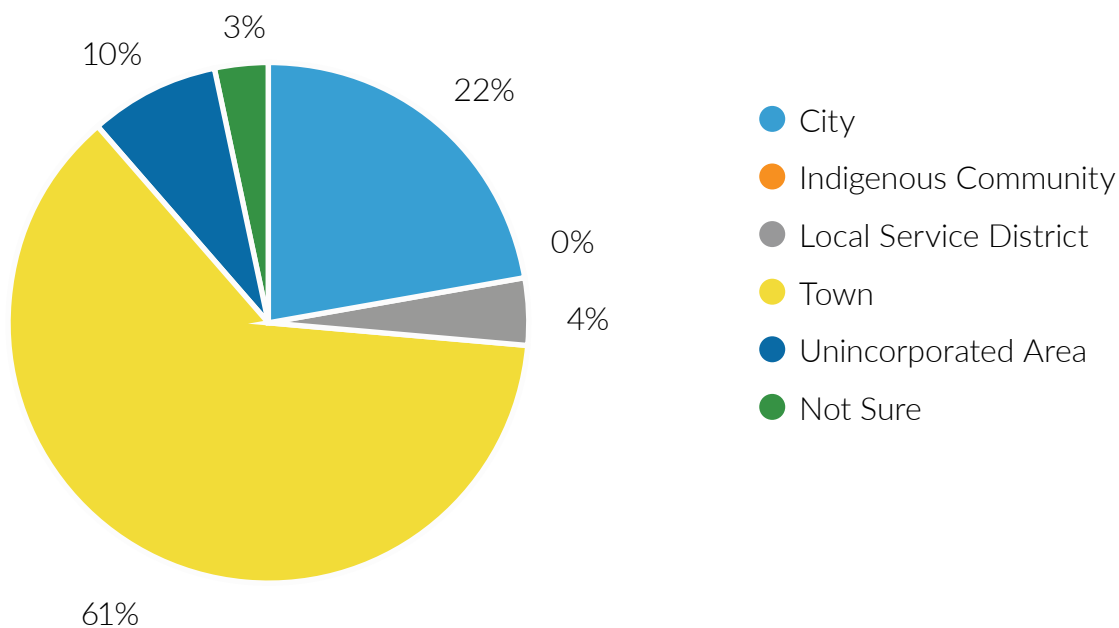


Figure 3.2 Community Designation



Questionnaire Responses

A copy of the questionnaire is contained in Attachment 3.1. In addition to asking for responses to specific questions, there was opportunity to expand on many of the answers, on things we might have missed, or anything additional that people wanted to add. Below is a summary of the feedback.

1. Satisfaction with Current Recycling Programs

While many respondents are generally satisfied with recycling programs in their communities, for many there is need for improvement. Forty-five respondents (42%) are very or moderately satisfied with current recycling programs. Eighteen (17%) are neutral and forty-four (41%) are slightly satisfied or not at all satisfied. Of the latter, 57% are from the western region and 30% from the eastern region.

2. Making Recycling Mandatory

Eighty-seven respondents (81%) support mandatory recycling. Ten (9%) are neutral on the question and another ten respondents either support slightly or not at all making recycling mandatory. Of the six business owners responding, only one strongly opposes mandatory recycling. Of the eight respondents not supportive of this proposal, four are from the eastern region and four from the western region.

3. Implementing an Industry-Led Program for Packaging and Printed Paper

There is overwhelming support for an industry-led program dealing with packaging and printed paper waste. Seventy-eight participants (73%) feel industry should finance curbside recycling programs for packaging and printed paper waste. Nine respondents (8%) oppose and twenty (19%) are unsure.

A small number of respondents would support such a program if cost effective and affordable; another few did not support the proposal outright due to financial concerns. Several respondents also note the importance of reducing waste from the start and not having to deal with the residual later.

4. Organics and Composting

A. Importance of Keeping Organic Waste Out of Landfills

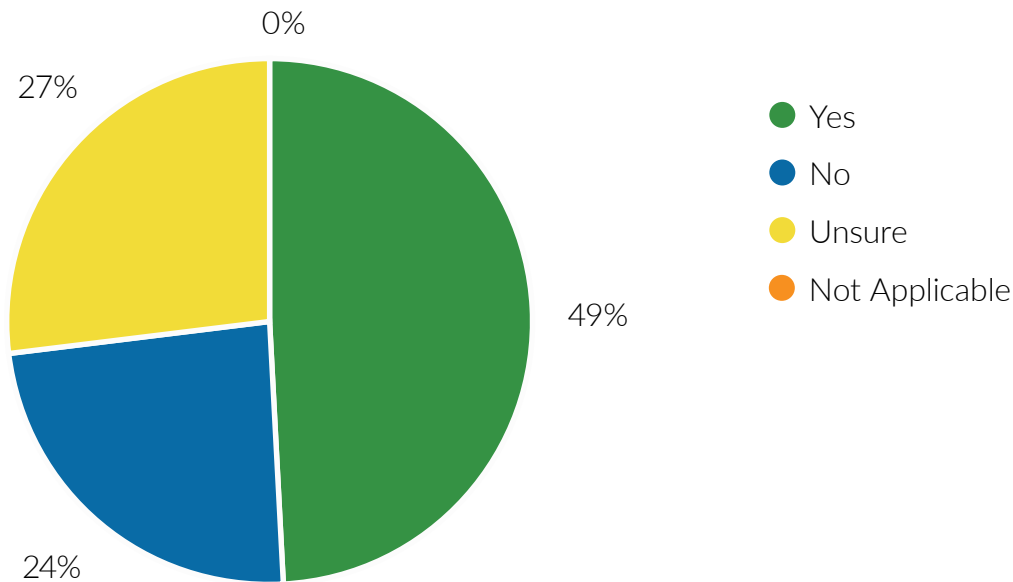
A high majority of respondents agree keeping organic waste out of landfills is important. Seventy-nine respondents (74%) think it is very important or moderately important. Thirteen (12%) are neutral and fifteen (14%) feel it is slightly or not at all important. The majority of these latter respondents live in the western region.

B. Support for Organics Diversion and Composting Programs

As indicated in Figure 3.3 below, almost one-half of respondents support introducing organic waste diversion and composting programs. Twenty-seven percent are unsure.

The 26 respondents not supportive of such programs split equally between the eastern and western regions. The two reasons cited most are the costs and the need to address current waste management issues before introducing major new programs.

Figure 3.3 Support for Organic Waste Composting



5. How to Increase Waste Diversion in the Industrial, Commercial and Institutional (ICI) and Construction, Renovation and Demolition (CRD) Sectors

Oft repeated suggestions on how to improve waste diversion in the ICI and CRD sectors include:

- providing financial incentives for businesses, including reduced waste management fees, tax incentives and increased fines for non-compliance;
- implementing mandatory recycling; some respondents qualify their support to indicate recycling only those materials where end markets exist;
- mandating full life cycle responsibility for all waste in the industrial and commercial supply chain;
- creating opportunities for reuse of discarded materials; and,
- engaging industry to identify economically valuable materials and end markets.

6. Regional Policy

A. Transporting Waste to Designated Landfills

Thirty-six participants (33%) support transporting waste outside their region to a designated modern landfill on the island. Fifty-one persons (48%) do not. The remainder (19%) are unsure.

Those in support note the environmental benefits of disposing of waste in a modern system, but caution



Delivering recyclable materials to Scotia Recycling facility, Corner Brook

about the increased greenhouse gas emissions of transporting waste long distances. Those opposing the transportation of waste worry about the high cost, environmental effects from additional emissions and the potential for increased littering and illegal dumping of waste by those trying to avoid the associated higher fees.

B. Need for Different Waste Management Approach in Labrador

Fifty-two respondents (48%) feel a different approach to waste management is warranted for Labrador compared to the island portion of the province. Twenty-one (20%) suggest there is no need to differentiate between areas of the province, while thirty-four (32%) are unsure.

A common theme in the supplementary commentary provided by respondents suggests that region-centric approaches to waste management makes practical sense to the extent there are unique challenges, such as sparse populations, large geography, weather, and/or lack of year round ferry and/or road access. At the same time, some question why larger urban centres of Labrador, such as Labrador West (Labrador City and Wabush) and Happy Valley-Goose Bay are not held to the same landfill environmental standard as municipalities and communities on the island.

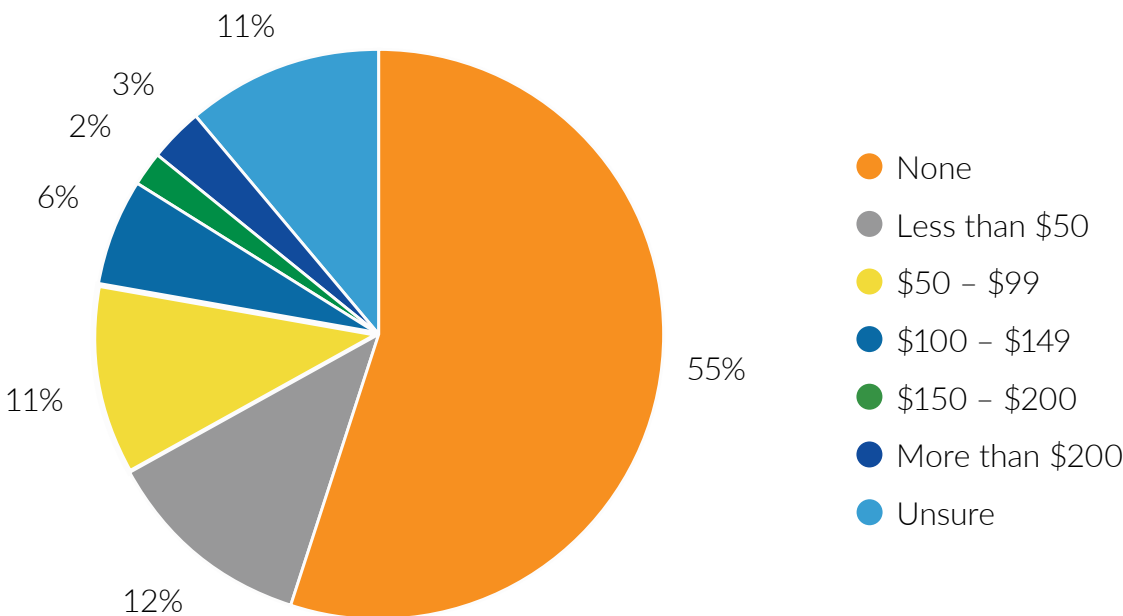
7. Waste Management Fees

Seventy-nine (75%) respondents do not know the amount of annual household fee they pay for waste management. This is largely due to the cost being included as part of the overall annual property tax assessment and not specifically itemized. The remaining answers are mixed (and not always accurate).

8. Range of Household Fee Increases Acceptable

Although respondents generally want to see waste management improved in their region and the province, their willingness to pay for improvements varies, with a slight majority, 55%, unwilling to accept any incremental increase in their annual household fee. Another 12% would be prepared less than \$50.

Figure 3.4 Range of Household Fee Increases Acceptable



9. Setting Consistent Fees For Everyone

The responses to this question indicate that fifty-three respondents (50%) feel a consistent waste management fee should apply across all regions of the province. Forty (37%) do not agree, and fourteen (13%) are unsure.

A common theme from participants supporting the idea of consistency includes recognition of the waste management strategy as a “provincial” strategy, with everyone contributing fairly towards the costs. Additionally, respondents suggest that communities not be penalized financially for being located further from a landfill than others. Those who disagree with a consistent provincial fee proffer that, if regions are supposed to be self-sustaining, as per the Strategy, then property owners should pay only the actual costs for regional services used.

10. Communities Opting In or out of Regional Services

Responses split almost evenly on whether communities should have a choice to be part of a regional waste management system. Fifty-one respondents (48%) suggest communities should have a choice. Forty-eight (45%) say they should not, and eight (7%) are unsure.

Responses giving communities a choice to opt out of a regional service were wide-ranging, and many addressed the specific issue of services and fees charged to cabin owners, who want a choice in whether or not to receive services.

Separating out the cabin-specific responses, remaining respondents who want to see all communities participate in a regional service focus on the lost financial benefits for all communities from non-consolidation of services, and the lack of consistency of services throughout the region. Other respondents feel it is appropriate for communities to have the discretion if they can provide their own services at acceptable standards or deliver the same services more economically than regional service boards. They also suggest accommodation should be made for circumstances unique to individual communities.

11. Residential Properties Situated on Unserviced Roads in Unincorporated Communities

A. Mandatory Services or Not

A majority of respondents, sixty-three (59%), support the premise that cabin owners can manage their own waste (by bringing it back to their primary residences for disposal), and thus, should not have to pay fees on two properties. Twenty-nine participants (27%) have a contrary view, suggesting all property owners, whether primary or secondary residences, participate like everyone else. Fifteen (14%) respondents were unsure what position to take on the matter.

B. Need for a Provincial Cabin Policy

The majority of respondents, seventy-one (66%), support having a provincial policy governing all residential properties situated on unserviced roads in unincorporated areas. Twenty-one (20%) suggest a provincial policy is unwarranted, as cabin owners are capable of handling their own waste responsibly. Fifteen (14%) are unsure.

C. Fees

If regional service boards provide waste management services on unserviced roads in unincorporated areas, should cabin owners:

Be required to pay the same fee as all residents living in the region regardless whether it is their secondary residence?	Yes - 20%
Be able to opt in or out of the services if it is their secondary residence?	Yes - 35%
Pay a reduced fee for part-time and seasonal occupancy of a secondary residence?	Yes - 30%
Other	14%
Unsure	1%

Under the “Other” response, the most common idea offered is for regional service boards to implement a user pay system, whereby property owners pay for services based on the amount of waste collected from their residences.

12. Environmental Standards for Rural and Remote Areas

Generally, responses split on whether special consideration should be given to rural and remote areas when it comes to environmental requirements related to waste. Forty-nine (46%) say the same standards should be applied provincially regardless of location, while 45 (42%) indicate different standards are warranted. Thirteen (12%) are not sure.

Three prominent themes from those suggesting the same standards apply provincially include: (a) only the operational aspects of handling waste management in rural areas need vary, not the bottom-line policy objectives; (b) people generate waste regardless where they live and waste must be disposed in the same responsible way; and (c) waste management affects everyone. For those with a contrary view, the consistent theme was to provide special consideration to any areas especially difficult to service.

13. Innovation

The majority of respondents (64%) think more should be done on innovation. Only five respondents (5%) feel no further action is required, and 33 (31%) are unsure.

Common replies include the need for more education on the waste management system; increased engagement between government and the private sector on solving challenges, such as increasing the economic value of waste, supporting local uses and/or business opportunities for recyclable materials, and reducing costs.

14. Increasing Economic Benefits from the Waste Sector

Several respondents believe there is considerable opportunity for economic benefit from the waste management sector. Many submissions note the increased business and employment opportunities from new waste diversion programs and the local processing of recyclable materials. Further, some submissions note that an increased focus on research and development and innovation offers potential to resolve many waste management problems. A few respondents, however, worry about the increase in fees associated with new programs and services.



Meeting with representatives of the Newfoundland and Labrador Environmental Industry Association

15. Public Education

There is high agreement on the importance of public education and awareness, and the need to do more. One item repeated many times is the need to educate children from a very young age and strengthening the school curriculum accordingly. Several respondents indicate they want more program-specific information (e.g., rules on recycling, how to compost), and want to know whom to contact if they have problems. More use of social media is indicated, as is the importance of continuing traditional methods of communication (e.g., TV, radio, print). More direct outreach to residents and communities is desirable as well (e.g., town halls).

16. Opportunities for Greater Cooperation across Communities/Regions

Respondents suggest municipalities and regional service boards should liaise more with each other and with private industry to determine what waste materials are economically important and to create partnerships to secure supply and common markets. Respondents feel municipal leaders need to be open to the idea of working collaboratively on regional versus local solutions. A number of respondents note common services and fees across regions could bring people together in support of the Strategy. A couple of respondents go so far as to suggest that a single provincial waste management board with regional representation would bring greater cooperation. Another respondent disagrees, suggesting that regional cooperation will improve when all regions finally have active regional services boards in place.



Multi-Materials Stewardship Board Waste Management Regional Forum, 2019

17. Additional Policy, Regulation or Legislation Suggestions

Most responses reiterate comments captured earlier in the questionnaire. Two additional proposals provided under this question include: (a) changing the structure of regional service boards from elected representatives to non-elected representatives, with knowledge of waste management and other critical skills; and (b) making regional boards more accountable.

18. Future Strategy Direction

A. Continued Relevance of 2002 Waste Management Strategy

Eleven respondents (10%) feel the Strategy is still appropriate and thirty-six (34%) feel it is not. Forty-six (43%) feel some of it is relevant and fourteen (13%) are unsure.

Many comments focus on the cost of the Strategy, that it is either too expensive to implement or not financially sustainable. The value derived from the millions spent to date is questionable for



some. Others suggest the Strategy needs to be updated/modernized (e.g. incorporate modern waste technologies, operations). Some respondents from the western region question why there is no landfill in the western region. Notwithstanding these views, many comments did acknowledge the importance of having modern waste management programs.

B. Top Waste Management Priorities

Answers varied widely here, but the frequently comments (in no particular order) include:

- controlling costs (e.g., reasonable fees; transporting waste shorter distances in some regions or provide subsidies);
- increasing education, awareness and communication;
- implementing more waste diversion programs in all segments, including business and industrial;
- increasing enforcement and fines; and,
- supporting innovation.

3.3 Additional Stakeholder Submissions and Feedback

In addition to the online questionnaire, 20 written submissions were received - from the five active regional services boards on the island, six local governments (e.g., municipalities), two businesses and one business association, an educational institution and the general public (five submissions). Further feedback came from discussions at various stakeholder forums and follow-up conversations, and meetings held with representatives of regional and local waste management authorities across the province throughout the course of this review.

Issues and comments are many and varied. The following summary reflects the main themes heard.

A. Waste Prevention

Feedback generally acknowledges this province produces too much waste, and that a myriad of initiatives at the federal, provincial and local levels are required to improve performance in this area.

B. Waste Diversion

Recycling

- There is a high level of support for recycling and making it mandatory;
- An important distinction for some is that mandatory recycling only occur where end markets exist for the recyclable materials.
- Enforcement is key to mandatory recycling programs.
- Noted is the cost of processing and transporting recyclable materials, especially for remote and isolated areas, parts of Labrador and communities distant from waste disposal facilities;
- A few stakeholders raise the issue of the deposit fee applicable on beverage containers, suggesting the fee increase to \$0.10 (from \$0.08) to align with the other Atlantic provinces.

Industry Program for Packaging and Printed Paper (PPP)

- All but one submission express support for a PPP waste diversion program that places responsibility for the waste materials with producers and consumers.
- While support for a PPP program is widespread, for many it has to be affordable.
- One business association indicates the program will be uneconomical for many small and mid-sized businesses.

Organic Waste Management

- There is overwhelming recognition of the importance of managing organic waste in meeting the goals of the provincial Strategy and mitigating emissions and other environmental impacts from landfills.
- This notwithstanding, many caution organics management can be very costly.
- Positions diverge on how to proceed with organics. Some stakeholders want a community-level approach, while others proffer that larger regional or provincial programs would be more effective. On this latter point, several participants suggest the private sector should lead such projects.
- Regardless of approach, stakeholders indicate that comprehensive education programs and full consultation with residents and communities will be critical.



Composting at Burin landfill site. Credit: Burin Peninsula Regional Service Board

Industrial, Commercial and Institutional (ICI) Waste

- According to most feedback, there is a significant missed opportunity for increasing waste diversion by ignoring this sector.
- Some participants question why separation of municipal waste is required in many areas of the province, but ICI waste gets a pass.
- There is general agreement on the need for better management of ICI waste by federal and provincial government departments and agencies.
- Several submissions describe efforts employed to manage ICI waste in different areas of the province, such as reduced tipping fees and mandatory curbside separation programs.
- For many participants, consultation, education and enforcement will be key activities in addressing such a major waste stream.

Construction, Renovation and Demolition (CRD) Waste

- As with the ICI sector, stakeholders want to see more done to divert CRD waste from disposal in landfills.
- At the same time, there is recognition that consultation with the CRD industry is required to isolate marketable opportunities and economical approaches.

C. Regional Waste Management

- There is plenty of feedback on issues regarding waste management.
- A common theme suggests there be a consistent level of service provincially.
- This is not to say that the majority also agree that a consistent fee should be applied provincially. Considerable feedback suggests fees cannot be one-size-fits-all. Instead, fees should reflect the actual costs of service delivery and apply consistently to all who avail of those services.
- According to one business association, 69% of its members say it is too costly at present to recycle and dispose of waste.
- Regions designated to transport waste long distances or have transportation challenges (e.g., poor road or weather conditions) raise concern about the high costs and practicalities of implementing a regional waste management approach, suggesting instead that additional regional landfills may be more environmentally appropriate, economically viable and support local employment.
- Some residents living in regions that have implemented new waste management programs and services consider costs too high.
- Many communities have major operational and environmental issues with their local landfills and recognize the status quo cannot continue.
- A common view among stakeholders is that indiscriminate dumping of waste will increase unless fees are affordable and adequate penalties and enforcement applied.
- With one exception, all active regional service boards agree that communities should not be able to opt-out of a regional service, as the collective cooperation and participation of all local communities is crucial to the success of the overall regional waste management system. The one board opposing this view suggest communities have the right to decide for themselves.
- There is a very high level of agreement among regional service boards that responsibility for the management of waste for residential properties situated on unserviced roads in unincorporated areas (e.g., cabins) should reside with the individual boards as opposed to regulating the matter at a provincial policy level. Regional boards are better able to deal with local circumstances. Other feedback reinforces that property owners' pay only for services actually received.



Attendees participating in regional municipal meeting for the Labrador Straits

D. Modern Standards and Technology

- The issue of differing landfill environmental standards for the larger centres in Labrador was again raised.
- There is general agreement that consistent standards be set and applied across the province, recognizing that different approaches may be necessary to address unique community or region specific circumstances.
- There is strong acknowledgment that not enough attention is afforded to research and development and innovation in the waste management sector.

E. Economic and Employment Opportunities

- Many submissions agree with the comments put forth in Part 1 that more economic and employment opportunities can be derived from the waste sector.
- A range of policy and regulatory instruments (e.g., landfill bans) can position the private sector to respond with solutions to waste management issues.
- Many activities in waste management can support provincial social policy outcomes (e.g., health, social well-being, poverty reduction), through such things as employment at recycling depots to the creation of new community or social enterprises (e.g., waste re-use programs).
- Several funding programs and sources exist of which the waste management sector can avail, but take-up has not been significant.

F. Public Education

- Many respondents emphasize the importance of continuing public education, and enhanced education throughout the education system. Teaching children and young adults how to live a zero-waste lifestyle is important as Canada moves forward with zero waste strategies, according to two groups.
- Educational programming should extend beyond “how to recycle” to explaining why waste management is important, keeping residents informed on an ongoing basis about all aspects of waste management that affect them and their communities, and ensuring sufficient notice of service changes is provided.

G. Governance and Public Accountability

- All active regional service boards agree they are the appropriate entity to provide services in their regions, and do not support consolidation of waste management regions, including under a one provincial board structure.
- A few respondents suggest the composition of the boards of directors of the regional service boards expand beyond only having local politicians to including other skill sets and demographic representation (e.g. financial, engineering, youth). One submission suggests there be no politicians on the board.
- Regional service boards recognize there are opportunities for greater cooperation, including meeting more often to share information and best practices.
- Local residents and businesses want much more consultation and engagement with them by their regional service boards.

H. Legislation and Policy

- A number of legislative and policy suggestions offer support for many of the above referenced suggestions.
- Additional proposals submitted focus on the need for increased enforcement and regional service board accountability and administration.

I. Relevance of Provincial Waste Management Strategy

- Most stakeholders agree that the basic tenets of the Strategy remain appropriate.
- Some participants suggest the current approach is too costly and not financially sustainable.
- There is no consensus on the top priorities on which to focus moving forward; several mention increasing waste diversion, composting, education and public awareness, cost control, and enforcement.

Attachment 3.1

Public Consultation Questionnaire



Section A: Participant Profile

- A. I am answering the following questions primarily as a:**
- a. Private citizen
 - b. Business owner/operator
 - c. Local Government or Waste Management Authority
 - d. Industry association
 - e. Other:
- B. My community is**
- C. My community is located in which of the twelve waste management regions (refer to map and region descriptions included in Attachment 2.2):**
- a. Baie Verte Peninsula–Green Bay
 - b. Burin Peninsula
 - c. Northern Peninsula
 - d. Coast of Bays (South Coast)
 - e. Central
 - f. Discovery (Bonavista Peninsula)
 - g. Eastern
 - h. Western
 - i. Western Labrador
 - j. Central Labrador
 - k. Northern Labrador
 - l. Southern Labrador
 - m. Not sure
- D. The community I live in has a population of about:**
- a. Less than 500
 - b. 500 - 1,500
 - c. 1,501 - 5,000
 - d. 5,001 - 10,000
 - e. 10,001 – 25,000
 - f. More than 25,000
 - g. Not sure

- E. My community is designated as a:**
- a. City
 - b. Indigenous community government
 - c. Local service district
 - d. Town
 - e. Unincorporated area
 - f. Not sure

The following three questions to be answered by private citizens only;

- F. I am between the ages of:**
- a. Under 18
 - b. 18-34
 - c. 35-54
 - d. 55-64
 - e. 65 and over

- G. The number of people living in my place of residence is:**
- a. 1-2
 - b. 3-4
 - c. 5 or more

- H. I am:**
- a. Self-employed
 - b. Employed
 - Full Time
 - Part time
 - c. Unemployed
 - d. Retired
 - e. Student
 - f. Other

Section B: Waste Management Questions

* If additional space is required, please attach a separate sheet.

Waste Diversion (keeping waste out of landfills)

1. How satisfied are you with current recycling initiatives in your community?
 - a. Very satisfied
 - b. Moderately satisfied
 - c. Neutral
 - d. Slightly dissatisfied
 - e. Not at all satisfied

2. How supportive are you of making recycling mandatory in order to increase waste diversion?
 - a. Very supportive
 - b. Moderately supportive
 - c. Neutral
 - d. Slightly supportive
 - e. Not at all supportive

3. Large quantities of packaging and printed paper end up in our landfills every year. Successful industry-led diversion programs exist in other parts of Canada. Should government require industry to set up a packaging and printed paper program in this province?
 - a. Yes
 - b. No
 - c. Unsure

Please explain your answer

4. Organic waste (e.g., food scraps, lawn clippings, cardboard) accounts for nearly one third of all waste generated in the province and contributes to the production of greenhouse gases and leachate at landfills. Voluntary composting programs in NL have diverted only 2% of this waste.
- A. How important is it that more be done to keep organic waste out of landfills?
- a. Very important
 - b. Moderately important
 - c. Neutral
 - d. Slightly important
 - e. Not at all important
- B. Should your local government or waste management authority implement waste diversion and composting programs for organic waste, recognizing there may be a cost and need mandatory participation to be successful?
- a. Yes
 - b. No
 - c. Unsure
- Please explain your answer
5. Over half of the waste generated in the province comes from non-residential sources, such as industrial, commercial and institutional (ICI) organizations and construction, renovation and demolition (CRD) activities. What more can be done to increase waste diversion from the:
- a. ICI sector?
 - b. CRD sector?



Regional Waste Management

6. Currently, the provincial waste management system includes 12 regions, four in Labrador and eight on the island (see map in Attachment 2.2). The majority of waste generated on the island portion of the province is to be transported to one of two landfills, at either Robin Hood Bay (for eastern waste) or Norris Arm (for central/western waste).
- A. Do you support transporting waste from your region on the island to the designated landfill?
- a. Yes
 - b. No
 - c. Unsure
- Please explain your answer
- B. Due to challenges associated with geography and dispersed population, Labrador is not slated to have a designated, centralized waste disposal facility. Do you agree that waste management in Labrador requires a different approach than for the island?
- a. Yes
 - b. No
 - c. Unsure
- Please explain your answer
7. What do residential property owners in your community currently pay each year for waste collection and disposal?
- a. Enter value \$ _____
 - b. Unsure
8. Achieving the benefits of new programs and services may have some extra cost. What increase in your current annual residential waste management fee would be acceptable to implement additional modern waste management programs and services in your area of the province?
- a. None
 - b. Less than \$50
 - c. \$50-99
 - d. \$100-149

- e. \$150-200
- f. More than \$200
- g. Unsure

9. Fees paid for residential waste collection and disposal vary widely across the province. Do you think all residential property owners in the province should pay the same annual amount for waste collection and disposal?

- a. Yes
- b. No
- c. Unsure

Please explain your answer

10. Should communities have the choice to opt in or out of a regional waste management system?

- a. Yes
- b. No
- c. Unsure

Please explain your answer

11. The approach to waste management for properties located on unserviced roads in unincorporated areas varies throughout the province. In some areas, waste management service is not provided and property owners manage their own waste. In other areas, this service is provided at a reduced rate for cabin owners who have a primary residence elsewhere, and until recently, property owners in the eastern region were charged the same mandatory fee for service on unserviced roads as those with property on serviced roads.

A. Do you think Regional Services Boards or Waste Management Authorities should provide waste management services on unserviced roads in unincorporated areas?

- a. Yes
- b. No
- c. Unsure

Please explain your answer



- B. Do you think there needs to be a provincial policy governing waste management on unserviced roads in unincorporated areas that brings a consistent approach to all regions?
- a. Yes
 - b. No
 - c. Unsure
- C. If waste management services are provided on unserviced roads in unincorporated areas, should cabin owners:
- a. be required to pay the same fee as all residents living in the region regardless whether it is their secondary residence?
 - (i) Yes
 - (ii) No
 - b. be able to opt in or out of the service if it is their secondary residence?
 - (i) Yes
 - (ii) No
 - c. pay a reduced fee for part-time and seasonal occupancy of a secondary residence?
 - (i) Yes
 - (ii) No
 - d. Other
 - e. Unsure
- Please explain your answer

Modern Standards and Technology

12. Given our geography and dispersed population, is it reasonable to expect rural and remote areas of the province to have the same standards for waste management as urban areas?
- a. Yes
 - b. No
 - c. Unsure
- Please explain your answer

13. Is enough being done in this province to encourage innovation in waste management?

- a. Yes
- b. No
- c. Unsure

Please explain your answer

Economic and Employment Opportunities

14. How can we achieve more economic benefit from the management of waste in your region and in the province generally?

Public Education

15. What more needs to be done to educate and inform the public about waste management?

Governance, Legislation and Policy

16. What opportunities exist for greater cooperation in waste management across communities and regions?

17. Can you suggest any policy, regulation or legislation changes that your local waste management authority, municipality, regional service board or provincial government can make to improve the delivery of waste management in your area or the province overall?

Waste Management Strategy Direction

18. Given the background information provided for this consultation and your own perspective on the topics covered in this questionnaire:

A. Do you think the overall direction of the 2002 Waste Management Strategy remains appropriate to implement moving forward?

- a. Yes
- b. No
- c. Some of the strategy is relevant, but not all
- d. Unsure

Please explain your answer



- B. What do you think are the top three things we need to do to meaningfully advance waste management performance in the province?

General Comments

19. Do you have any other comments or suggestions that we should know about and consider?

Thank you very much for your time in responding to our questions.

CHAPTER 4

WASTE REDUCTION AND DIVERSION

4.1 Canada Overview

4.1.1 Canadian Waste Diversion by the Numbers

According to Statistics Canada data published by Environment and Climate Change Canada's, approximately 34 million tonnes of waste or 974 kilograms (kg) per person annually was generated by Canadians in 2016. A total of 25 million tonnes of waste, or 688 kg per person, was disposed. Of the 25 million tonnes disposed, 14.7 million tonnes (59%) is non-residential waste, and the remainder, 10.3 million tonnes or 41%, was disposed by the residential sector. An estimated 27%, or 9.3 million tonnes, representing 265 kg per person annually of the total waste, was diverted from landfills. Using Statistics Canada's methodology, the comparable waste diversion rate specific to Newfoundland and Labrador was nine percent (9%). Newfoundland and Labrador sent 395,000 tonnes to landfills, or 761 kg per person in 2016.¹



Compacting waste at the landfill. Credit: City of St. John's

The above numbers do not reflect the full waste picture in Canada or this province, due to the fact that the data collected by Statistics Canada is not collected from all waste management systems operating in the country.² For example, surveys of municipalities and businesses that meet certain reporting thresholds are used, and many of the smaller operations in Newfoundland and Labrador and in other provinces and territories do not meet the criteria. Statistics Canada also bases its waste diversion calculations on waste processed through municipal facilities only (e.g. blue bag programs), thus excluding other recyclable wastes, such as most stewardship programs (e.g., beverage containers), and private sector diversion (e.g. metals and hazardous wastes). Consistent diversion data for purposes of jurisdictional comparisons is extremely difficult to track.

The Multi-Materials Stewardship Board (MMSB) collects more broad-based waste information in this province through waste audits and reporting information from waste authorities and private operators. According to the MMSB's 2016 Waste Report Card, with all other sources of diversion activities included, the province generated approximately 520,000 metric tonnes of waste, which is approximately 1,000 kg or one metric tonne of waste per person in the province. Of this total, about 57% comes from

1. Environment and Climate Change Canada, "Canadian Environmental Sustainability Indicators: Solid waste diversion and disposal," (2018), pp. 6-7. www.canada.ca/en/environment-climate-change/services/environmental-indicators/solid-waste-diversion-disposal. Accessed July 21, 2019.

2. Ibid., p. 1.



non-residential sources and 43% from residential sources. The MMSB estimates that approximately 25% of our total waste is actually diverted from landfills – half of that targeted in the Provincial Solid Waste Management Strategy.

As seen by the differing approaches to data collection and reporting the varying results described above, measuring waste and comparing performance nationally is fraught with difficulties. It is only in understanding the on-the-ground aspects on what is happening in the various jurisdictions can a truer determination of this province's performance be made. The reality is that Newfoundland and Labrador is falling behind many Canadian jurisdictions when it comes to waste diversion programming, including the Atlantic provinces.

4.1.2 National Commitments

Provinces, territories and the federal government generally agree that the current situation is not sustainable, at least as demonstrated by the many waste-related environmental agreements and commitments made at the national level. As described below, many of the planning frameworks are there, but future overall success rests on the strength of the commitment to meaningful action.

4.1.2.1 Canadian Council of Ministers of the Environment

Through the Canadian Council of Ministers of the Environment (CCME), the federal government, provinces and territories established several waste reduction and diversion initiatives. The three most notable ones on waste management include: (a) Canada-Wide Aspirational Waste Reduction Goal; (b) Canada-Wide Strategy on Zero Plastic Waste; and (c) Canada-Wide Action Plan on Extended Producer Responsibility. These commitments establish approaches aimed at improving national and provincial performance on waste reduction and diversion and reducing marine litter.

Canada-Wide Aspirational Waste Reduction Goal

The Canada-Wide Aspirational Waste Reduction Goal was endorsed by all jurisdictions in the fall of 2018. Due to the previously described difficulties in tracking comparable waste diversion data across jurisdictions, the focus is on reduction in waste disposal rather than increases in waste diversion. The Canada-Wide Aspirational Waste Reduction Goal aims to reduce national waste disposal per capita from Canada's 2014 baseline to 490 kg per person by 2030 (30% reduction) and to 350 kg disposed per person by 2040 (50% reduction). These aspirational goals do not set specific targets for individual jurisdictions. Applying the national aspirational goal to Newfoundland and Labrador



Public drop-off at Robin Hood Bay. Credit: City of St. John's

suggests the total amount of waste disposed will need to be cut in half by 2030, and another 20 percent beyond that by 2040. Considerable aggressive action will be required to meet such targets.

Canada-Wide Strategy on Zero Plastic Waste

In recognition of the magnitude of the environmental problems associated with plastic wastes, in the fall of 2018, jurisdictions approved-in-principle the Canada-Wide Strategy on Zero Plastic Waste. According to this strategy, the durability of plastics, the large quantity of inexpensive single-use plastic products, and the convenience of disposal are among the issues contributing to a growing environmental problem. The strategy indicates that only 14% of plastics is recycled and about eight million tonnes ending up in oceans every year from land based sources. About 95% of the material value of plastic packaging, between \$100 and \$150 billion annually, is lost to the global economy after only a single use.³

The Strategy on Zero Plastic Waste aims to reduce the impacts of plastic waste through greater prevention, collection and value recovery. The Strategy focuses on ten results areas, including: product design, single-use plastics, collection systems, recycling capacity, domestic markets, preventing plastic pollution in oceans, inland lakes and waterways, advancing science to monitor the impacts of plastics pollution within the environment, consumer awareness, clean-up and global action. In 2019, jurisdictions endorsed the first phase of the Canada-Wide Action Plan on Zero Plastic Waste addressing the first five results areas. The CCME is currently consulting on the second phase of the Action Plan to address the remaining five areas.

As part of its commitment to Phase 1 of the plan, in June of 2019, the Government of Canada announced it will ban select single use plastics as early as the year 2021 and work with the provinces to implement programs to make plastics manufacturers responsible for their waste. On April 9, 2019, the Government of Newfoundland and Labrador amended the **Environmental Protection Act** to allow for later regulations necessary to place a distribution ban on retail plastic bags. The Provincial Government is now consulting with the industry on details of the ban's implementation.



Sample single use plastic bags

Canada-Wide Action Plan on Extended Producer Responsibility

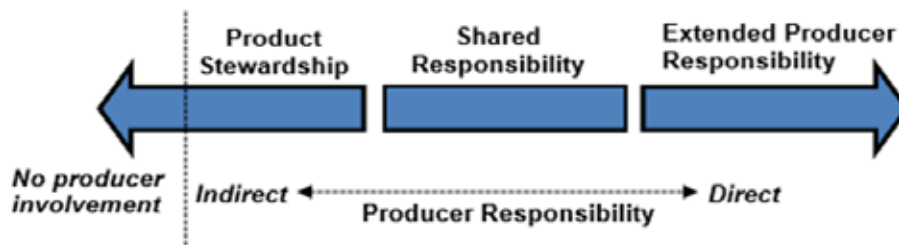
A waste management approach applied in other countries and Canadian jurisdictions to varying degrees is the Extended Producer Responsibility (EPR) Model. Under this approach, responsibility for the end-of-life management of products rests with the producers and not with governments and taxpayers. By

3. Canadian Council of Ministers of the Environment, "Strategy on Zero Plastic Waste," (November 23, 2018), p 1. <https://www.ccme.ca/files/Resources/waste/plastics/STRATEGY%20ON%20ZERO%20PLASTIC%20WASTE.pdf>. Accessed August 9, 2019.

designating producers responsible for the management of their products, EPR can shift the expenses associated with the end-of-life management from governments (e.g., municipalities) and taxpayers to producers and consumers, while reducing the amount of waste going for disposal and increasing producers' awareness of management of their products.⁴

The degree of producer responsibility can vary. It should be noted that other approaches beyond EPR include varying degrees of a producer responsibility component. These include shared responsibility and product stewardship approaches.

Figure 4.1 Extended Producer Responsibility Continuum⁵



“Product Stewardship” generally refers to waste diversion programs funded by either general taxpayers or consumers and operated by public agencies. Under product stewardship models, producers are neither directly responsible for program funding nor program operations. The province’s beverage container and used tire programs are examples of legislated product stewardship programs operated by the MMSB and financed through a deposit or levy paid by consumers. Current curbside programs for packaging and printed paper are also examples, operated by municipalities and regional service boards and financed by general taxpayers.

“Shared Responsibility” programs generally operate with varying degrees of producer involvement and/or funding. These are commonly found in the areas of packaging and printed paper, where municipalities provide collection and sorting/processing services with substantial funding provided by producers, notably through a producer responsibility organization or an industry funding organization.

“Extender Producer Responsibility” refers to waste management programs operated and financed directly by product manufacturers. Waste paint, used oil and glycol, and electronics are programs in this province currently operated and financed directly by industry.

In 2009, each Canadian jurisdiction agreed under the Canada-Wide Action Plan on Extended Producer Responsibility (CAP-EPR) to develop framework legislation or regulations for a priority list of specific material types by 2015 (Phase 1). These waste materials include paint, electronics, used oil, packaging and printed paper, mercury containing lamps and products, household hazardous wastes and automotive

4. Canadian Council of Ministers of the Environment, “Progress Report on the Canada-Wide Action Plan for Extended Producer Responsibility,” (2014). <https://www.ccme.ca/files/Resources/waste/extended/CAP-EPR%20Progress%20Report.pdf>. Accessed on September 6, 2019

5. Ibid., p. 2.

parts. Jurisdictions also committed to having EPR programs in place by 2017 for construction materials, demolition materials, furniture, textiles and carpet, and appliances, including ozone-depleting substances (Phase 2).

4.1.2.2 Waste Diversion Programs in Canada

Significant progress has been made by several jurisdictions establishing legislation, regulations and/or programs for designated products for Phase I products under the CAP-EPR. Over half the product categories for Phase I are now being implemented across Canada. There is less success on many of the materials targeted under Phase 2 programs. Refrigerants, which contribute to ozone depletion, are federally regulated and Refrigerant Management Canada now operates a program nationwide on behalf of the industry.

All provinces except Alberta have full EPR programs for electronics, waste paint and used oil and glycol. Alberta has not implemented the EPR approach, preferring instead to have the public sector operate its waste diversion programs. It appears that Newfoundland and Labrador lags several provinces in the number or scope of coverage of EPR-led waste diversion programs. Taxpayer funded programs for packaging and printed paper and household hazardous waste are currently delivered by several regional service boards or municipalities in this province, but in central Canada and in the west, industry takes a larger role.

In addition to provincial or municipal mandated programs, there are ample examples of voluntary recycling undertaken by industry at local and provincial levels. Unfortunately, the quantity of material diverted from landfills through voluntary recycling programs, often is not tracked. Nevertheless, the organizations and businesses involved are reducing the amount of waste disposed and making a difference in their own spheres of influence.



Credit: Product Care Recycling

4.2 Newfoundland and Labrador Waste Profile

Table 4.1 profiles waste generation and waste diversion in Newfoundland and Labrador in 2016. According to the MMSB, Newfoundland and Labrador generated approximately 520,000 metric tonnes (MT) of waste. Consistent with national trends, the majority of waste generated (57%) came from non-residential sources and 43% from residential sources. The amount of total waste disposed was 390,000 MT and the total diverted from landfills was approximately 130,000 MT or 25%. This percentage represents half the waste diversion target set out in the provincial Strategy. Labrador West generates the most waste per capita by far in the province.

The MMSB indicates that of the 130,000 MT of waste diverted from landfills in 2016, only seven percent (7%) was processed through publicly funded material recycling facilities. The remainder of the diverted waste, just under 121,000 MT or 93%, was handled through private recycling and product stewardship programs.

Table 4.1 Provincial Waste Profile, 2016

2016 Provincial Waste Profile Population of Newfoundland and Labrador: 519,716						
		Waste		Diversion	Total Waste	Per-capita Waste Generation
Region	Pop'n	Residential	Other		KG	kg/person/day
Eastern	275,836	92,088,147	132,535,449	74,740,895	299,364,491	2.97
Central	73,551	18,875,249	25,656,988	17,888,660	62,420,896	2.33
Western (WC&BSG)	48,257	15,117,300	21,264,848	9,956,837	46,338,985	2.63
Labrador West	9,126	6,484,751	3,534,748	4,300,552	14,320,051	4.30
Burin	19,942	8,882,678	5,294,740	4,095,880	18,273,298	2.51
Remaining NL	93,004	27,109,896	32,777,644	19,058,404	78,945,945	2.33
Total	519,716	168,558,021	221,064,416	130,041,229	519,663,667	2.74
		389,622,438		130,041,229	519,663,667	
		74.98%		25.02%	100.00%	

Source: Multi-Materials Stewardship Board

4.3 Waste Reduction and Diversion Proposals

4.3.1 Waste Reduction

Waste reduction is the most meaningful contribution to any effective waste management system (i.e., the avoidance of waste generation). For consumers, waste reduction requires a fundamental shift in purchasing behaviour. For government, Newfoundland and Labrador can be viewed as too small a market to exert substantive influence on most national and international producers of products supplied to consumers in the province. The province is better to focus its efforts on working collectively with

the other provinces and the federal government on national waste reduction plans and harmonized regulations as the primary means to effect meaningful reductions in waste generation.

This is not to say that the province should not do anything on its own. As will be discussed in Chapter 7, part of a waste management economic strategy should include how to work with established and prospective local manufacturers to minimize their packaging waste, among other activities. Chapter 8 (Public Education) proposes that provincial public education efforts be enhanced to promote the importance of waste reduction and provide tangible examples of how residents and businesses can reduce waste in their daily lives and operations.

4.3.2 Enhancing Existing Waste Diversion Programs

Existing waste diversion programs have been important contributors to our waste diversion effort. We must continue to support these programs. For two programs, namely the beverage container and used tire recycling programs, changes are warranted to achieve further outcomes. A discussion of these programs follows.

4.3.2.1 Beverage Container Recycling Program

Beverage container recycling has been the flagship program of the waste diversion system in the province since the MMSB came into being in 1996. The beverage container recycling program operates as a product stewardship initiative administered by the MMSB. Similar in approach to other Atlantic provinces, a deposit/refund system is used, whereby consumers of non-alcoholic beverages pay a deposit of \$0.08 and can receive a refund of \$0.05 for every unit returned to one of the 56 Green Depots. Alcoholic beverages have a \$0.20 and \$0.10 deposit/refund rate. Revenue collected operates the program and contributes to financing MMSB's operations, conduct research and development in waste management, undertake public education and support the overall achievement of provincial waste management goals.



Bales of beverage containers ready to transport

According to the MMSB, approximately 281 million beverage container units were sold and 187 million collected for recycling in 2017-18, thus leaving 94 million units being disposed or discarded as litter. This represents a recovery rate for used beverage containers of 66.5%, which lags well behind the national rate of approximately 77%. The rates in Nova Scotia and Prince Edward Island (PEI) exceed 80%. Contextually, it is important to note that provinces in Western Canada have full-back programs for beverage containers where consumers pay a deposit of up to \$0.40 and a handling fee to operate the program of up to \$0.10. Higher deposits typically result in higher recovery rates. Other Atlantic Canadian jurisdictions also have more access to curbside recycling programs, which can also bolster recovery.



Nova Scotia, PEI and New Brunswick charge a \$0.10 deposit on non-alcoholic beverages. Interestingly, Newfoundland and Labrador has the lowest deposit rate in the Atlantic region, yet has some of the most significant challenges maintaining a strong rural presence and managing a more complex and dispersed collection and transportation network. Revenue generated by the beverage container program has been relatively consistent over the past few years, but program costs over time have increased. As well, funding available from the program to support strategic waste management initiatives is now only a quarter of what was available previously.

Amending the provincial Waste Management Regulations to increase the deposit on non-alcoholic beverage containers by two cents (from \$0.08 to \$0.10) would generate important additional funding. The impact on consumers is minuscule. A person purchasing one beverage a day every day for a year will pay an extra \$7.30 annually (or \$0.61 a month). Consumers have the opportunity, by purchasing beverages in larger sized containers, to reduce this cost. Several stakeholders commenting on this issue support this proposal.

4.3.2.2 Used Tire Program

The Used Tire Program is another product stewardship initiative administered by the MMSB. The program is funded through a levy of \$3.00 on passenger tires with a rim size of 17 inches or less and \$9.00 on tires with a rim size greater than 17". Consumers return their used tires to tire retailers. There is no refund paid.

There are approximately 665,000 tires sold annually in the province, with approximately 495,000 used tires collected. This equates to a 74.4% recovery rate, which is generally on par with New Brunswick and Nova Scotia, according to the MMSB. Data from PEI is not publicly available.

The used tire program is currently operating at an annual deficit, which is expected to grow significantly in the next couple of years due to projected increases in the cost of transporting the tires. To ensure financial sustainability of the program, the fee on tires has to increase.

As Table 4.2 shows, Newfoundland and Labrador has the lowest tire levies in Atlantic Canada. Matching those in Nova Scotia and New Brunswick (\$4.50 and \$13.50) would generate additional annual funding of approximately \$1.5 million. The financial impact on consumers would again be minimal, adding only \$6.00 (for small passenger tires) and \$18.00 (for larger passenger tires) per vehicle every 4-5 years.

Table 4.2 Passenger Tire Levies in Atlantic Canada

Tire Size	NB	NS	PEI	NL
Under 17" PTL	\$4.50	\$4.50	\$4.00	\$3.00
Over 17" MT	\$13.50	\$13.50	\$11.25	\$9.00

Source: Multi-Materials Stewardship Board

Used tires from this province are transported to one industrial customer in Quebec for use as fuel in a cement kiln. The MMSB is undertaking a pilot project to determine if tires can be used locally as tire derived aggregate (TDA), as is done in several provinces. TDA is an engineered product made by mechanically shredding scrap tires for use in such applications as road construction and paving.

Reliance on one commercial contract can be very risky for any business, and especially for the tire recycling business, which has experienced two substantial market interruptions since the program's inception, leaving thousands of tires stockpiled. The MMSB recently invested over \$1.0 million to construct a used tire laydown area at the central waste facility at Norris Arm, as a contingency measure.

It may be time for the MMSB to re-assess the risk profile of operating this program versus transferring full responsibility to the tire industry. Four provinces (Ontario, Manitoba, Saskatchewan and British Columbia) implement EPR programs, with tire companies having responsibility and owning the risk of collecting and marketing the used tires. The MMSB's current tire contract does not expire until January of 2023. This gives the MMSB sufficient time to explore the feasibility of an alternate management approach. This also provides an opportunity to assess the merit of adding additional tire sizes to the program as well (e.g., ATV tires), which are not included under the existing contract due to technical restrictions with cement kilns.

A final issue related to the used tire program concerns tires on imported vehicles. No levies are paid on these tires, notwithstanding costs being incurred for their eventual disposal. All passenger tires coming into the province should pay an appropriate tire levy. This can be facilitated by the provincial Department of Service NL through the provincial vehicle registration process, with the money remitted to the MMSB. New Brunswick and PEI charge for imported tires. According to the MMSB, between 2011 and 2018, over 14,000 vehicles were imported into the province from the United States alone. Applying a weighted average fee on these vehicle tires, over \$400,000 in additional revenue could have been collected.



Tires collected for use in Multi-Materials Stewardship Board TDA pilot project



4.3.2.3 Recently Announced New Programs

EPR Program for Used Oil and Glycol

Under the provincial Used Oil Control Regulations introduced in 2003, vendors selling more than 1,000 litres of lubricating oil are required to accept used lubricating oil at their premises and arrange with a licensed collector for proper disposal.

On November 1, 2018, an EPR model for the future management of used oil and glycol came into effect, making oil and glycol producers responsible for the end of life management of oil, glycol, filters and containers. With this new program, Newfoundland and Labrador now joins seven other provinces in Canada offering a full industry-led used oil and glycol waste diversion program.

The program involves the free collection of used oil and glycol, filters, and containers from all generators in the province using the existing network of repair shops, automotive dealerships, collectors, transporters and processors operating under the provincial Used Oil Control Regulations. Producers have appointed an industry-funded organization called the Atlantic Used Oil Management Association to operate the program. A minimum recovery rate of 75% has been set for oil, oil filters and oil containers within five years. In six years, 65% recovery for glycol and glycol containers is expected.



Used oil and glycol recycling. Credit: Used Oil Management Association

Distribution Ban on Plastic Bags

Amendments to the provincial **Environmental Protection Act** passed on April 11, 2019 to allow the provincial government to draft regulations to ban the distribution of many types of retail plastic bags. According to the Discussion Guide used for public consultations on this issue, plastic retail bags account for less than 1% of the weight of waste generated annually, but 6% of large litter found along roadways.⁶ The plan to ban plastic bags clearly demonstrates what can be achieved when the public, stakeholders and government all come together to address an issue.

6. Department of Municipal Affairs and Environment, "Reduction in Plastic Retail Bag Use: Discussion Guide," (March 5, 2019), p 3. https://www.engagnl.ca/sites/default/files/discussion_document_-_reduction_in_plastic_retail_bag_use_final_0.pdf. Accessed on October 22, 2019.

4.3.3 New Waste Diversion Program Proposals

4.3.3.1 Municipal Special and Hazardous Waste

Household hazardous waste, now referred to as municipal special and hazardous waste (MSHW), encompasses a wide variety of products and material types, everything from household batteries and fluorescent light bulbs to household cleaners, pesticides and wood preservatives. The improper management of these hazardous materials poses environmental risk and in response, the Provincial Solid Waste Management Strategy envisioned all residents of the province having access to MSHW collection services.



Municipal Special and Hazardous Waste depot at Robin Hood Bay.
Credit: City of St. John's

Other than paint and used oil programs, the MMSB estimates 1.7 million litres or 1,700 MT of MSHW is generated annually in the province. This translates to an average of eight litres of MSHW per household. In 2016, only 232 MT of MSHW was collected through municipal and regional depots and events (13.6%). The majority of the population on the island and a few areas in Labrador have access to MSHW collection services. These programs are voluntary, however, and capture rates not as high as they need to be.

MSHW is an area where industry led programs have been successful in several provinces, notably British Columbia, Manitoba, Ontario and Quebec. The provinces of PEI, NB and NS also are working to develop EPR programs in their own jurisdictions. Where publicly funded and operated collection systems exist, industry has chosen, in the majority of situations, to fund a portion of the costs associated with the MSHW program, thereby reducing the costs to municipalities and other waste system operators. It is now time for Newfoundland and Labrador to advance a program for this waste stream.

4.3.3.2 Packaging and Printed Paper

Packaging and printed paper (PPP) waste encompasses a wide variety of products and material types, and includes everything from cardboard boxes and cleaning solution containers to yogurt containers, and plastic and paper wrap. Three regions in the province, representing over 80% of the population, offer access to curbside recycling of most types of PPP; however, the collection, transportation and processing of PPP is currently financed by taxpayers, not the producers of these materials. The MMSB estimates the provincial residential sector generates roughly 40,000 MT of PPP annually, and the industrial, commercial and institutional (ICI) sector another 50,000 MT.

As referenced in Section 4.1.2.1 of this report, under the Canada-Wide Action Plan on Extended Producer Responsibility, Newfoundland and Labrador committed to implement an EPR program for the management of packaging and printed paper waste by 2015. In a shared responsibility approach, implementation of an EPR program for the PPP waste stream could see producers fund a substantial proportion of the costs associated with existing publicly funded and operated curbside collection, processing, transporting and recycling systems. In a full EPR approach, producers would be directly responsible for operating and financing the programs. The industry would also invest in research and development and end market development. In doing so, the cost borne by communities and regions for recycling programs and services can be reduced significantly.

New Brunswick is furthest advanced of the Atlantic provinces in regulating this program and is now consulting stakeholders on what its provincial program will comprise. British Columbia, Manitoba, Saskatchewan, Ontario and Quebec introduced shared or full EPR programs for PPP after blue bag-type recycling programs were in place. Industry-funded organizations, such as the Canadian Stewardship Services Alliance (CSSA) and Eco-Entreprises Quebec, were formed to coordinate industry funding and/or operate the program and liaise between oversight bodies and producers.

Newfoundland and Labrador is in a good position to begin its own discussions for a PPP program as over 80% of its population now has access to curbside (blue bag) recycling services, in the eastern, central and western regions. The MMSB only awaits final government approval to proceed with industry consultations leading towards a PPP program for this province, which would include determining, among other items, the designated material types and producers to include, accessibility within the province, and roles and responsibilities of all of the stakeholders involved.

4.3.3.3 Organic Waste Management

When it came to waste diversion two decades ago, generally all attention focussed on the development of recycling legislation and programs. From an environmental impact perspective, while recycling is certainly very important in reducing demand on virgin materials, organic waste creates much larger challenges. Organic waste disposed in a landfill breaks down to create harmful leachate, which can pollute local topography and water bodies, and produce methane, a greenhouse gas (GHG) that is 21 times more powerful than carbon dioxide. Organics diversion, and processing the material in approved composting systems, can result in potential significant GHG reductions from the avoidance of methane production within landfills.



Paper recycling at material recovery facility

As the province moves forward, it is imperative to deal with organic waste. In a 2014 major study of waste management in Canada, prepared by Giroux Consulting for the CCME, “investments in organics programs (either high or low tech) provide the biggest bang for the buck in terms of opportunities to significantly increase diversion.”⁷ The MMSB estimates 30% of total waste generated is organic material. Approximately 155,000 MT of organics waste is generated annually in Newfoundland and Labrador, divided equally between residential and commercial sources. Only about 4,000 MT of the organic waste is diverted currently, despite nearly 30,000 backyard compost bins having been distributed by the MMSB over the years, and implementation of some community, institutional and private sector compost initiatives. Current estimated organics diversion represents less than one percent of the total municipal solid waste stream, or 2.5% of the organics waste stream. The remaining organic material is disposed in landfills. Adding to this situation is the fact that all industrial organics waste is being disposed at the one authorized landfill in the province currently, and the landfill is not lined.

A 2014 report produced by Dillion Consulting (Dillon Report) under contract to the Provincial Government presents an analysis of seven organics management scenarios for the island portion of the province using a 30-year planning horizon.⁸ The scenarios range from establishing one or two regionally based centralized processing facilities, to regional facilities augmented by sub-regional, multi-community processing operations.

The Dillon Report identifies significant potential for GHG and avoided landfill cost benefits under one scenario, namely having organic facilities located in central and eastern Newfoundland in which all island organic waste is processed. Compared to landfilling only, this scenario could result in a GHG reduction of over 1.7 million tonnes of carbon dioxide equivalent (CO₂e) and a landfill capital cost savings of approximately \$33 million.

Such environmental benefits come at considerable cost, however. Dillon suggests that over 30 years, the net present value costs associated with each of the seven scenarios exceeds \$100 million. Annual cost estimates total \$6-7 million for each option. The Department of Municipal Affairs and Environment (MAE) estimates these figures translate into a potential upfront capital investment of about \$75 million. In the Dillon Report, the assumption is that all capital costs are borne by the province and assets owned and operated by a regional service board(s).

Canadian jurisdictions approach the management of organic waste through a variety of private and public ownership and service delivery models. For example, the Province of Prince Edward Island diverts all of its organic waste through a central composting facility operated by Island Waste Management Corporation, a Crown corporation. Nova Scotia has 18 composting facilities, six of which are privately owned. Notable in both provinces is that all facilities operate under the backdrop of a provincial organics landfill ban.

7. Giroux Environmental Consulting, “State of Waste Management in Canada,” (2014), p. E-4. https://www.ccme.ca/files/Resources/waste/wst_mgmt/State_Waste_Mgmt_in_Canada%20April%202015%20revised.pdf. Accessed on August 6, 2019.

8. Dillion Consulting, “Study of Options for Organic Waste Processing in the Province of Newfoundland and Labrador,” (July 31, 2014). https://www.mae.gov.nl.ca/waste_management/Organic_Waste_Report.pdf. Accessed on October 28, 2019.

In the feedback received during consultations for this review, many participants recognize the importance of managing the environmental impact associated with organics waste, but opinions divide on how best to manage these impacts and the affordability associated with such programs. There are issues related to existing and new organics programs of concern to the public, such as odour and pests, and a few organics project proposals have come up against strong public opposition, despite technologies available to mitigate many of these concerns. Much more consultation, and public education and awareness, will be important to get the buy-in necessary to support effective implementation of any major new composting programs.



Central Composting Facility in PEI. Credit: ADI International (PEI)

There exist now local end markets for finished compost in this province. In addition to being a soil amendment, compost also has value in bio-remediation; added to soil, it can improve stability, reduce the effects of erosion and water run-off, and remediate soil affected by oil spills. Some local compost operators are selling their product to farms, municipalities, public institutions, businesses and individual property owners for use as fertilizer and as fill. At least one local company wants to source high quantities of fish and animal waste for use as collagen in skin and health care products.

An important missing piece in advancing effective organics management in the province is a definitive organics waste management strategy, one that outlines the details of the actual organics system(s) to be established. Such strategy development needs to finalize, among other things, the type, size and location of facilities, implementation schedule, and facilities management and funding alternatives, including the leadership role that the private sector can (and should) play. There is much information already available to advance this exercise in a timely manner, including the experiences of other provinces, the Dillon Report, and local industry interest.

Consultation and collaboration among all stakeholders will be key to developing an effective strategy. The MMSB is the appropriate agency to lead the process, with involvement also to include, for example, relevant federal and provincial government departments, regional services boards and other waste management authorities (e.g., from Labrador), industry and industry groups (e.g., Newfoundland and Labrador Environmental Industry Association), post-secondary institutions and research and development organizations.

There may be some who believe a call for development of an organics strategy (as opposed to more specific actionable recommendations) will be a way to avoid doing anything on organics, or unnecessarily delay needed work in this area. Arising out of this report, much work will need to be done over the next several years across the system. A strategy will take time to develop, but the effort worth it if it outlines definitive and integrated actions and priorities for all players in the system.

It is important that a strategy be developed in a timely matter nonetheless, as organics management is crucial to the success of the overall provincial strategy. For this reason, the strategy should be developed with the backdrop of implementing a provincial landfill ban on organics in five years. Presumably, a component of the strategy will take into account the fact that some regions can and should implement an organics waste management system before others. According to the MMSB, a ban, effectively enforced, could divert as much as 100,000 MT of existing organics waste, contribute an estimated 19% to overall waste diversion, and reduce the per person waste disposal rate by 0.52 kilograms/person/day or 190 kilograms annually.

4.3.3.4 Mandatory Recycling

The province will need mandatory municipal and institutional, commercial and industrial (ICI) recycling programs to advance meaningfully its waste diversion goal. Fortunately, there is a high level of support for such initiatives during the consultations process

Mandatory recycling programs for most PPP materials generated by the residential sector are in place in the central and western regions by way of a clear bag program for waste. Some mandatory ICI programs are also in place in the central region. The western region is currently working on a voluntary ICI recycling program, with the intent to have a mandatory program in 2020. Voluntary residential recycling programs have also been in place in several communities in the eastern region, including the City of St. John's. No tracking of ICI waste occurs in this region, but reduced tipping fees apply to some separated materials. The Eastern Regional Services Board advises that residential waste diversion in its region generally has stagnated and wants to see recycling programs made mandatory. No mandatory recycling programs exist in Labrador.

Operational challenges can happen with the introduction of new programs, but they should not be insurmountable for this proposal, if reasonable targets are set and operators willing to work with residents and businesses to find solutions to impediments. A period of transition, and comprehensive communications and education programs, will be critical to implementation in those regions and communities not partaking in recycling now. As regions have experience with mandatory recycling (say one year), then disposal bans at landfills should then follow. Eventually, it will be important to have bans in effect at all landfills to ensure regional fairness and consistency and maximize overall success. Bans exist in Nova Scotia and Prince Edward Island.



Compactor recycling truck unloading. Credit: Central Newfoundland Waste Management

Mandatory residential recycling programs will be critically important once a provincial packaging and printed paper program is implemented, and industry begins to contribute to the costs of municipal recycling, based on the rate of PPP material diverted. Recycling, if not made mandatory at that point, will undermine waste diversion goals and investments in infrastructure made to date, and represent potential significant missed financial opportunity as well.



Finally, to assist with the traceability of recyclable materials, regional service boards and other waste management authorities should consider including in any waste material sales contracts the right to access end market information for the recyclable materials.

4.3.3.5 Construction, Renovation and Demolition Waste

Construction, renovation and demolition (CRD) waste is a significant contributor to overall waste, but it is also a difficult waste stream to reduce or divert from landfills. The MMSB estimates that approximately 60,000 -100,000 MT of total waste generated in the province results from CRD activities (12-20%). CRD waste is composed of different types of materials, many of which are inert, such as wood, shingles, drywall, plastic, metals and aggregates. CRD waste can come from residential sources (e.g., house renovations) or non-residential sources (e.g., construction or demolition of buildings).

Of the total CRD waste generated annually, an estimated 20,000 MT is wood. Potential local markets for wood waste exist, and need to be explored further. Successful diversion of wood waste from our landfills still leaves a large amount of other CRD waste materials going for disposal. Many of these streams, such as shingles, drywall, and ceramics, require significant investments in equipment, research and market development. The CCME has engaged a consultant to review CRD waste policy options, including how to reduce the amount of CRD waste generated and going for disposal, and lessening the overall environmental impacts of the CRD waste requiring disposal.

CRD is a varied sector with multiple product lines and potentially different approaches and solutions for waste handling and diversion required. It is imperative therefore, for industry and appropriate waste management authorities to be engaged in the development of policy for CRD waste. Discussions are needed on such topics as the materials to be selected for diversion, recycling markets, available technologies, program delivery options and costs, etc. The MMSB would be the appropriate agency to bring all parties together, with a view to developing a provincial CRD waste management strategy.



Construction, Renovation and Demolition Waste Disposal

4.4 Government Leadership by Example

On March 1, 2019, the provincial government released its plan to address climate change, entitled “The Way Forward on Climate Change.”⁹ This plan contains actions to reduce greenhouse gas emissions from across the economy, stimulate clean innovation and growth, and build resilience to the impacts of climate change. Specific commitments in the plan related to waste management include:

- To develop and implement an environmental procurement policy for application through the **Public Procurement Act** (action 4.2.1);
- To increase the amount of waste diverted from government buildings, and develop metrics to measure and report on progress (action 4.2.5); and,
- To build awareness and a culture of environmental sustainability within the provincial government that facilitates understanding of how government employees can contribute to action on climate change (action 4.8.2); presumably, this latter item will include awareness of waste diversion amongst employees.

As the plan notes, government owns or leases over 1,000 buildings and structures and procures over \$3.5 billion annually in goods and services. This presents a significant opportunity to contribute further to provincial waste diversion goals. If government is serious about waste diversion, then as the largest employer, owner of infrastructure and consumer of goods and services in the province, it should lead by example. It cannot be “do as I say;” but “do as I do.” Many participants in the public consultations raised this expectation of government as Strategy implementation moves forward.

4.5 Relevance of Waste Diversion Target

Many Canadian jurisdictions are moving away from using waste diversion as a leading measure of waste management performance. Waste diversion is difficult to measure, especially in a comparable way to other jurisdictions, and neither can it tell the story of two other important activities in the waste management hierarchy, namely reuse and reduction. In the alternative, jurisdictions are beginning to measure performance in terms of waste disposed rather than waste diverted. In setting the 2018 Canada-Wide Aspirational Waste Reduction Goal, the CCME and jurisdictions are endeavoring to reduce the kilograms per capita disposed by 2030. It would make sense for this province to follow this lead. Not to do so will make the measurement of waste management performance incomplete and inhibit government’s ability to benchmark this province’s performance against other jurisdictions.

The MMSB’s estimates this province currently disposes of 750 kg per capita in landfills. It is not practical to set a target for the reduction in per capita disposal at this time. More needs to be known about the implementation details and timing associated with the recommendations of this report, including the outcomes of the additional consultations to be undertaken. Neither would it be appropriate to set a new target in isolation of consultations with the major system players, most notably the regional service boards, the primary drivers of Strategy performance overall.

9. Department of Municipal Affairs and Environment, “The Way Forward on Climate Change in Newfoundland and Labrador,” (March 1, 2019). https://www.exec.gov.nl.ca/exec/occ/publications/The_Way_Forward_Climate_Change.pdf. Accessed on November 21, 2019.

4.6 Recommendations

The following are the recommendations presented from this chapter:

- 4.1 The Waste Management Regulations be amended to increase the deposit on non-alcoholic beverage containers from \$0.08 to \$0.10.
- 4.2 The Waste Management Regulations be amended to increase the current levies on passenger tires to \$4.50 (under 17") and to \$13.50 (over 17").
- 4.3 The Multi-Materials Stewardship Board investigate the feasibility of implementing an Extended Producer Responsibility (EPR) approach for its tire program.
- 4.4 The Waste Management Regulations be amended to require levies to be paid on all tires entering the province with imported vehicles, and that Service NL collect these fees through the provincial vehicle registration system and remit all revenue collected to the Multi-Materials Stewardship Board less an appropriate administration fee.
- 4.5 The Multi-Materials Stewardship Board initiate consultations with producers of municipal, special and hazardous waste and appropriate waste management authorities to establish an EPR program for managing these materials in the province.
- 4.6 The Multi-Materials Stewardship Board initiate appropriate consultations with industry groups and waste management authorities leading to the establishment of an industry-led model for packaging and printed paper.
- 4.7 The Multi-Materials Stewardship Board lead the development of a provincial organic waste management strategy along the lines discussed in Chapter 4.
- 4.8 Further to Recommendation 4.7, the organic waste management strategy be developed against the backdrop of implementing an appropriate provincial landfill ban for organic waste in five years.
- 4.9 Wherever feasible, a mandatory recycling program be implemented across the province, followed by enactment of a landfill ban after no later than one year's full implementation; further, that the order of priority of communities and regions to participate in the mandatory program ideally be determined according to the degree of waste diversion to be achieved or system efficiencies realized.
- 4.10 Appropriate mandatory recycling programs for the Industrial, Commercial and Institutional (ICI) sector be instituted across the province, following full consultation with industry stakeholders on the implementation details and timing of said program; to be followed by a landfill ban after no later than one year's full implementation.

- 4.11 The Multi-Materials Stewardship Board conduct consultations with appropriate regional waste management authorities and the construction, renovation and demolition (CRD) sector with a view to developing a provincial approach for the management of the CRD waste stream.
- 4.12 Government show leadership through its own actions with the timely implementation of waste management commitments contained in “The Way Forward on Climate Change.”
- 4.13 The use of waste diversion as a key performance indicator for the Provincial Solid Waste Management Strategy be replaced with the indicator measuring waste disposal per capita in kilograms, with a target set once more is known about the details associated with implementation of the recommendations of this report.



CHAPTER 5

REGIONAL WASTE MANAGEMENT OPERATIONS AND GOVERNANCE

5.1 Role of Alternative Technologies in Managing Waste

5.1.1 Introduction

The Provincial Solid Waste Management Strategy calls for landfilling, recycling and composting to be the foundational technologies utilized. These technologies have been the benchmark applied in making decisions on infrastructure and the provision of capital funding from the provincial government. In addressing new infrastructure needs under the Strategy, to date government has invested significant capital in two regional landfills, a network of transfer stations, and two materials recovery facilities (a third materials recovery facility on the west coast of the island is owned and operated by a private operator). Outstanding major new investments include access to modern waste management infrastructure for the remaining regions of the province, and regional organics management potentially.

New technology alternatives have been coming on stream since 2002. Due to this, together with regional concerns over the increasing cost of waste management, the Department of Municipal Affairs and Environment (MAE) engaged Wood Environment and Infrastructure Solutions, a Division of Wood Canada Limited (Wood), to assess the viability of alternative technologies in advancing the goals of the 2002 Waste Management Strategy on the island portion of the province. The final report, entitled “Solid Waste Management Available Technology Analysis,” (Wood Report), is dated August 22, 2019.¹

The Terms of Reference for this report call for a review of the Wood Report to determine whether any existing and proven alternative technology is viable for application in the province. What follows is a summary of the findings of the Wood Report and a commentary on its conclusions.

5.1.2 Summary of Wood Report

The Wood Report begins with an overview of proven, available alternative technologies to landfilling and composting, including thermal and biological treatment options. Thermal treatment options included waste to fuel technologies, waste to energy (WTE) technologies (including micro WTE) and gasification technologies. Biological technologies included anaerobic digestion (including small-scale anaerobic digestion) and mechanical biological treatment technologies. Considering technologies with a minimum of 8,000 operating hours of processing municipal solid waste in other jurisdictions, moving grate WTE, micro WTE and anaerobic digestion were selected from a long list of potential technologies for detailed analyses.

1. Wood Environment and Infrastructure Solutions, “Solid Waste Management Available Technology Analysis,” (August 22, 2019). Available through the Department of Municipal Affairs and Environment.

The Wood Report compares a number of centralized and decentralized scenarios substituting landfilling and composting with the selected WTE and anaerobic digestion technologies on the island portion of the province. It is important to note that WTE cannot eliminate the need for landfills, but can reduce the volume of waste going to landfill by more than 70%. An assessment of options that excluded any separate organics processing (i.e., no composting) is also completed. The financial models estimate the impacts for capital investments, operational costs, transportation costs and potential income from electricity generation.

The Wood report analyzes five principal waste management scenarios for alternative technology application and variations thereon:

Option 1: Using WTE technology at the two regional waste sites at Robin Hood Bay and Norris Arm. A variant of this scenario replaced composting with anaerobic digestion technology and another variant assumed no separate organics processing (organics would go to WTE).

Option 2: Increasing to four the number of regions using WTE to recover energy from residual waste (i.e., Robin Hood Bay, Norris Arm, Western Region and Northern Peninsula Region). A variant of this scenario replaced composting with anaerobic digestion technology and another variant assumed no separate organics processing (organics would go to WTE).

Option 3: Constructing and operating one WTE facility, in the Eastern Region to service the Eastern region only. A variant of this scenario assumed no separate organics processing (organics would go to WTE).

Option 4: Constructing and operating a composting facility to service the Western Region. A variant of this scenario replaced composting with anaerobic digestion technology.

Option 5: Hauling waste from the Northern Peninsula Region to a WTE facility at Norris Arm. Option 5A processes waste from the Northern Peninsula using a micro WTE facility located in the region.

Using a 40-year planning horizon, the Wood Report concludes that the adoption of WTE technology for the treatment of all residual waste generated on the island part of the province (Options 1 and 2) could reduce waste going to landfills by as much as 70-90%. The use of WTE technology to treat waste currently disposed at Robin Hood Bay (Option 3) could prevent over 50% of waste going to landfill.

From a strategic provincial perspective, the Wood Report presents the following scenario as potentially viable for the island portion of the province:

- With a long-term power purchase agreement at ~\$0.20 per kilowatt hour, a WTE facility in the eastern region would be as, or more, economical than the current provincial waste management plan.
- A composting facility in the Western Region may be economically preferred over transporting organic waste to Norris Arm, depending on the final location of composting facilities (e.g., co-location with transfer station); additionally, with a long-term

power purchase agreement at \$0.15 per kilowatt hour, an anaerobic digestion facility may be economically preferred over a compost facility in the Western Region.

- The most cost-effective option for the Northern Peninsula Region is to haul its residual waste to Norris Arm.
- Composting is one of the most economical options for waste diversion from landfills; it can also provide great environmental return - depending on the technology employed, composting can produce up to 300 kg of CO₂e/ per tonne of waste less than landfilling; WTE facilities can produce 40 kg less than landfilling.

5.1.3 Conclusions

A technical committee comprised of officials from the departments MAE and Service NL, together with the Multi-Materials Stewardship Board (MMSB), assessed the report and accepted its findings.

On the matter of possible technologies potentially employable for the Northern Peninsula region, Wood did not identify any “micro” waste technology meeting Newfoundland and Labrador’s environmental standards and more economical than diverting local composting materials and hauling the residual waste to Norris Arm. Applying the Wood Report analysis to other regions similar (or smaller) than the Northern Peninsula, the technical committee concluded that WTE technology also would not be economically preferred over current waste management plans for these areas. As noted in Section 5.2.5.3 below, the consultant reviewing waste management approaches for northern Labrador reached the same conclusion for that area.

As the world of waste management technology continues to evolve, it is important to keep apprised of key developments, as alternate technologies could represent new potential down the road as existing major landfills reach the end of their useful lives.

5.2 Assessment of Regional Waste Management Framework

5.2.1 Overview

As highlighted in Chapter 2, there are 12 waste management regions designated currently in the province - eight on the island portion and four in Labrador. On the island, regional waste management boards are to oversee delivery of waste management in each region. The provincial government provides capital funds for the initial waste management infrastructure. Responsibility for system operations and all costs beyond that reside with each regional service board. Five of eight regional boards on the island are in place and active, including the Northern Peninsula, Western, Central, Burin Peninsula and Eastern regions. Of the five active boards, three operate or transfer waste to a modern waste disposal facility.

Two regional modern waste management facilities, in the Eastern Region at Robin Hood Bay and Central Region at Norris Arm, are intended to be the only facilities on the island permitted to accept waste for final disposal. Remaining regions on the island are expected to develop the systems necessary to support the transportation of waste to the appropriate disposal site. As currently contemplated, waste designated for Norris Arm includes the Northern Peninsula, Western, Coast of Bays, Baie Verte Peninsula-Green Bay and Central regions. Waste designated for Robin Hood Bay includes the Discovery (Bonavista Peninsula), Burin Peninsula and Eastern regions. The Strategy was not prescriptive for Labrador.

Over 80% of the island population now has access to modern waste management services, however, this effort has focused on only three of the eight regions, namely eastern, central and western. While substantial consolidation of waste disposal sites has occurred in some of the other regions, definitive plans for moving the overall Strategy forward in the remaining five regions on the island are elusive. Waste management services in the western and central regions of Labrador are led by the large municipalities in those regions, Labrador West and Happy Valley-Goose Bay respectively. The other two waste management regions in Labrador, northern and southern Labrador, generally are in a holding pattern, awaiting final direction from the provincial government on the waste management system and related infrastructure it will finance.

Numerous studies have been commissioned over the years by or for the 12 waste management regions on how to implement the Strategy. Unfortunately, the recommendations in some of the consultant reports are not acceptable to the regions concerned, notably because costs will increase beyond what they consider reasonable and affordable. Many landfills destined for closure under the Strategy are now reaching a critical point (e.g., space and cover constraints) where something has to be done, and soon. Site visits conducted across the province as part of this review confirm the poor state of many of them. Local officials acknowledge landfills need to close. The question is what to do in the alternative.

For regions on the island portion of the province, a complicating factor associated with fees is the issue of capital reserves. The provincial government agreed to fund 100% of the initial infrastructure associated with regional waste management, with no additional commitment for the replacement of equipment, buildings, landfill cells or landfill capping. Regions have been able to build enough reserves for the replacement of assets needed to date; however, select long-term replacement costs are either partially, or not funded by current fee structures.

Against this backdrop, this chapter aims to chart a path forward for each region. Relevant consultant studies are reviewed and additional analyses presented, with the objective of identifying the most economical and efficient options for moving regional and provincial waste management agendas forward.

5.2.2 Waste Currently Designated for Norris Arm

5.2.2.1 Central Waste Management Region

Population and community information provided by MAE² indicates that the Central Region, governed by the Central Regional Service Board (Central Board), serves over 72,000 residents in 104 communities (i.e., municipalities, local service districts and unincorporated areas). It is a region well advanced in implementation of the Strategy. The region offers multiple recycling programs and has a modern second-generation regional landfill and seven transfer stations. Forty-two local landfills closed since 2002. The Central Board provides waste collection services, including curbside recycling, to almost 60% of households in the region, and operates a regional materials recovery facility, which receives, prepares and markets recyclable materials. The provincial government invested over \$60 million to establish this infrastructure.

2. Community and population data referenced in Chapter 5 provided by the Department of Municipal Affairs and Environment. Population numbers sourced from 2016 census data.

The current tipping fee at the Norris Arm landfill is \$136 per metric tonne. Household fees vary in the Central Region according to waste generation. Using 2018 scale data on residential curbside waste generation, the average annual household fee paid by residents in the region is calculated at approximately \$150.

An examination of the tipping fee amount indicates that only a portion of the capital reserves required to replace infrastructure is covered within the existing fee structure. Factoring in a full contribution to capital reserves would adjust the tipping fee upwards to an estimated \$182 a metric tonne, an increase of \$46. The average annual household fee increases to \$180.



Credit: This and following images in this section of report courtesy of Dillon Consulting

5.2.2.2 Western Waste Management Region

The Western Region of the island portion of the province has a population just over 75,000 in 115 communities. Initially contemplated for this region was a waste management hub to service the west and north coasts of the island, inclusive of a modern regional landfill and related waste management infrastructure. Through subsequent analyses, the most economical approach to waste management was determined to be transportation of waste to the existing facility at Norris Arm. A revised waste management plan for the Western Region was implemented accordingly, with six transfer stations and related infrastructure established at a cost of approximately \$46 million. The provincial government financed this infrastructure.

The Western Regional Service Board (Western Board) opts not to offer waste collection services, so individual municipalities provide this service and deposit waste at transfer stations. The region introduced mandatory curbside recycling in 2018, supported by the establishment of a privately owned and operated materials recovery facility in Corner Brook in the spring of 2019. Of the 35 landfills in operation in 2002, only two small sites remain. With the completion of the transfer station network, the transporting of waste to Norris Arm began in 2018. The Western Board charges a tipping fee of \$164 per tonne at its transfer stations. Households in the region report paying \$160-\$220 annually (average \$188) for collection and waste disposal combined.

Earlier this year, the Western Board and Central Board held protracted negotiations on the tipping fee the Western Board should pay at Norris Arm. To assist the negotiations, Government commissioned a report by consultants White and Abbott,³ recommending a tipping fee of \$53.58



3. White and Abbott, "Financial Analysis: Cost-Sharing of the Central Region Landfill," (December 6, 2018). Available through the Department of Municipal Affairs and Environment.

per tonne. This amount covers the Western Board's share of relevant operating costs and a contribution to the capital reserve fund for Norris Arm. An interim arrangement put in place to December 31, 2020 sees the Western Board paying a total tipping fee of \$30.64 per tonne. The provincial government agreed to fund the next landfill cell, negating the need for the two boards to contribute related capital reserves for the next five years.

As with the Central Board, there is an issue with the amount of capital reserves being set aside by the Western Board. Fully funding its capital reserve requirements would increase the tipping fee per tonne from \$164 to \$178, and bring the average household fee to about \$196.

5.2.2.3 Northern Peninsula Waste Management Region

The Northern Peninsula has a population of approximately 11,600 living in 52 communities. The 15 waste disposal sites in 2002 are reduced to four. The Northern Peninsula Regional Service Board (Norpen) delivers regional curbside waste collection services (no sorting for recyclables) and offers diversion programs for metals and hazardous waste and a pilot project for organic waste. The current annual household fee is \$115.50. Converting Norpen's fees currently charged by volume to tonnage the tipping fee calculates at approximately \$193 per tonne.



Norpen commissioned the consultant BAE-Newplan Group to determine the long-term infrastructure requirements supporting the eventual transportation of regional waste to Norris Arm and the best approach for curbside collection.⁴ The lowest operational cost option in the 2016 report estimates an annual household fee of \$298. Removing the operational cost of the compost facility and correcting for a calculation error brings the household fee to \$309 and the tipping fee to \$304. The lowest operating cost option in NorPen's study was a four-transfer station model at an estimated capital cost in 2016 of \$19 million.

Norpen's Board of Directors advises such fees are not affordable for many of its residents. They note having accounts receivable issues now with a lower fee. That said, the Board recognizes something needs to be done with landfills in the region.

Additional analysis conducted for this report examined the option of developing a regional waste disposal facility or applying technology solutions as a means to reduce costs. The costs associated with operating a landfill on the Northern Peninsula would see household fees go to \$317 and tipping fees to \$269 per tonne. As Section 5.1 above discussed, there are no current technology solutions economically viable for this region, at least in the short to medium term.

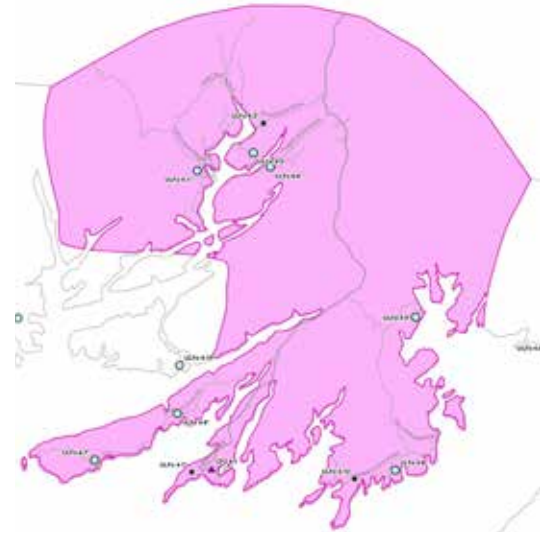
4. BAE-Newplan Group Limited, "Solid Waste Management Study Draft Northern Peninsula Regional Service Board," (June 7, 2016). Available through the Department of Municipal Affairs and Environment.



Another option explored was merging Norpen's operations with that of the Central Board. The annual household fee estimate to do this is about \$273, with a tipping fee of \$262 per tonne with 100% of annualized capital reserves included.

5.2.2.4 Coast of Bays Waste Management Region

The Coast of Bays Region has a population of about 7,100 people. Fourteen communities are located along this area of the south coast. Little advancement in waste management practices has occurred in the region. All of the original thirteen landfills remain operational. Individual communities generally provide curbside waste collection services (no sorting), and some are involved in community-based composting. Annual household fees charged in the region range from \$60 to \$213, with a weighted average of \$84.



The lowest cost operating option for transporting waste from the region to Norris Arm, as per the 2016 BAE-Newplan Group Report, calculates an annual household fee of \$262 and a tipping fee per tonne of \$160.⁵ With compost facility operating costs removed, the revised household and tipping fees are \$263 and \$144 respectively.

A separate cost analysis completed as part of this report's review process included combining the operations of the Coast of Bays Region with the Central Region. The analysis suggests an annual household fee of \$214 and a tipping fee of \$161 per tonne, with 100% annualized capital reserves included.

5.2.2.5 Baie Verte Peninsula-Green Bay Waste Management Region

The population of the Baie Verte Peninsula–Green Bay region is just over 13,200 residents in a combined 41 municipalities, local service districts and unincorporated areas. Without an active regional service board, the two sub-regions of Baie Verte and Green Bay run waste operations independently. With 25 landfills in 2002, the region has 12 sites currently. The reductions in landfills have come from the Green Bay sub-region.

The Green Bay sub-region, the larger of the two sub-regions with about 57% of the peninsula's total population, has long had a formal waste management authority (Green Bay Waste Authority) in place to oversee delivery of waste management programs and services. It provides curbside recycling programs, and owns and operates an unlined landfill in South Brook, servicing up to 18 communities. The Green Bay Waste Authority charges household fees at a rate of \$52.92 per person. Assuming an average of 2.1 persons per household, the annual household fee calculates at \$111. The tipping fee at South Brook

5. BAE-Newplan Group Limited, "Coast of Bays Solid Waste Management Strategy Final Report," (March 2016). Available through the Department of Municipal Affairs and Environment.

is currently based on volume. Remaining communities in the region reportedly pay considerably less fees, due to operating legacy landfills and providing basic waste collection services generally.

The Green Bay Waste Authority indicates a high level of satisfaction with their current waste management practices and infrastructure. Authority representatives indicate a willingness to consider expanding services and landfill access to accommodate the needs of the Baie Verte sub-region. Using an unlined landfill is contrary to the Strategy.

In 2016, SNC Lavalin authored a report on the proposal to transport all waste from the entire Baie Verte Peninsula-Green Bay region to Norris Arm. The analysis estimates the lowest cost option to be annual fee of \$330 per household, and a tipping fee of \$211 per tonne.⁶ Removal of compost facility operating costs brings the household fee to \$309 and the tipping fee to \$214.

The costs of integrating the entirety of the Baie Verte Peninsula-Green Bay region with the operations of Central could see fees of \$202 per household and \$126 per tonne, with 100% annualized capital reserves included.

5.2.2.6 Five Region Consolidation

The scenarios above present estimates for integrating the operations of the Central Region with each individual region. This section gives consideration to an interrelationship between all five regions.

Household fees are generally low in many communities within these regions now, reflective of the minimal level of infrastructure and services now in place. At the time the Strategy was launched, there was an expectation that the Strategy could be implemented across the island portion of the province for no more than \$200 per household per annum. Some communities, in the western region for example, are already paying more than this amount, and the lowest cost scenarios presented above suggest the same result for many regions when they implement new waste management plans.

The impact capital reserves have on household and tipping fees warrants discussion at this point. Regional service boards are responsible for all current and future operating and capital costs once the initial infrastructure, paid by the provincial government, is established. Factoring in the cost of full capital reserves can increase household and tipping fees significantly.



6. SNC Lavalin, "Solid Waste Management Study Baie Verte – Green Bay Draft Report," (December 21, 2016). Available through the Department of Municipal Affairs and Environment.



The reality at the moment is a system of costs that many consider unsustainable under the existing financial arrangement with the provincial government. Either fees have to increase substantially or the provincial government has to assist financially. To address some of the financial pressure, the provincial government could enable regional service boards to apply for incremental funding for major capital works on the same cost-sharing basis as municipalities under the Provincial Capital Works Program (70:30 provincial/municipal ratio). Eligible capital items might include buildings, trailers, new cells and cell capping, but not operational equipment, such as collection trucks and landfill/transfer station equipment. Government can continue to fund initial infrastructure at 100%, as at present.

Applying a reduced annualized capital reserves requirement to 30% to the scenario merging all five regions designated to dispose of waste at Norris Arm, namely the Northern Peninsula, Western, Baie Verte Peninsula-Green Bay, Coast of Bays and Central regions, the resultant annual household fee will be \$188 and the tipping fee will be \$167 per tonne. This represents the most economical option for the delivery of waste management for all five regions combined. As Section 5.2.4 below indicates, applying an island-wide approach could result in further fee reductions for the five regions.

A summary of scenarios presented above is contained in Attachment 5.1.

5.2.3 Waste Currently Designated for Robin Hood Bay

5.2.3.1 Eastern Waste Management Region

The Eastern Region, governed by the Eastern Regional Service Board (Eastern Board), has a population over 283,000 in 191 communities. As with the Central Region, the Eastern Region has been advancing the Strategy, with many of the same services and modern waste management infrastructure. Forty-six landfills in the region have closed. Two landfills remain in the region. A modern regional landfill owned and operated by the City of St. John's is located at Robin Hood Bay. The provincial government invested over \$46 million in upgrades to this facility, which now features a landfill with methane and leachate systems, a residential drop-off, materials recovery facility, and a waste transfer station located in Clarenville. A second landfill is located at Sunnyside, dedicated to industrial organic waste generators. The long-term viability of the Sunnyside site will be reviewed as part of the consultations on an organics strategy proposed in Chapter 4.



The Eastern Board provides waste collection services for many of the smaller communities in the region, the larger ones do their own due to proximity to the regional site. The Eastern Board serves about 30% of households in the region. For the communities serviced, the Eastern Board charges an annual household fee of \$180. The tipping fee at Robin Hood Bay is currently \$67.60, but increases to \$75 on April 1, 2020.

5.2.3.2 Burin Peninsula Waste Management Region

The Burin Peninsula has a population of about 20,000 in 104 communities (i.e., municipalities, local service districts and unincorporated areas). Eighteen waste disposal sites closed since 2002; one landfill (unlined) remains at Marystown. The Burin Peninsula Regional Service Board (Burin Board) offers weekly curbside waste collection, scheduled bulk pick-ups, diversion programs for metals, electronic waste, paint and household hazardous waste, and curbside collection of compost and fibre waste for the Town of Grand Bank. The annual household fee is \$170 and the tipping fee is \$99 per metric tonne.



The Burin Board is interested in having a modern landfill in the region as an alternative to transporting waste to Robin Hood Bay. In a study commissioned by the Burin Board, Edwards and Associates Limited (Edwards Report)⁷ estimated a regional landfill to be the lowest operating cost option for the region compared to transporting waste to the Eastern regional landfill. Estimated fees presented in the report are \$201 (annual household fee) and \$96 per tonne (tipping fee).

As part of additional analyses completed for this report, AECOM Canada Ltd. was contracted to peer review the Edwards Report.⁸ Conclusions vary with that of the Edwards Report. It should be noted that the numbers in the Edwards Report were prepared based on a conceptual landfill and leachate system, and not detailed specifications.

AECOM suggests that the capital costs estimated in the Edwards Report could be under-estimated by over 150% and annual operating costs by over 10%. Recalculated household and tipping fees are \$237 (from \$201) and \$147 (from \$96) respectively for a regional landfill scenario.

Additionally, the leachate treatment system costed by Edwards is a Blivet system, which is widely used in wastewater treatment applications in the province, but not municipal solid waste. AECOM reviewed the proposed technology to determine whether it can manage the expected leachate quality and quantity ranges. The concentrations of both organic and inorganic constituents in landfill leachate are generally much higher than municipal wastewater. AECOM suggests the Blivet system design does not fully account for the organic load or removal of total nitrogen, and the system may struggle to consistently meet effluent discharge requirements. These factors also significantly impact the size of the treatment system. The estimated capital and operating costs for the Blivet system may be low if the system did not fully account for the expected leachate loads.

7. Edwards and Associates, "Burin Peninsula Regional Waste Management Study, 2008 Final Report," (January 19, 2008). Available through the Department of Municipal Affairs and Environment.

8. AECOM Canada Ltd., "Peer Review of Costs for Proposed Landfill Site on the Burin Peninsula," (December 19, 2019). Available through the Department of Municipal Affairs and Environment.

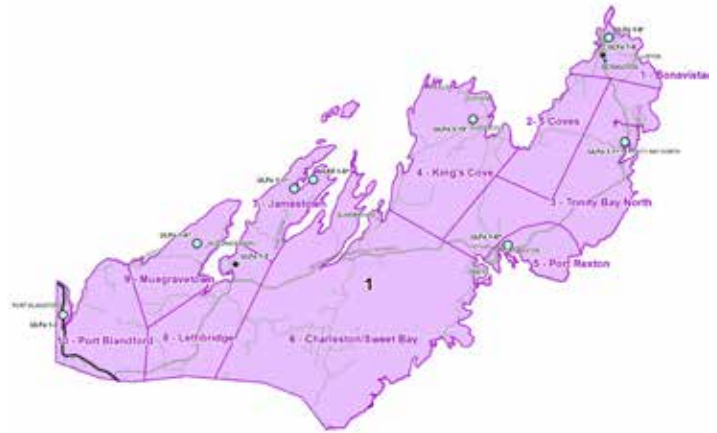


AECOM agrees with a conclusion that the location being contemplated for the proposed site (proximate to the existing landfill location) may be unsuitable for a landfill due to high water content in and around the area.

In considering other waste management approaches for the region, a proposal integrating the waste management operations of the Burin Peninsula region and the Eastern Board was analyzed. This proposal represents a more economical option still – an annual household fee of \$207 and \$126 tipping fee per tonne, with full capital reserves factored in.

5.2.3.3 Discovery (Bonavista Peninsula) Waste Management Region

The population of the Discovery Region sits around 9,800 people residing in 40 communities on the Bonavista Peninsula. Similar to other smaller and rural regions, little progress on Strategy implementation has occurred, primarily due to concerns about implementation costs. One of ten landfills in the region closed since 2002. Several communities use the same contractor for basic household waste collection services. Annual household and tipping fees vary widely in the region.



A 2014 BAE-Newplan report estimates an annual household fee of \$230 for a proposal to transport waste to Robin Hood Bay with supporting local facilities and programs. The tipping fee is \$87.60 (Clareville transfer station).⁹ A more economical option for the region is to integrate its operations with that of the Eastern Board. The annual household fee reduces to \$191. The tipping fee remains unchanged.

5.2.3.4 Three Region Consolidation

One additional option reviewed was the merger of the waste management activities of the Eastern, Burin Peninsula and Discovery regions. If capital reserve requirements reduce to 30%, as discussed above in Section 5.2.2.6, the annual household fee drops to \$183 and the tipping fee to \$65 per tonne. This represents the most economical option for the delivery of waste management in a three-region scenario. As Section 5.2.4 below indicates, applying an island-wide approach could see further fee reductions for these three regions.

A summary of the scenarios presented above is also contained in Attachment 5.1.

9. BAE-Newplan, "Waste Management Plan – Financial Analysis Final Report Discovery Regional Service Board," (February 3, 2015). Available through the Department of Municipal Affairs and Environment.

5.2.4 Conclusions – Waste Management on the Island

A final option reviewed was the impact on fees associated with the consolidation of all regions across the entire island portion of the province. Preliminary analysis suggests this scenario could represent the most economical option for all regions on the island combined. Factoring in capital reserve requirements at 30%, the annual household fee approximates \$183, and the tipping fee could reduce substantially, to \$103 approximately.

The benefit of a one region model is the ability to capitalize on the full scope of synergies possible across the entire waste management system on the island, and maximize collaboration amongst all areas. It also supports the development and implementation of a consistent set of programs and services across the island and the application of fees in a consistent manner for all. Additionally, such a proposal can realize more streamlined (yet effective) accountability and reporting.

While the option of integrating all waste management activities on the island into one system could represent the most attractive option economically for the island as a whole, it is not recommended for implementation, at least in the short term. During consultations, all regional service boards cited concerns with this approach. Buy-in is important. Such a multi-regional consolidation will also take considerable time to plan and implement, and be very disruptive across the entire system in the meantime. It could potentially delay by as much as a year the ability to move forward with further implementation of anything meaningful on the Strategy. This is time many communities cannot afford in having their landfill issues addressed. It is also time better spent actually advancing the provincial waste management agenda, such as the industry-led packaging and printed paper program, which can bring millions in new revenues annually to support system costs.

The recommended option at this point in time is to move forward with a two-system approach on the island, integrating waste management activities for all regional waste going to Norris Arm under one system, and integrating activities for all waste destined for Robin Hood Bay under another. This proposal, supported by a new financial arrangement with the provincial government on cost-sharing capital requirements, addresses the concern about system financial sustainability. Further, aligning regions and operations by final disposal location can be implemented readily, and would be the operational path followed under a one region system in any event. Importantly, this model provides opportunity for each of the two regions to offer a suite of waste management programs and services at relatively consistent household fees for all.

It is important to note that the cost estimates in Section 5.2 above generally are conservative. They do not reflect all potential cost savings achievable from consolidating multiple regions, as a detailed operational and financial assessment of each region for all efficiencies and the like was not completed. Further detailed planning and operational analysis carried out as part of the process of combining regional operations will surely identify additional cost savings.

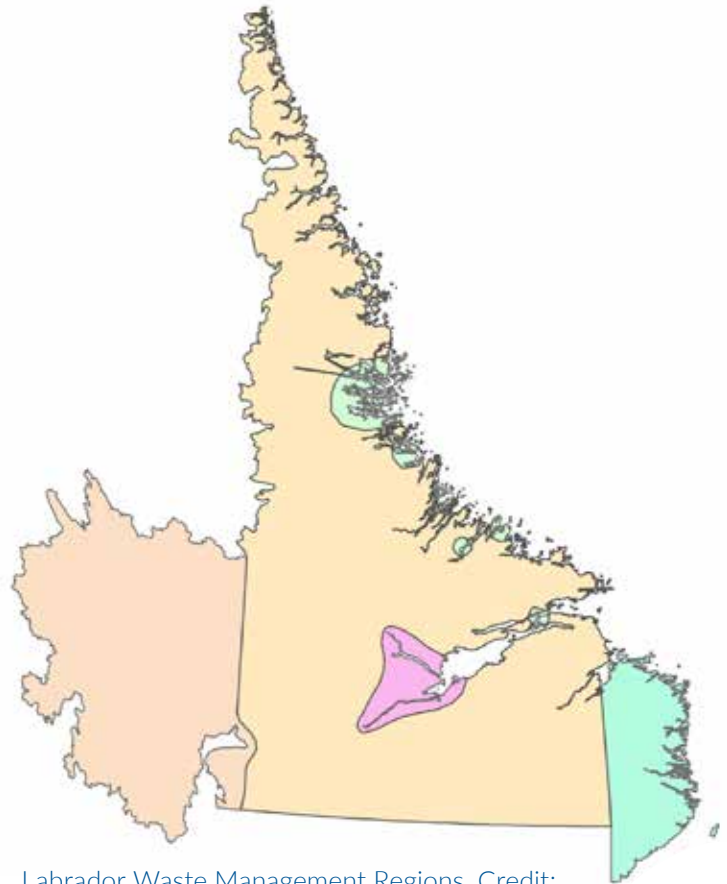
5.2.5 Waste Management in Labrador

5.2.5.1 Western Labrador Waste Management Region

The Western Labrador Region is home to approximately 9,800 people, comprising the towns of Labrador City and Wabush and outlying areas. Curbside collection services are provided, along with a public drop-off and waste diversion service at the landfill location, for materials such as metals, electronics, paint and household hazardous waste. Using 2016 landfilling and waste collection costs, annual household fees calculate at approximately \$259. The tipping fee is \$95 per tonne.

A new waste management facility was constructed for the Labrador West region in 2012, located just outside the Town of Labrador City. The current landfill is a continuation of the temporary landfill constructed with the closing of the waste incinerator approximately seven years ago. The landfill is not lined and does not contain any leachate collection and treatment (treatment is by natural attenuation).

If the existing site can be upgraded to accommodate a lined landfill with leachate treatment, a lined site to service Labrador West warrants attention. Assuming the current site can be upgraded to a lined site (pending site assessment), the operating cost of a lined landfill in the region is estimated at \$147 per tonne and a household fee of \$279. At a minimum, further analysis would be required on the appropriate leachate treatment system for the climate and leachate characteristics in Labrador West.



Labrador Waste Management Regions. Credit: Department of MAE

5.2.5.2 Central Labrador Waste Management Region

The Central Labrador Region comprises the communities of Happy Valley-Goose Bay, Mud Lake, North West River and the First Nation's Community of Sheshatshui. The combined population is about 9,200 people. Two landfills operate in the region, at Happy Valley-Goose Bay and a small one for the 50+ residents of Mud Lake.

At Happy Valley-Goose Bay, a one-stream residential waste collection service is provided along with public drop-off at the landfill for bulk waste and some recyclables (e.g., metals, electronics, paint). The estimated annual household fee approximates \$74. The estimated per tonne tipping fee is \$11, based on the current volumetric fee structure.

A study by SNC Lavalin in 2016¹⁰ reviews the most viable options to address solid waste management needs for the region. Upgrading the existing landfill site (weigh scales, garage, equipment, fencing and collection equipment) is estimated to increase the annual household fee to \$156, with a corresponding tipping fee of \$63.

A scenario involving the addition of a liner and leachate collection and treatment system at the landfill was considered. These additional costs increase the annual household fee to \$216 and the tipping fee per tonne to \$132. Given the size of the population served and fees proposed for the island part of the province, this option warrants further analysis.

5.2.5.3 Northern Labrador Waste Management Region

The Northern Labrador Region comprises the Innu community of Natuashish and the five Inuit communities of Rigolet, Makkovik, Postville, Hopedale and Nain. As the federal government supports the Innu community, the remainder of this section focuses on the Inuit communities only.

The estimated population of the five communities approximates 2,400. The communities are not accessible by road, and coastal ferry services operate during summer months. Waste is collected two to five times weekly depending on the community and season. Garbage collection is more frequent in this region due primarily to the prominence of wildlife. Waste collection is by truck, all-terrain vehicle and/or snowmobile/sled (winter). Each of the five communities operates its own landfill.

A report produced in 2017 by Aivek Stantec¹¹ describes many issues facing the various community landfills, including lack of capacity, cover material and locations too close to airports, communities and/or open water. All five communities burn waste during the winter, but Nain burns year-round. Total waste management costs for collection and disposal, reported in the Aivek Report, range from \$314 to \$1045 per household currently. Actual household amounts paid are reported to be under \$100 for most communities.

The conclusion of the Aivek Stantec report supports having each of the five communities continue to manage its own waste, with significant site improvements at some sites and relocation of others. Securing long-term landfilling capacity is paramount, by either upgrading existing sites (Rigolet, Postville, Hopedale, Nain) and/or by developing new sites (Postville, Makkovik, Nain). Aivek Stantec analyzed alternatives such as a centralized waste disposal facility and incineration and concluded such options are impractical and uneconomical for the communities and region. Aivek Stantec notes the importance of management of hazardous waste, elimination of open burning and landfill optimization through waste diversion.

10. SNC Lavalin, "Solid Waste Management Study Central Labrador Waste Management," (January 13, 2016). Available through the Department of Municipal Affairs and Environment.

11. Aivek Stantec Ltd Partnership, "Solid Waste Management Study – Northern Labrador Region: A Sustainable Waste Management Strategy for Nunatsiavut," (December 21, 2017). Available through the Department of Municipal Affairs and Environment.

This report endorses the above conclusions, and suggests discussions with the communities resume accordingly.

5.2.5.4 Southern Labrador Waste Management Region

The population of the Southern Labrador Region is about 5,600 people residing in 20 communities. The region has three notable sub-regions, namely the Straits (south), Southeast (central) and the Town of Cartwright (north). One-stream residential waste collection is generally the norm for most communities, and some separation of recyclables occurs at landfills. Twelve landfills operate throughout the region. Current tipping fees and annual household fees vary throughout the region, with many communities charging under \$100 for the latter.

A consultant report prepared in 2010 (updated in 2013) by Hatch Mott MacDonald¹² proposed a waste management approach for the region involving centralization of final waste disposal at one facility. The optimal location suggested for the waste disposal facility (unlined) is mid-way between Mary's Harbour and Port Hope Simpson, with access directly from Route 510. Instead of transfer stations are community dumpsters. The estimated annual household fee is \$282, with a tipping fee of \$75 per tonne. A two-landfill system for the region calculates at \$60 more per household. One disposal facility may result in higher transportation distances, but the savings are over-shadowed by higher operational costs related to running two sites.

A project description for a centralized, unlined waste disposal site was registered under the **Environmental Assessment (EA) Act** by the Labrador Straits Waste Disposal Inc., on behalf of the Southern Labrador Waste Management Committee, in June 2016. The project was released from the EA process on August 4, 2017, clearing the way for implementation. Opposition to the plan then and now halts forward movement.

Two of the original concerns include increased costs and impacts of the waste disposal site on salmon and other fishing rivers. A more recent concern is the impact of winter road closures (primarily between Red Bay and Lodge Bay) on the transportation of waste to the regional landfill by communities south of Red Bay.

Costs associated with the proposed waste management system are much higher than residents now pay. The reality is that modern waste management will cost all residents in the province more, some much more. According to the Environmental Assessment Branch of the Department of MAE, water and fisheries issues were assessed during the EA process. It attached two conditions to the project release, namely site drainage and groundwater monitoring plans, to mitigate these issues. Increasing environmental protection by having a second generation landfill and full leachate system will drive up costs considerably more.

12. Hatch Mott MacDonald, "Memo: Revised Cost Model for the Labrador Region Solid Waste Management Plan," (February 1, 2011) and Hatch Mott MacDonald, "Memo: Southern Labrador Waste Management Study," (March 19, 2013). Available through the Department of Municipal Affairs and Environment.

Statistics provided by the provincial Department of Transportation and Works on winter road closures in the Red Bay to Lodge Bay area are presented in Attachment 5.2. Several road closures occur annually in this area in the winter months. Ideally, it might be preferred to have two waste disposal sites for the region, north and south of Lodge Bay approximate. Such an alternative is not financially practical, however, given the high costs to be allocated over such a small population. Weather conditions will be challenging at times, yes, but proper attention to waste collection and transportation logistical planning should mitigate the issues sufficiently.

5.2.6 Finalizing Waste Management Options

Several of the proposals presented above in Section 5.2.2 through 5.2.5 have not been supported by affected regions in the past or discussed with regional representatives recently. Before final implementation, therefore, a renewed dialogue with them should occur. The approach taken with these discussions and final decision-making should be with a sense of urgency by all concerned, however, as many communities need timely solutions to their waste issues, and further progress on waste management will continue to stall otherwise.

5.3 System Governance

5.3.1 On the Island

The above sections discuss the most economical and efficient options for future waste management in the province. Concerning operations on the island, it is proposed that the current eight waste management regions on the island portion of the province be reduced to two regions. The activities in the four western-most regions on the island should be integrated with those of the central waste management region under one system - this includes the Northern Peninsula, Western, Coast of Bays and Baie Verte Peninsula-Green Bay areas (together the Western/Central Region). The remaining three regions, namely the Burin Peninsula, Discovery and Eastern, can combine as the second region (Eastern Region).

Concerning governance in the two new regions, it is suggested that each new Board comprise up to 18 members, including a Chairperson, the same as regional health authorities. To support the board appointments process, the Minister of Municipal Affairs and Environment will apportion each of the two regions into sub-regions as per the **Regional Service Boards Act**. Regional Advisory Committees should be established in each sub-region. Once in place, these committees can elect their representative(s) to the regional board. These advisory committees offer an important vehicle for regional board staff to undertake ongoing local engagement, and with which elected representatives can consult regularly. Lack of consultation and engagement with area residents and communities was a concern raised by several respondents during the consultation process. It is important that elected representatives realize, however, that, while they represent a sub-region on the regional board, they are also responsible to govern in the best interest of the overall region.

To expedite implementation of the governance model and appointment of board members to begin, for the new Western/Central Regional Board for example, the waste management region could be divided into five sub-regions, aligned with the existing regional service board structures. Appointments to the regional board could comprise up to five members each from the western and central sub-regions, two members each from the Northern Peninsula, Baie Verte Peninsula-Green Bay and Coast of Bays areas, and a chairperson appointed by the Lieutenant-Governor in Council. The existing regional service boards could serve initially as the regional advisory committees, and interim appointments to the new regional board selected from their membership. Appointments to the Eastern Regional Board can be handled in a similar matter.

5.3.2 Labrador

Section 5.2.5 supports the current systems of waste management operating in Labrador for three of the four waste management regions. From a governance lens, no formal changes are deemed required either. These include the current waste management arrangements between: (1) Towns of Labrador City and Wabush in western Labrador; (2) Happy Valley-Goose Bay and surrounding communities in central Labrador; and (3) continued operation of individual waste management systems in each of the five Inuit communities of northern Labrador. Ensuring these three waste management regions have an effective mechanism for ongoing engagement with participating communities, through a Regional Advisory Committee, is the only suggestion.

For the Southern Labrador waste management region, this report supports one regional waste disposal facility and a one regional service board model. The general governance process described above in Section 5.3.1 is relevant to the establishment of the new regional board (with relevant changes) as is the proposal for regional advisory committees.

5.4 Other Policy Considerations

5.4.1 Discretionary Participation in Regional Services

An issue that arose early in the Strategy review process was the question of which entity (i.e., local governments or regional service boards) has final authority on waste management. The feedback provided in the public consultations gave no clear position upon which to clarify the expectation here; responses were split almost equally on whether communities should have the ability to opt out of regional services. Perhaps not surprising, most regional service boards believe communities should not be able to opt-out of a regional service, as doing so undermines the economies of scale inherent in regional service delivery.

Municipalities and local service districts are legislated to deliver waste management services under the **Municipalities Act**. The **Regional Service Boards Act** gives this same mandate to the regional services boards. Municipalities and local service districts are governed by officials elected by their constituents; regional service boards are not. It seems appropriate, then, that elected governments have final decision-making authority on waste management in their communities, including being able to opt out of a regional service. Boards should continue to have final authority over waste management in

unincorporated areas without elected representation.

The above notwithstanding, and depending on circumstances, opting out of a service by communities could potentially undermine the integrity of an overall regional waste management system and/or execution of the provincial Waste Management Strategy. In the Eastern Region, for example, some communities are opting out of regional collection services because recycling is not mandatory and single stream collections less expensive to deliver. Designating minimum levels of service, like the proposal for mandatory recycling, will be important moving forward. There are other scenarios that could have the same consequences, for example, had the dispute on fees between the western and central regional service boards continued unabated.



Curbside recycling in St. John's. Credit: City of St. John's

In the above situations, the Minister of Municipal Affairs and Environment should have the ability to intervene and, if necessary, issue a directive to a municipality or regional service board. The legislative authority for the Minister to do so does not exist in the **Regional Service Boards Act** currently and should. Whether sufficient authority on this matter exists in the **Municipalities Act** should also be reviewed.

5.4.2 Servicing Residences on Unserviced Roads in Unincorporated Areas

In public consultations, no clear consensus emerged on how owners of properties situated on unserviced roads in unincorporated areas (i.e., cabin owners) should be treated in terms of the services they should or should not receive and the fees they should pay.

Over half of the feedback received in the consultations process suggests a consistent household fee apply across the province. A high majority also support having a provincial level policy governing all residential properties situated on unserviced roads in unincorporated areas. Regional service boards generally feel they need to maintain discretion in setting policy for these properties, given the unique situations that can exist in each particular region. A high number of respondents counter these views, suggesting that cabin owners can manage their own waste and not have to pay fees on two residential properties.

In response to an ongoing disagreement between the Eastern Regional Service Board (ERSB) and some cabin owners in that region, the Department of Municipal Affairs and Environment acted as a broker in resolving the dispute. On October 2, 2019, a policy was finalized, summarized as follows:¹³

13. Department of Municipal Affairs and Environment, "Government and Eastern Regional Service Board Agree on Approach to Waste Collection Services," (October 2, 2019). <https://www.releases.gov.nl.ca/releases/2019/mae/1002n04.aspx>. Accessed on December 9, 2019.

1. The ERSB shall not provide mandatory waste collection services to residential properties situated on unserviced roads in unincorporated areas.
2. Notwithstanding Item 1, the ERSB may offer residential properties situated on unserviced roads in unincorporated areas the opportunity to opt-in to the service on an area-by-area basis.
3. If 70 per cent or more of the identified property owners in an unserviced road area indicate they want to receive waste collection services, the ERSB may provide the services for all properties in the area.
4. All properties receiving services in an area shall pay for the services at rates set by the ERSB.
5. Further to Items 2 and 3 above, the ERSB has discretion to define the geographic area for purposes of establishing the boundaries of each unserviced road area.
6. The ERSB shall review with the Department of Municipal Affairs and Environment any unresolved disputes about areas covered by this policy.
7. The period covered by any outstanding fees and interest (i.e. back fees) charged to individuals on their first invoice from Boards shall be limited to a two-year period.

Having considered this matter through a provincial lens, a policy along the lines described above appears appropriate to implement provincially, but only as a guideline, not a de facto directive. Under the policy, if a majority of cabin owners desire waste management services and the regional service board can so provide said services effectively, then it should do so. The policy also enables individual groups of cabin owners and a regional service board sufficient flexibility to develop services acceptable to both parties. Finally, the policy provides a basis upon which to mitigate potential disputes in other regions.

The above policy is specific to the circumstances of the Eastern Region and was finalized only after many months of detailed analysis. There may be situations specific to other regions that warrant exceptions to the policy. Some regional service boards provide no services in these areas and do not plan to do so. To cite another example, several residents of Saint Pierre and Miquelon have cabins on the Burin Peninsula, who cannot legally return home with their waste. It would appear appropriate in this instance for the Burin Peninsula Regional Service Board to collect waste and charge fees for these properties. Any decision to mandate formally this policy should occur after further consultation with the regional boards.

5.4.3 Need for Industrial Strategy

Section 4.3.3.4 addresses opportunities for waste diversion for institutional and commercial waste streams. To date, the industrial sector has not really been a focus under the provincial Strategy from an implementation perspective, with the general approach being to leave the private sector to handle its own waste management needs through separate negotiated arrangements with private contractors or local/regional landfill operators. Many industrial operations have aligned their waste disposal activities with specific waste disposal sites. With the continued reduction of landfills proposed under the Strategy and earlier in this chapter,



Industrial waste deposited at a landfill

it is now important to review the waste management needs of the industrial sector specifically and develop a provincial industrial waste management plan for integration into an overall provincial strategy addressing all waste types. Important in this exercise will be the participation of all relevant industries and government agencies, as the issues are many and varied.

A few examples demonstrate why an industrial waste management plan should be developed and integrated into an overall provincial strategy on waste:

- Each mining operation in the Labrador West region has its own (unlined) landfill, even though they are a very short distance from each other and the relatively new regional landfill in Labrador West. With the increase in new mines planned for the area by 2030 under the provincial government's "The Way Forward on Mineral Development," it would seem opportune to review this sector's waste management needs on a regional basis.
- With the leachate treatment system at Norris Arm being unable to handle high volumes of organic waste, aquaculture "wet" waste around the province is deposited at an unlined landfill at Sunnyside. Such a situation is not appropriate for the long term. "Dry" aquaculture waste, such as nets and feedbags, is deposited at landfills not designed to handle such quantities. The aquaculture industry on the south coast of Newfoundland involves a number of companies and operations, which should set the stage for industry-wide discussions on waste management, and provincial organics waste management too.
- Harbour Authorities across the province are experiencing numerous challenges dealing with the waste generated on fishing and other vessels landing at their piers. Consistent rules are important, given some vessels dock at several piers around the province.

5.5 Recommendations

This chapter on regional waste management operations and governance recommends that:

- 5.1 Subject to further (and timely) regional consultation, legislative amendments be drafted to replace the existing eight waste management regions on the island portion of the province with two newly defined waste management regions:

Region 1 (Western/Central Waste Management Region) covering the geographic areas of the Northern Peninsula, Western, Coast of Bays, Baie Verte Peninsula-Green Bay and Central Regional Service Boards.

Region 2 (Eastern Waste Management Region) covering the geographic areas of the Eastern, Burin Peninsula and Discovery Regional Service Boards.

- 5.2 Legislative amendments be drafted to support the new regional waste management and governance model for the island portion of the province, said framework to include a Regional Service Board comprising up to 18 members and Regional Advisory Committees being established for designated sub-regions.
- 5.3 The current governance model for three of the existing waste management regions in Labrador (excepting Southern Labrador) be confirmed, and a Regional Advisory Committee established in each region to support effective, ongoing engagement with communities across the region.
- 5.4 For Southern Labrador, one regional waste disposal facility service the entire waste management region and one regional service board be established, consistent with the governance approach outlined in Recommendation 5.2.
- 5.5 Regional service boards and waste management authorities be eligible to apply for cost-shared funding in support of capital needs beyond initial core infrastructure requirements, the latter of which the provincial government should continue to fund fully as appropriate.
- 5.6 The Department of Municipal Affairs and Environment review the appropriateness of having the Labrador West regional waste disposal facility and the facility at Happy Valley-Goose Bay upgraded to more modern environmental standards.
- 5.7 Amendments be made to the **Municipalities Act** and the **Regional Service Boards Act** (and any other affected legislation) to clarify that the order of authority for waste management lies firstly with municipalities and local service districts and then with regional service boards; further, that regional service boards have appropriate authority for waste management in unincorporated areas.
- 5.8 Notwithstanding Recommendation 5.7, the **Regional Service Boards Act** (and **Municipalities Act** as necessary) be amended to permit the Minister of Municipal Affairs and Environment to issue directives on waste management matters to regional service boards, municipalities, local service districts and any community should it be in the public interest to do so.
- 5.9 The Department of Municipal Affairs and Environment finalize a Provincial Policy Guideline respecting residential properties situated on unserviced roads in unincorporated areas along the lines described in Section 5.4.2, with the Minister to issue said Guideline to all regional service boards for consideration pursuant to the new legislative authority recommended above in Recommendation 5.8.

Attachment 5.1

Summary of Financial Analysis of Regional Waste Management Options



Tipping and Household Fees by Scenario										
Current										
Tipping Fee (MT)	BV-GB	COB	NorPen	Western	Central	Burin	Discovery	Eastern		
Current - Actual or Estimated	\$ < 100	\$ -	\$ 193	\$ 164	\$ 136	\$ 99	\$ -	\$ 68		
Estimated with Full Reserves Included ¹	N/A	\$ -	\$ 193	\$ 178	\$ 182	\$ 99	\$ -	\$ 68		
Household Fee ²	BV-GB	COB	NorPen	Western	Central	Burin	Discovery	Eastern		
Current - Actual or Estimated	\$ 111	\$ 84	\$ 116	\$ 188	\$ 150	\$ 170	\$ < 100	\$ 180		
Estimated with Full Reserves Included	N/A	N/A	\$ 136	\$ 196	\$ 180	\$ 170	N/A	\$ 180		
Regional Study										
Tipping Fee (MT)	BV-GB	COB	NorPen	Western	Central	Burin	Discovery	Eastern		
Lowest Operating Cost Option ³	\$ 214	\$ 144	\$ 304	N/A	N/A	\$ 96	\$ 88	N/A		
Revised Estimates for Lowest Operating Cost Option ⁴	N/A	N/A	N/A	N/A	N/A	\$ 147	N/A	N/A		
Household Fee	BV-GB	COB	NorPen	Western	Central	Burin	Discovery	Eastern		
Lowest Operating Cost Option	\$ 309	\$ 263	\$ 309	N/A	N/A	\$ 201	\$ 230	N/A		
Revised Estimates for Lowest Operating Cost Option ⁴	N/A	N/A	N/A	N/A	N/A	\$ 237	N/A	N/A		
Assessment of Individual Region Joined with Host Region ⁵										
Tipping Fee (MT)	BV-GB + Central	COB + Central	NorPen + Central	Western	Central (Host)	Burin + Eastern	Discovery + Eastern	Eastern (Host)		
Scenario 1: 100% Capital Reserves Financed by Region	\$ 126	\$ 161	\$ 262	\$ 178	\$ 182	\$ 126	\$ 88	\$ 68		
Scenario 2: 30% of Capital Reserves Financed by Region	\$ 106	\$ 115	\$ 230	\$ 158	\$ 57	\$ 113	\$ 88	\$ 63		
Household Fee	BV-GB + Central	COB + Central	NorPen + Central	Western	Central (Host)	Burin + Eastern	Discovery + Eastern	Eastern (Host)		
Scenario 1: 100% Capital Reserves Financed by Region ⁴	\$ 202	\$ 214	\$ 273	\$ 196	\$ 180	\$ 207	\$ 191	\$ 180		
Scenario 2: 30% of Capital Reserves Financed by Region	\$ 188	\$ 178	\$ 255	\$ 185	\$ 168	\$ 196	\$ 186	\$ 178		
Changes to Governance and Capital Reserve Financing: Two Region Model ⁶										
Tipping Fee (MT)	Region 1									Region 2
Two Region Model : 30% of Capital Reserves Financed by Regions	\$ 167									\$ 65
Household Fee	Region 1									Region 2
Two Region Model : 30% of Capital Reserves Financed by Regions	\$ 188									\$ 183
Changes to Governance and Capital Reserve Financing: One Region Model ⁷										
Tipping Fee (MT)	One Region Model: 30% of Capital Reserves Financed by Region									
One Region Model: 30% of Capital Reserves Financed by Region	\$ 103									
Household Fee	One Region Model: 30% of Capital Reserves Financed by Region									
One Region Model: 30% of Capital Reserves Financed by Region	\$ 183									

Attachment 5.1 Footnotes

1. Full Reserves includes annualized capital replacement costs not covered by the current fee structure for equipment, buildings, future landfill cells and landfill capping.
2. Household fee covers applicable system costs, including such activities as waste collection, recycling and disposal.
3. Compost facility operating costs are deducted from consultant regional studies for consistency of analysis on options. The Northern Peninsula variation also factors in a calculation error in the original study.
4. Revised estimates for Burin Peninsula Region factor in results of AECOM peer review and additional internal analysis.
5. Scenarios reflect the impact on tipping and household fees with individual regions merging with either Central or Eastern Region, factoring in capital reserves funding by regional service boards at 100% and 30% levels. Calculations assume regions will reserve 100% for mobile equipment at landfills, transfer stations and waste recovery facilities, and collection trucks, and 30% for future landfill cells, landfill capping, transfer station buildings, transfer station stationary equipment and transfer trailers.
6. Blended tipping fee and estimated household fee for a two region model – Western/Central and Eastern.
7. Blended tipping fee and estimated household fee for a one region model combining all eight island regions.



Attachment 5.2

Winter Road Closures - Red Bay to Lodge Bay				
Month/ Year	Total Hours Closed	24-Hour Closures (#)	Overnight Closures (#)	Partial Day Closures (#)
Dec 2016	82.5	1	3	4
Jan 2016	41	0	5	2
Feb 2016	42.5	1	0	3
Mar 2016	117	2	3	4
Dec 2017	29	1	2	0
Jan 2017	126.5	0	8	6
Feb 2017	85	1	4	4
Mar 2017	302.5	9	4	3
Apr 2017	22	0	1	1
Jan 2018	101	1	3	4
Feb 2018	134.5	2	4	5
Mar 2018	93	1	3	3
Apr 2018	298	8	5	3
May 2018	19.5	0	1	1
Nov 2019	55	1	2	5
Dec 2019	32.5	1	1	3
Jan 2019	75	2	4	4
Feb 2019	329.5	11	13	4
Mar 2019	262	6	10	8
Apr 2019	229.5	7	11	4

Source: Department of Transportation and Works

CHAPTER 6

STANDARDS AND ENFORCEMENT

6.1 Operating Practices of Regional Service Boards

6.1.1 Service Standards

There exists currently a high level of inconsistency across the province regarding waste management services and operating practices, and the consequential annual fees charged residential property owners and businesses. Some regions have waste diversion programs and curbside recycling programs, while others do not. For those that do, some make recycling mandatory while others are voluntary. Some regional service boards offer residential waste collection services accessed by all communities in the region, while another offers no collection services at all. Some communities have automated garbage collection, while others have no waste pick-up, and require residents and businesses to deliver their waste to the landfills themselves. Some regions have weigh scales at landfills, while most do not. Residential garbage bag weight limits differ from one region or community to another. The current list of inconsistencies in waste management services between communities and regions is extensive.

Without question, services delivered consistently across communities and regions offers tremendous opportunity to maximize overall system efficiencies, performance and costs, and minimize complaints from residents and businesses about being treated unfairly compared to others. Common service standards also enable the fair evaluation and comparison of the performance of all waste authorities. Until decisions about regional service delivery and operations are finalized, as described in Chapters 4 and 5 of this report, developing a set of cohesive provincially based operating standards in waste management will be challenging, but a start can and should be made.

Minimal meetings and dialogue are happening among most of the boards at present. There is much to be gained from joint discussions on such items as operational best practices, consistent service standards and collaboration opportunities. Moreover, as Chapter 4 and 5 just discussed, consolidation of efforts between regions can have a marked impact on the quantity and quality of services delivered province-wide, with more consistency in costs and household fees feasible.



Public drop-off area at Norris Arm. Credit Central Newfoundland Waste Management



6.1.2 Occupational Health and Safety

According to a 2017 article published in the Canadian Occupational Safety Magazine, waste collection workers in New Brunswick are three times more likely to be injured at work compared to other workers.¹ Over the five-year period 2014-2018, WorkplaceNL accepted 420 claims from public works maintenance equipment operators and labourers, including waste collection workers. Total claim costs was \$5.0 million. The most common types of incidents arose from ergonomic hazards, such as lifting (47%), contact with equipment (27%) and falls (18%), resulting in back, head and leg injuries.



Worker handling used oil. Credit: Used Oil Management Association

According to Workplace NL, the annual lost-time incidence rate in municipalities decreased by 12.5 percent in 2018. However, this sector continues to have the highest lost-time injury rate of all sectors in Newfoundland and Labrador. Lifting is the leading hazard for waste collection workers. Some larger municipalities in the province have introduced automated garbage collection, which has had a significant effect on controlling this hazard.

In 2012, the Municipal Safety Council of Newfoundland and Labrador was created to promote and improve occupational health and safety and return-to-work outcomes in the municipal sector. The Council's board of directors consisted of representation from Municipalities NL, Newfoundland and Labrador Federation of Labour, Canadian Union of Public Employees, Newfoundland and Labrador Association of Public and Private Employees, International Association of Fire Fighters, Professional Municipal Administrators, Newfoundland and Labrador Employers' Council, WorkplaceNL and Service NL. WorkplaceNL provided the funding support.

In February of 2019, Municipalities NL withdrew from the Council, and the Council subsequently ceased operations in June 2019. Municipalities NL prefers to oversee delivery of safety services directly to municipalities, as it has a training network established with the sector. It has since entered into a Memorandum of Understanding with the College of the North Atlantic for the delivery of training services.

Municipalities NL indicates it appreciates the importance of good data to ensure focus is on the right injury profiles and prevention strategies. It plans to reach out to WorkplaceNL in 2020 in hopes of entering into a data sharing agreement. Having these two entities (as a minimum) working together on waste-related health and safety issues is encouraging and should be supported.

1. Amanda Silliker, "Talking Trash." Canadian Occupational Safety, (December/ January 2018), p. 16.

6.2 Provincial Environmental Standards

Staff of the Environment Branch of the Department of Municipal Affairs and Environment (MAE-ENV) express confidence that there are no major, fundamental differences between this province and other Canadian jurisdictions related to the legislative and regulatory (and standards) regimes governing the establishment and operation of waste management facilities. Since the release of the Strategy in 2002, considerable effort has been invested developing standards aligned with national practices. In making the above declaration, departmental officials quickly point out that their process for reviewing standards is very much a reactionary (complaint or issue driven) process. According to MAE-ENV, a more proactive approach to updating standards has been a challenge due to resource constraints and competing demands.



Confederation Building Complex, St. John's

As a general process, officials draft environmental requirements following jurisdictional scans of other provinces and/or utilizing national standards developed through the technical working committees under Canadian Council of Ministers of the Environment (CCME). As a recent example, the department launched a review of the environmental standards for composting facilities to align better with the other Atlantic Provinces and the CCME.

Currency of legislation, regulations and standards is important. A quick review of the department's website suggests that the average age of its environmental and waste-related policies is around seven years, with almost a third of these documents dated over ten years ago. Maybe these documents remain current, maybe not. The department needs to develop and execute a regular schedule of review for all of its legislation, regulations and standards, prioritizing those most critical to the protection of public health and environment. Additional resources or a reassignment of resources within the department specifically, or government more broadly, may be required to accomplish this. Additional discussion on resources is contained in Chapter 9.

Coordination of regulatory approvals between Service NL and MAE-ENV is another matter in need of attention. The regional offices of Service NL have authority to issue many of their own waste management facilities' authorizations, albeit using templates for guidance. MAE-ENV issues approvals for regional landfills and related operational infrastructure. There is no central registry for the authorizations issued. Neither are the records of enforcement activities captured in one centralized location. An online central registry of all waste management-related authorizations and inspection and enforcement actions, accessible by all provincial Environmental Protection Officers and MAE-ENV staff would help ensure consistent application (and enforcement) of legislation and standards, and promote better

data collection, management and reporting. A model worth exploring is the Application Management and Data Automation (AMANDA) system in use at Service NL and elsewhere in government.

6.3 Provincial Enforcement

There exists a multitude of federal and provincial legislative and regulatory requirements governing the establishment and operation of waste management systems in the province. Prominent among these provincially are the **Environmental Protection Act** and **Water Resources Act**. The provincial **Highway Traffic Act** makes it an offense to litter on provincial highways. The **Municipalities Act** enables municipalities to create their own by-laws to address such matters as littering and indiscriminate dumping.

MAE-ENV issues approvals for larger waste management infrastructure, such as regional landfills, transfer stations, and waste recovery and recycling facilities. The Department of Service NL is responsible for approvals for the remaining smaller landfill sites, and conducts compliance and enforcement activities for the vast majority of all provincial environmental legislation through a Memorandum of Understanding with MAE-ENV.

Service NL conducts inspections on a wide array of environmental operations in accordance with the “Inspection Frequency Guide for Fixed and Mobile Facilities.” The rate of inspection frequency is set according to an assessment of environmental risk, resource availability and legislative requirements. Generally, waste facilities are targeted for inspection 1-2 times annually. There are additional inspections and activities also completed by Service NL on a demand basis in response to complaints (e.g. indiscriminate dumping).

There are 13 Environmental Protection Officers situated at Service NL’s Government Service Centres across the province. These include five for the Avalon region, four in central region, three in western region and one for Labrador (located in Happy Valley-Goose Bay). Their job descriptions are extensive and include a multitude of inspection activities in addition to waste management.

Information provided by Service NL indicates that Environmental Protection Officers conduct approximately 900 annual inspections per year at a variety of facilities. About 150 of these are at waste facilities on average. Closer examination of the data indicates that the inspection frequency in the western Newfoundland region and in Labrador are below Service NL’s own inspection standard.

Some of the landfill compliance issues observed by Service NL staff include uncontrolled site access and consequential illegal dumping; poor waste separation; scavenging; insufficient covering of garbage at disposal sites; and burning of waste.



Local landfill

The reality is many communities and regions in the province are still in a holding pattern, awaiting final decisions by the provincial government on the long-term management of their waste. Unfortunately, time is now running out for many communities, which are now operating in day-to-day crisis mode. Final decisions on Strategy implementation are now critical for many communities. Until then, Environmental Protection Officers have their hands tied and can do little in the way of meaningful enforcement, as insisting on full compliance could force the shutdown of many sites or require major capital investment, which would be money wasted if decisions are taken eventually to close these sites down.



Local landfill

A few operating approvals exist for (commonly referred as) construction and demolition (C&D) landfills. These disposal sites accept generally “benign or inert” waste materials, such as wood, shingles, drywall, windows, and oversized concrete. Over time, the approvals for some of these sites have expanded to accept a broader array of waste materials, such as dead animals, industrial waste, etc. It is important that C&D landfills contain only those waste streams initially intended, as they do not have the appropriate environmental safeguards for holding more environmentally harmful waste streams.

Generally, waste management facilities servicing larger populated areas use weigh scales to track waste volumes. Smaller regions and communities, and several industrial sites with their own landfills, do not. Neither are these latter sites required to implement environmental monitoring programs. For any landfills operating in the province, the tracking of waste accepted at those facilities should be mandatory; you cannot manage what you do not know! Environmental monitoring programs should also be mandatory. The method and scope for tracking waste and implementing an environmental monitoring program will depend on site and operational specifics, such as waste volumes and location, and government approval for these activities should be required.



Litter in wooded area

A troublesome issue is indiscriminate dumping, the intentional dumping of waste enroute or near approved waste facilities. This issue is generally more prevalent at smaller or remote sites, but issues like wind-blown debris and indiscriminate dumping are evident across all regions. Service NL staff indicate the number of inspections initiated due to complaints about indiscriminate dumping has been increasing over time.



Table 6.1. SNL Inspections - Indiscriminate Dumping and Abandoned Vehicle Wrecks

Fiscal Year	Number
2007-08	279
2010-11	426
2015-16	752
2018-19	780

Source: Department of Service NL

The **Environmental Protection Act** provides for financial penalties for first offences ranging from \$1000 to \$1.0 million for a corporation or local government authority (e.g., municipality), and \$500 to \$10,000 for a person. Service NL indicates that this province’s penalty regime for waste related offences is generally in line with other provinces. Charges laid and fines issued for convictions have been few over the years and fee generally minor.

Littering in the province is an ongoing concern as well. As Table 6.2 below shows, a litter audit conducted by the MMSB calculated that 92 million pieces of litter found their way onto provincial roadways in 2016. Penalties under the **Highway Traffic Act** related to littering are \$100-\$500 per offence. Charges laid and fines issued for convictions last year totalled seven, and averaged about \$100 per offence.

Table 6.2 Multi-Materials Stewardship Board Roadside Litter Audit, 2016

Community	Large	Small	Cigarette
Total Audited Litter	5,105	3,169	22,671
Average Audited Pieces per Site	23.20	14.40	103.05
Total Pieces of Litter	13 M	8.5 M	61 M
Total Litter	83 M		

Highway	Large	Small	Cigarette
Total Audited Litter	348	187	710
Average Audited Pieces per Site	31.64	17	64.55
Total Pieces of Litter	2 M	1 M	5 M
Total Litter	8 M		

Total	Large	Small	Cigarette
All Sites	16 M	10 M	66 M
Total Litter	92 M		

Source: Multi-Materials Stewardship Board

6.3.1 Additional Proposals for Action

A consistent theme iterated by many stakeholder groups and the public during consultations was the importance of enforcement, at both provincial and local levels. More and better enforcement was the general call to action by many.

If we are serious about enforcement, then consideration of the following four proposals is appropriate, including: (a) increasing Service NL resourcing and use of technology; (b) expanding regional service board authority related to indiscriminate dumping; (c) introducing a summary offence ticketing regime under the **Environmental Protection Act**; and (d) aligning legislative fines for littering offences.

Increasing Service NL Resourcing and Technology: Based on its “Inspection Frequency Guide for Fixed and Mobile Facilities” (Guidance Document GD-PPD-027.2), Service NL devises annual site inspections plans for its officers. In recent years, the department has not been able to execute on its plan. Further, Table 6.1 above shows a marked increase over time in the demands placed on enforcement staff related to indiscriminate dumping activity. Despite these two situations, staffing levels at the department have remained unchanged. Additional discussion on resources is contained in Chapter 9. Leveraging technology, such as camera and video surveillance, is worth considering. It can enhance or extend the reach of enforcement personnel by obtaining evidence for the purposes of prosecuting violators.

Expanding Regional Service Board Authority for Indiscriminate Dumping: Increasing the mandate of regional service boards to deal directly with, and initiate legal action in, cases of illegal dumping would complement provincial and municipal efforts and increase the overall level of enforcement activity. This would be consistent with the authority municipalities have now. Mandatory training of regional service board staff will be critically important in implementing proper enforcement procedures.

Introducing a Summary Offence Ticketing Regime: Proceeding through the Court system to lay charges and prosecute offenders for illegal dumping can be a lengthy, costly process. Summary offence ticketing, utilized in most provinces, can expedite some matters for all concerned. Service NL, in consultation with MAE, should review the appropriateness of introducing summary offence ticketing to facilitate waste management enforcement, and potentially extend this review to include consideration of other ticketing opportunities under the **Environmental Protection Act**.



Illegal dumping.

Aligning Legislative Fines for Littering and Indiscriminate Dumping Offences: Penalties under the **Highway Traffic Act** on littering and indiscriminate dumping are significantly below those contained in the **Environmental Protection Act**. Service NL officials suggest the two fee structures be the same, and recommend the fines under the **Highway Traffic Act** increase accordingly.

While the fines serve as a deterrent, they are generally insufficient to cover the cost of cleanup and restoration of an affected area. At one time, Service NL had a budgetary allocation to do site cleanups, but no more. To address this situation in part, amendments to the **Environmental Protection Act** and **Highway Traffic Act** should require the mandatory cleanup of discarded materials and restoration of the affected area, or payment in lieu into a government cleanup fund, as part of any Court judgments for violations. Unfortunately, however, the reality for many indiscriminate dumping issues is that the evidence is insufficient to support legal action, thus the waste material remains where it is, especially if the site is located outside a municipal boundary. The re-establishment of a cleanup fund, but by regional service boards as part of their annual budgets, is a potential means to address this latter described circumstance. Enabling regional service boards to address these situations creates an incentive of sorts with residents to keep their regions clean, as it would directly affect their annual fees. It would also benefit enforcement efforts, as more residents are incentivized potentially to report illegal activity.

6.4 Role of Enforcement in Waste Diversion

If we are serious about waste diversion, then we need to get serious about enforcement at regional and local levels too. Multiple opportunities exist to increase waste diversion outcomes through enforcement efforts at the local or regional level, be it at curbside, a transfer station, landfill entry gate or within a landfill area at source separation areas. Despite these sorting (and inspection/enforcement) opportunities, however, considerable valuable waste that can be reused or recycled continues to end up in landfills across the province.



Entrance to landfill on Burin Peninsula
Credit: Burin Peninsula Regional Service Board

Divert NS, the sister organization of the MMSB in Nova Scotia, takes enforcement very seriously and provides significant annual funding in support of municipal enforcement activities specific to waste management. It is important that regional service boards have an effective enforcement regime for monitoring compliance with waste diversion protocols and adequate funding to carry it out. Whether it is leaving improperly separated garbage bags at the curb, making residents, businesses and haulers visit several waste separation areas when dropping off mixed waste at local landfills or applying fines for large mixed loads arriving at landfills, it is imperative that effective enforcement regimes are in place and implemented at the local and regional level. These waste handling points are where control and opportunity for behavioral changes can be most effective. Reporting on these statistics and efforts should be part of public reporting requirements too.

6.5 Standards for Remote and Isolated Communities

MAE-ENV's Guidance Document GD-PPD-073, entitled "Environmental Standards for Labrador Landfills," is the reference standard to regulate solid waste landfills in Labrador and remote and isolated communities on the island portion of the province with a population of 10,000 residents or less. The standard notes these areas of the province warrant special consideration in waste management due to their geographic remoteness, difficulty of access (e.g., infrequent or no road or ferry access), small and

dispersed populations, low tax base, and availability of trained personnel. The standard also asserts that, by maximizing waste diversion efforts, the small quantity of residual waste creates minimal environmental impact and therefore is suitable for disposal in an unlined, non-containment landfill.

Some remote and isolated communities certainly have unique waste management challenges requiring customized solutions. Some of these solutions will necessarily mean that an exemption from full modern waste management requirements may be necessary. It should not be the case, however, that all of Labrador, and every remote or isolated community in the province, be granted automatic relief from modern waste management practices. Instead, due diligence should be done on every proposal, and exceptions made only if warranted on strong environmental and economic grounds. This is consistent with a number of comments received during consultations.

Wherever possible, consistent waste management standards and expectations should be the norm province-wide, with the Minister of Municipal Affairs and Environment authorized to address legitimate unique circumstances on an exception basis as required. Policy GD-PPD-073 as written should be rescinded.

6.6 Recommendations

From this chapter, it is recommended that:

- 6.1 More substantive and regular dialogue occur between regional service boards, and other waste management authorities to maximize opportunities from sharing best operating practices, establishing consistent customer service standards, and the identification and execution of collaboration opportunities.
- 6.2 Regional service boards and major waste management authorities, Multi-Materials Stewardship Board and Department of Municipal Affairs and Environment, work together to develop measurable operational service standards covering all major components of a modern waste management system.
- 6.3 Municipalities NL and Workplace NL, in consultation with other groups as appropriate, work together on occupational health and safety issues specific to the waste management sector.
- 6.4 The Department of Municipal Affairs and Environment develop and execute a regular schedule of review for all legislation, regulations and standards related to the establishment and operation of waste management facilities, prioritizing, in the first instance, those most critical to the protection of public health and environment.
- 6.5 The Departments of Service NL and Municipal Affairs and Environment jointly develop and implement an online central registry for all waste management related authorizations and enforcement activity.
- 6.6 Construction and demolition (C&D) landfills be authorized to accept benign or inert waste materials only.

- 6.7 All landfills approved to operate in the province (municipal and industrial) be required to track all waste volumes entering the site and undertake appropriate environmental monitoring, as approved by government.
- 6.8 Service NL increase its use of technology, such a camera and video, to enhance its enforcement efforts related to indiscriminate dumping.
- 6.9 The **Environmental Protection Act** and the **Regional Service Boards Act** be amended to enable regional service boards to use technology, conduct investigations and lay charges related to the illegal dumping of waste, with boards' staff to undertake mandatory training to ensure proper and safe execution of this new role.
- 6.10 The Department of Service NL, in consultation with the Department of Municipal Affairs and Environment, review the merits of adopting summary offence ticketing under the **Environmental Protection Act**, commencing with a review of ticketing for indiscriminate dumping.
- 6.11 Concerning littering and indiscriminate dumping:
- (A) Fines for offences under the **Highway Traffic Act** be increased to align with the **Environmental Protection Act**;
 - (B) Amendments to both Acts be made to include a mandatory requirement for the cleanup of discarded materials and restoration of the affected area, or the payment of equivalent costs in lieu into a government cleanup fund as part of Court judgments for violations; and
 - (C) Regional service boards allocate funds annually for cleanups.
- 6.12 Regional service boards and waste management authorities develop and implement a comprehensive waste diversion enforcement regime and report on the effectiveness of same in their annual public reporting.
- 6.13 Guidance Document GD-PPD-073 - "Environmental Standards for Labrador Landfills" - be rescinded.

CHAPTER 7

ECONOMIC AND EMPLOYMENT OPPORTUNITIES

7.1 Overview

The 2002 Strategy indicated that considerable new economic and employment opportunities will arise from the development and implementation of a provincial modern waste management system. Hundreds of new jobs as well as new businesses would arise to deliver the multitude of new services and programs in such areas as waste diversion, organics management, waste disposal operations, training, environmental monitoring, site reclamation, public communication and education, and research and development. Government's focus at the time was twofold: (a) stimulating regional economic benefits (20-30 jobs per waste management region); and (b) developing requirements to ensure waste management incorporates provincial content.



Scotia Recycling facility in Corner Brook

Provinces with mature waste management systems are reaping substantial economic benefit. For example, the Government of Nova Scotia reported that the solid waste management sector realizes benefits worth at least \$31 million a year.¹ The Ontario Ministry of Environment and Climate Change reports its existing waste diversion programs create up to 10 times more jobs than waste disposal and for every 1000 tonnes of waste diverted seven jobs are created.²

The five active regional services boards on the island report a combined 114 permanent jobs and 66 part-time and contractual jobs. The Multi-Materials Stewardship Board (MMSB) reports over 250 persons are directly employed at 56 Green Depots. In excess of \$200 Million in gross domestic product has resulted from beverage container recycling since inception of the program. Additionally, new industry-led waste diversion programs in waste paint, used electronics and used oil and glycol, along with municipal curbside blue-bag recycling programs in the eastern, central; and western regions of the province, have created new employment.

1. Government of Nova Scotia Department of Environment, "Consultation Paper Solid Waste Resource Management Strategy: Thinking Outside the Landfill," (Winter 2009), p 1. <https://novascotia.ca/nse/waste/docs/ConsultationPaper-Thinking.Outside.the.Landfill.pdf>. Accessed November 21, 2019.

2. Ontario Ministry of Environment and Climate Change, "Strategy for a Waste-Free Ontario. Building the Circular Economy," (February 2017), p. 6. https://files.ontario.ca/finalstrategywastefreeont_eng_aoda1_final-s.pdf. Accessed November 22, 2019.



7.2 Some Issues and Opportunities

Research, Development and Innovation

Notwithstanding the facts that waste management and waste diversion come with added costs, environmental challenges are escalating, and the vast majority of recyclable materials generated in the province are exported for processing elsewhere, little research and development (R&D) and innovation in waste management is being undertaken here. An important waste management challenge facing this province and other jurisdictions is finding end markets for specific waste materials. We, like North Americans generally, have to come to terms with our consumption and waste practices, as countries like China place tougher restrictions on the waste they accept for recycling. It is critical that we identify and create local end markets for our waste.



Modified waste collection vehicle. Credit: Burin Peninsula Regional Service Board

Funding

The levels and types of funding available for private sector waste management initiatives and projects in this province may warrant investigation. During consultations, representatives of the environmental industry suggested that, despite the availability and diversity of funding programs available through federal and provincial governments and private sources, the waste management sector has not benefited significantly from these funding opportunities. Commentary was also received about the MMSB's funding programs. The MMSB has four funding programs supporting research, innovation and economic development in the waste sector, yet three of these programs limit project funding to \$10,000 or \$15,000, too small for projects seeking solutions to provincial level issues. Finally, it was suggested that more interagency collaboration between federal and provincial funding agencies could increase the amount of funding available for waste management projects, with funding provided by one agency used to leverage funding from another. Presently, it appears that funding agencies will consult on projects involving joint funding applications, but not necessarily in a "strategic" context.

Policy and Regulatory Instruments

A number of policy and regulatory instruments have been used in other provinces to advance waste management goals, but also to stimulate new economic development. Several landfill bans enacted in the provinces of Nova Scotia and Prince Edward Island, for example, have increased diversion of specific waste materials for reuse or recycling, resulting in new business opportunities in the private sector.

Chapter 4 discussed a proposal calling for mandatory recycling in this province. Maximum waste diversion can be achieved through mandatory recycling and eventual landfill bans. There may be other

policy and regulatory instruments worth considering. Many effective policy instruments come in the form of financial incentives. Individuals, businesses and associations commented during the consultations on the value of having a blend of 'carrots and sticks' to achieve environmental and economic outcomes.

Social Enterprises

Social enterprises are well suited to the waste management sector. One successful company is Ever Green Environmental. This non-profit organization has established a thriving recycling business employing almost 80 people, several of whom are recovering from mental illness. The organization also undertakes R&D, and commercialized one project for export, namely a management information system for full system tracking and refund processing of containers at depots. Investment in such entities yields obvious environmental and economic results, but also supports social and health outcomes – an all-round success story.



Ever Green Environmental - Solar powered automatic recycling depot pilot

7.3 Strategy for the Waste Management Sector

There is no reason why this province should not realize economic success from its waste management sector, as has happened in other provinces. Some additional economic activity will come automatically once more waste management regions transition to modern waste management programs and operations. Major system operators agree more needs to be done to increase provincial economic returns from the waste sector, including from innovation, and the local industry no doubt is anxious to capitalize as well. What is missing then, it seems, is a coordinated approach to tackling this challenge, namely the development of an integrated economic development and innovation strategy for the sector.

The list of potential topics to be examined in the development of such a strategy can be as broad as the number of activities falling under the umbrella of waste management itself. Some topics raised during the consultation phase included:

- identification of priority R&D and innovation projects that can meaningfully advance outcomes of the provincial Waste Management Strategy; for example:
 - developing local markets for existing waste diversion materials (to displace recyclable waste exports);
 - diverting additional waste materials;



- aiding existing or prospective local manufacturers in minimizing their product's packaging waste;
- increasing efficiencies in the waste management system– e.g., waste collection, processing, disposal, transportation, environmental systems;
- potential for new business start-ups;
- how government procurement and waste management contracts can be used to support local waste management companies;
- assessment of federal, provincial and other funding programs available to the waste management sector to determine: (a) if adjustments to funding criteria and limits are warranted to better support the sector; and (b) how best to position the sector to take advantage of relevant funding opportunities; and,
- increasing participation of social enterprises.

An approach proven successful in developing other economic strategies in this province is the sector model instituted under the provincial government's "The Way Forward" for such sectors as agriculture, aquaculture, mining, oil and gas, culture, tourism, community, forestry and technology. Under this model, a strategy is developed as a partnership among a diverse group of key stakeholders, including government, the private sector, etc. In the case of an economic development and innovation strategy for the waste management sector, potential groups involved might include regional service boards and other waste management authorities, relevant federal and provincial government departments, MMSB, industry and industry associations, educational and research institutions, and social enterprises. It is suggested that the Department of Tourism, Culture, Industry and Innovation and the MMSB serve as co-leads for the initiative.

7.4 Recommendations

It is recommended that the Department of Tourism, Culture, Industry and Innovation and the Multi-Materials Stewardship Board co-lead the development of a provincial economic development and innovation strategy along the lines discussed in Chapter 7.

CHAPTER 8

EDUCATION AND AWARENESS

8.1 Discussion

Public consultations held in 2001, which feedback informed the 2002 Provincial Strategy, supported the need for major change in the province's waste management efforts. Feedback also suggested that change would not happen without strong and sustained education programs. Public consultations held as part of this current review confirm that the observations made in 2001 remain as relevant today as they did then.

The Multi-Materials Stewardship Board (MMSB) and municipal and regional waste management authorities have done some very good work in education and promotion over the years. Industries too, through regulated stewardship programs, are meeting public awareness targets set forth in their stewardship plans, including a 58% public awareness level for the paint recycling program and 78% for the electronics recycling program. Despite all of these efforts, awareness among the public is not translating into improvements in waste diversion and other system indicators. A common message received during public consultations is that more, and also targeted, education and awareness is needed.

Most of the provincial efforts appear to focus on promoting the specific implementation details of recycling programs, which is important to reinforce on an ongoing basis. However, to achieve meaningful and sustainable results, a change of mindset about waste and the waste management system is critical. People need to know “why” waste management is important and be motivated to want to participate. This includes promoting waste as a valuable resource that has re-use and economic potential, and the importance of everyone taking responsibility for their own waste as a complement to services delivered by local waste management authorities.

The littering and indiscriminate dumping happening in this province are illustrative of the need for a shift in thinking.



The Road to Zero Waste Event. Credit: Zero Waste Canada – Newfoundland and Labrador Chapter

Sadly, for many, waste is nothing more than an inconvenience, something they look to their local governments to handle. Changing public perception about waste will not happen overnight. It requires a sustained effort and strategies that emphasize, at a minimum, the basic three R's on the waste management continuum, namely Reduction, Reuse and Recycling. It also means education on what



proper waste disposal involves, and that it comes with a cost, shareable between provincial and local governments, residents and businesses.

The MMSB's "Rethink Waste" website is a step in the right direction in encouraging Newfoundlanders and Labradorians to think differently about waste. The initiative is relatively new. One observation to improve it is a broadening of content to include more information on such items as the environmental story, progress on the Waste Management Strategy, provincial and local success stories, and tangible examples of how residents and businesses can reduce waste in their daily lives and operations. Broader promotion of the website and implementation support for it would certainly help as well. Finally, the "Rethink Waste" program needs to be more than a website, but a brand promoted through multiple marketing channels, such as print, radio and TV.

The MMSB recently developed a new promotion strategy with much potential. From the environmental enthusiast to the totally disengaged, and everyone in-between, strategies segmenting how different audiences receive and react to information will have greater impact than generic "one size fits all" campaigns.

A high majority of feedback from the consultations recommended more education throughout the primary, secondary and (possibly) post-secondary systems. There is no argument on this. Feedback received during consultations support having the topic of waste management added to the school curricula for all grades, up to and including high school.

For public education programs, it is important that the education programs differentiate by age levels, as primary school children need a different level of interaction than say teenagers in high school. Important too is messaging delivered through a variety of public mediums aligned with the different school age audiences and broader public audiences.

Building on the programs and services that exist in the province or proposed in this report, there are or will be many commonalities in the delivery of waste management across the province that can be promoted better at a provincial level by the MMSB. For example, with the current low collection rate for municipal special and hazardous waste, more can be done provincially to promote the importance of bringing hazardous waste to a public drop off, transfer station or collection event. The basket of goods recyclable are homogenous in western, central and eastern regions on the island portion of the province, thus an island-wide marketing campaign can likely improve capture rates more cost effectively than only region-centric efforts. Furthermore, education and awareness on provincially banned materials, and challenges with indiscriminate dumping and littering, would seem best delivered from a provincial perspective.

Having an integrated provincial education and awareness strategy would help support execution of the current Strategy. Greater traction and economies of scale are possible when all key players involved in the province's waste management system can work collaboratively to bring improvements to program planning and delivery at provincial, regional and municipal levels. Collaboration enables the delivery of consistent messages, development of quality content and sharable resources, and meaningful program evaluation at regional and provincial levels. It would also garner maximum effectiveness in the use of staffing and budgetary resources across all organizations, which have been dwindling over time.



It is important that all major entities involved in implementation of the provincial waste management strategy partake in this communications effort. This includes the MMSB (as lead), key local and regional waste management authorities, indigenous groups, the provincial government and representation from key target audiences (e.g., business, youth).

Enhanced and well-coordinated efforts in education and awareness will require additional investment. Even provinces with mature waste management systems, like Nova Scotia and Prince Edward Island, continue to invest significantly in public education and awareness, in fact two to three times that of this province. Consequently, they have been able to advance many waste initiatives and are leaders nationally. To realize this same success, additional investment in education and awareness, and resourcing to support these efforts at both provincial and regional levels, is an imperative. Additional discussion on resourcing is contained in Chapter 9.

8.2 Recommendations

From this chapter, it is recommended that:

- 8.1 The Department of Education and Early Childhood Development consider adding waste management to the school curricula for all grades, kindergarten through high school.
- 8.2 The Multi-Materials Stewardship Board (Lead), in collaboration with appropriate regional and local waste management authorities, indigenous groups, provincial government departments, and stakeholder groups representing key target audiences, develop a comprehensive, integrated provincial education and awareness strategy along the lines discussed in Chapter 8.

CHAPTER 9

SYSTEM AND ACCOUNTABILITY

9.1 Public Sector Governance

Chapter 5 proposed significant changes to the service delivery and governance models for regional waste management in the future. Important too, is having the right oversight within government and its agencies.

Three provincial entities have important elements of waste management as part of their mandates. The Department of Municipal Affairs and Environment (MAE) has responsibility for general oversight of Strategy implementation, working with communities to establish regional governance and implement the Strategy, infrastructure approvals and funding, and municipal and environmental legislation, standards, and policy. The Department of Service NL is involved in environmental monitoring and enforcement, and waste facility approvals. The Multi-Materials Stewardship Board (MMSB) leads efforts in waste diversion programming, public education, research, and the collection and dissemination of waste information.

The adequacies of provincial legislation and standards, regulatory compliance, and enforcement activities were discussed earlier in this report and recommendations made to redress deficiencies identified during this review. An important additional issue that needs mentioning is the lack of (a) overall provincial level focus on the Strategy, and (b) coordinated decision-making.

The MMSB is better positioned than the Municipal Affairs Branch of MAE (MAE-MA) to oversee implementation of the Waste Management Strategy moving forward. The MMSB is involved in most aspects of waste management already. It is the lead provincial agency for all things waste diversion, the ongoing management of which will be critical to the Strategy's success once landfill closure decisions are finalized. The MMSB now works collaboratively with, and is a significant resource to, municipalities and regional service boards on waste diversion and other issues; is a conduit between multiple agencies on waste related research; collects and compiles data for provincial public reporting; and serves on waste management working groups of the Council of Ministers of the Environment. MAE-MA has also come to rely on the MMSB more of late for other expertise, such as leading the recent waste management technology review (Wood Report). Finally, the MMSB has more staff knowledgeable and experienced about waste and the provincial system. MAE-MA has only a couple of positions dedicated to waste management currently, with one position recently filled and another vacant. MAE-MA's limited resources should focus on regional governance and infrastructure related needs and issues.



Credit: Multi-Materials Stewardship Board

Consideration was given to merging the two entities, but there is little efficiency or cost savings to be gained from such a proposal. Importantly, it would be very disruptive to both organizations and seriously delay implementation of the recommendation of this report and the overall provincial Strategy. The

preferred approach is a clear delineation of new responsibilities between the two entities and promoting enhanced cooperation.

Two areas where cooperation can be improved immediately is decision-making on project funding and sharing of information. Currently, each entity operates independently, and the risk high that funding and other decisions may not necessarily always be mutually supporting.

With the MMSB taking the lead in overseeing implementation of the Waste Management Strategy, it makes sense that it also chair a provincial interdepartmental waste management committee. A technical committee now exists. An expansion of that committee's mandate, to deal with such matters as provincial strategy and policy, and leading joint assessments of major program and funding proposals, can make this forum much more effective.

9.2 Planning and Accountability

The goals articulated in the provincial Strategy have not translated at the regional and municipal levels into strategic and annual plans with performance measurements. This needs to change. As the adage goes, "what gets measured gets managed, and what gets managed gets done." Each regional board and waste management authority (in the case of some regions in Labrador) should submit for ministerial approval (via the MMSB) their own five-year waste management strategy, inclusive of key performance indicators, supported by annual implementation plans. Having authorities simply prepare annual reports on their activities without any performance targets is insufficient to ensure progress on the Strategy.

The provincial interdepartmental Waste Management Committee can review the strategic and annual plans submitted from a province-wide integrated lens. It can support establishing priorities, confirming targets or setting new ones, linking financial needs with funding programs, etc., all the while ensuring coordinated progress and contributions by all regions to the advancement of the overall Strategy and provincial outcomes. These plans can also contribute to planning done by the relevant government departments and the MMSB. Once approved by the Minister of Municipal Affairs and Environment, these regional strategies and plans can serve as the basis for funding support and annual monitoring, reporting and accountability by all involved in executing the provincial waste management agenda.

The MMSB needs to ensure there is consistency in the format, level of detail, waste terminology and financial categorizations used for the reports submitted by regional boards. Standardizing data collection, terminologies, and reporting can bring more consistency, accuracy and transparency to provincial and regional waste management reporting.

In recognition of the expanded mandate proposed for the MMSB, some realignment of the skills competency profile of its Board of Directors may be in order. For example, strategic planning, municipal infrastructure/engineering and financial literacy will be important board attributes. A corporate name change may also be in order, perhaps something along the lines of "Newfoundland and Labrador Waste Management Corporation."

9.3 Resourcing the Strategy

The many suggestions made in this report affecting future Strategy implementation will have financial and human resourcing impacts across the waste management system.

Continued implementation of the Strategy requires significant additional funding for such things as new waste diversion programs, infrastructure, closing old landfills, operations, enforcement, public education programming and system accountability oversight. The good news is considerable funds are earmarked for new waste management infrastructure under the multi-year federal/provincial gas tax agreement. Additionally, affordable proposals for new revenue generation are presented in Chapter 4. These funding sources, combined with the proposal enabling regional service boards to apply for cost-shared capital works funding instead of having to maintain full capital budgetary reserves (Chapter 5) enables considerable progress to be made in the next five years.

The new interdepartmental Waste Management Committee can be the vehicle to lead development of an integrated system plan, working in concert with other key stakeholders. Developing an implementation plan associated with this report's recommendations, inclusive of financial and staffing requirements, would be a good place to start.

9.4 Recommendations

From this chapter, it is recommended that:

- 9.1 The Multi-Materials Stewardship Board be designated the lead agency with responsibility for overseeing, promoting, monitoring and public reporting on the Provincial Solid Waste Management Strategy.
- 9.2 The current interdepartmental Waste Management Technical Committee be re-constituted as the Waste Management Committee and chaired by the Multi-Materials Stewardship Board, and the mandate of the committee expanded to include provincial waste management strategy, planning and policy, and assessments of major program and funding proposals.
- 9.3 Each regional board or waste management authority, as appropriate, submit for the approval of the Minister of Municipal Affairs and Environment, via the Multi-Materials Stewardship Board, a comprehensive waste management strategy at five-year intervals, inclusive of key performance indicators, supported by annual implementation plans.
- 9.4 The Multi-Materials Stewardship Board review the current financial and data collection and reporting requirements by regional service boards and other waste management authorities with a view to standardizing same wherever possible.
- 9.5 In light of the proposed expanded mandate for the Multi-Materials Stewardship Board, a corporate name change for the entity be considered, and the skills competency profile for its Board of Directors reviewed for continued relevance.
- 9.6 The interdepartmental Waste Management Committee lead development of an integrated provincial waste management systems plan, working in concert with other key stakeholders.

CHAPTER 10

ADDITIONAL LEGISLATIVE AND POLICY PROPOSALS

During the consultations, a few issues of a policy or legislative nature arose in addition to those addressed earlier in this report. Attachment 10.1 presents these additional items, together with recommendations on their disposition.

10.1 Recommendations

It is recommended that the disposition of legislative and policy items discussed in Attachment 10.1 be accepted.



Attachment 10.1

Additional Legislative and Policy Proposals

Issue	It is recommended that:
<p>1. Regional Service Board (RSB) Legislative Authority</p> <p>In several areas of legislation, authority granted to RSBs varies from that afforded municipalities; redress appears appropriate in some cases, especially provisions that can facilitate RSBs' working more efficiently and effectively in delivering on their waste management mandate.</p> <p>Some items mentioned for review in the consultations include, but are not limited, to: enforcement (incentivizing compliance and penalizing non-compliance); charging and collecting fees and handling overdue accounts; ensuring accurate property owner lists; raising capital; adopting by-laws; awarding grants; and enabling the appointment of an Administrator if an RSB is not functioning effectively.</p> <p>Additionally, a review of the Regional Service Boards Act and other relevant legislation may be necessary to ensure any legislative changes arising from implementation of the recommendations of this report are included.</p>	<p>The Department of Municipal Affairs and Environment (MAE) conduct a review of the Regional Service Boards Act, Municipalities Act, and the various cities' statutes (St. John's, Mount Pearl, and Corner Brook) to:</p> <ol style="list-style-type: none"> a. address any unwarranted legislative inconsistencies in the authorities granted municipalities and cities versus the RSBs; and b. ensure any legislative changes required to support the implementation of this report, if and as accepted, are incorporated.
<p>2. RSB Governance</p> <p>There are no formal and consistent rules on board behaviour in place for RSBs.</p>	<p>The Department of MAE develop a Code of Conduct and Conflict of Interest Policy for all RIt is SBs, and ensure the boards incorporate said policies as part of their governance procedures.</p>
<p>3. RSB Governance</p> <p>During public consultations, the adequacy of representation for unincorporated areas on the RSBs was raised; only officials elected by a municipality, local service district or band council in the region may now serve.</p>	<p>The Department of MAE include consideration of this matter as part of its municipal review, given that the governance framework prescribed in the Regional Service Boards Act is modelled on the Municipalities Act.</p>
<p>4. RSB Administration</p> <p>Municipalities are exempt from paying provincial vehicle licensing and registration fees, but RSBs, providing public services too, are not.</p>	<p>The Department of Service NL afford the same consideration to RSBs as municipalities and exempt them from paying provincial vehicle licensing and registration fees.</p>



Issue	It is recommended that:
<p>5. Role of RSBs in Applications Assessed by Governments</p> <p>RSBs have responsibility for a variety of waste management services throughout the province and should be apprised of any project proposals with significant waste management implications. Federal and provincial government departments and other public agencies should consider referring relevant project applications to RSBs for comment as part of their due diligence processes (e.g., applications for Crown land, aquaculture licences; major building/ road construction and demolition projects; project registrations under environmental assessment).</p>	<p>Federal, provincial and municipal governments, agencies, boards and commissions involve appropriate regional service boards or waste management authorities in the review of any proposals having significant or special waste management considerations.</p>
<p>6. Role of RSBs In Government-sponsored projects and tenders</p> <p>The provincial and federal governments and associated entities tender for a variety of major projects that may have waste management implications; RSBs can provide valuable advice on waste diversion and waste operational requirements as tenders are drafted.</p>	<p>The provincial and federal governments and affiliated entities consult with relevant RSBs or other appropriate authorities on the waste management components of any projects and tenders involving construction, industrial and other substantive works in the province.</p>

CHAPTER 11

COMPENDIUM OF RECOMMENDATIONS

The following is a consolidation of all recommendations made throughout this report, by chapter reference:

Chapter 4: Waste Reduction and Diversion

- 4.1 The Waste Management Regulations be amended to increase the deposit on non-alcoholic beverage containers from \$0.08 to \$0.10.
- 4.2 The Waste Management Regulations be amended to increase the current levies on passenger tires to \$4.50 (under 17") and to \$13.50 (over 17").
- 4.3 The Multi-Materials Stewardship Board investigate the feasibility of implementing an Extended Producer Responsibility (EPR) approach for its tire program.
- 4.4 The Waste Management Regulations be amended to require levies to be paid on all tires entering the province with imported vehicles; and that Service NL collect these fees through the provincial vehicle registration system and remit all revenue collected to the Multi-Materials Stewardship Board less an appropriate administration fee.
- 4.5 The Multi-Materials Stewardship Board initiate consultations with producers of municipal, special and hazardous waste and appropriate waste management authorities to establish an EPR program for managing these materials in the province.
- 4.6 The Multi-Materials Stewardship Board initiate appropriate consultations with industry groups and waste management authorities leading to the establishment of an industry-led model for packaging and printed paper.
- 4.7 The Multi-Materials Stewardship Board lead the development of a provincial organic waste management strategy along the lines discussed in Chapter 4.
- 4.8 Further to Recommendation 4.7, the organic waste management strategy be developed against the backdrop of implementing an appropriate provincial landfill ban for organic waste in five years.
- 4.9 Wherever feasible, a mandatory recycling program be implemented across the province, followed by enactment of a landfill ban after no later than one year's full implementation; further, that the order of priority of communities and regions to participate in the mandatory program ideally be determined according to the degree of waste diversion to be achieved or system efficiencies realized.

- 4.10 Appropriate mandatory recycling programs for the institutional, commercial and industrial (ICI) sector be instituted across the province, following full consultation with industry stakeholders on the implementation details and timing of said program; to be followed by a landfill ban after no later than one year's full implementation.
- 4.11 The Multi-Materials Stewardship Board conduct consultations with appropriate regional waste management authorities and the construction, renovation and demolition (CRD) sector with a view to developing a provincial approach for the management of the CRD waste stream.
- 4.12 Government show leadership through its own actions with the timely implementation of waste management commitments contained in "The Way Forward on Climate Change."
- 4.13 The use of waste diversion as a key performance indicator for the Provincial Solid Waste Management Strategy be replaced with the indicator measuring waste disposal per capita in kilograms, with a target set once more is known about the details associated with implementation of the recommendations of this report.

Chapter 5: Regional Waste Management Operations and Governance

- 5.1 Subject to further (and timely) regional consultation, legislative amendments be drafted to replace the existing eight waste management regions on the island portion of the province with two newly defined waste management regions:
 - Region 1 (Western/Central Waste Management Region) covering the geographic areas of the Northern Peninsula, Western, Coast of Bays, Baie Verte Peninsula-Green Bay and Central Regional Service Boards.
 - Region 2 (Eastern Waste Management Region) covering the geographic areas of the Eastern, Burin Peninsula and Discovery Regional Service Boards.
- 5.2 Legislative amendments be drafted to support the new regional waste management and governance model for the island portion of the province, said framework to include a Regional Service Board comprising up to 18 members and Regional Advisory Committees being established for designated sub-regions.
- 5.3 The current governance model for three of the existing waste management regions in Labrador (excepting Southern Labrador) be confirmed, and a Regional Advisory Committee established in each region to support effective, ongoing engagement with communities across the region.
- 5.4 For Southern Labrador, one regional waste disposal facility service the entire waste management region and one regional service board be established, consistent with the governance approach outlined in Recommendation 5.2.
- 5.5 Regional service boards and waste management authorities be eligible to apply for cost-shared funding in support of capital needs beyond initial core infrastructure requirements, the latter of which the provincial government should continue to fund fully as appropriate.

- 5.6 The Department of Municipal Affairs and Environment review the appropriateness of having the Labrador West regional waste disposal facility and the facility at Happy Valley-Goose Bay upgraded to more modern environmental standards.
- 5.7 Amendments be made to the **Municipalities Act** and the **Regional Service Boards Act** (and any other affected legislation) to clarify that the order of authority for waste management lies firstly with municipalities and local service districts and then with regional service boards; further, that regional service boards have appropriate authority for waste management in unincorporated areas.
- 5.8 Notwithstanding Recommendation 5.7, the **Regional Service Boards Act** (and **Municipalities Act** as necessary) be amended to permit the Minister of Municipal Affairs and Environment to issue directives on waste management matters to regional service boards, municipalities, local service districts and any community should it be in the public interest to do so.
- 5.9 The Department of Municipal Affairs and Environment finalize a Provincial Policy Guideline respecting residential properties situated on unserviced roads in unincorporated areas along the lines described in Section 5.4.2, with the Minister to issue said Guideline to all regional service boards for consideration pursuant to the new legislative authority recommended above in Recommendation 5.8.

Chapter 6: Standards and Enforcement

- 6.1 More substantive and regular dialogue occur between regional service boards, and other waste management authorities to maximize opportunities from sharing best operating practices, establishing consistent customer service standards, and the identification and execution of collaboration opportunities.
- 6.2 Regional service boards and major waste management authorities, Multi-Materials Stewardship Board and Department of Municipal Affairs and Environment, work together to develop measurable operational service standards covering all major components of a modern waste management system.
- 6.3 Municipalities NL and Workplace NL, in consultation with other groups as appropriate, work together on occupational health and safety issues specific to the waste management sector.
- 6.4 The Department of Municipal Affairs and Environment develop and execute a regular schedule of review for all legislation, regulations and standards related to the establishment and operation of waste management facilities, prioritizing, in the first instance, those most critical to the protection of public health and environment.
- 6.5 The Departments of Service NL and Municipal Affairs and Environment jointly develop and implement an online central registry for all waste management related authorizations and enforcement activity.

- 6.6 Construction and demolition (C&D) landfills be authorized to accept benign or inert waste materials only.
- 6.7 All landfills approved to operate in the province (municipal and industrial) be required to track all waste volumes entering the site and undertake appropriate environmental monitoring, as approved by government.
- 6.8 Service NL increase its use of technology, such a camera and video, to enhance its enforcement efforts related to indiscriminate dumping.
- 6.9 The **Environmental Protection Act** and the **Regional Service Boards Act** be amended to enable regional service boards to use technology, conduct investigations and lay charges related to the illegal dumping of waste, with boards' staff to undertake mandatory training to ensure proper and safe execution of this new role.
- 6.10 The Department of Service NL, in consultation with the Department of Municipal Affairs and Environment, review of the merits of adopting summary offence ticketing under the **Environmental Protection Act**, commencing with a review of ticketing for indiscriminate dumping.
- 6.11 Concerning littering and indiscriminate dumping:
- (A) Fines for offences under the **Highway Traffic Act** be increased to align with the **Environmental Protection Act**;
 - (B) Amendments to both Acts be made to include a mandatory requirement for the cleanup of discarded materials and restoration of the affected area, or the payment of equivalent costs in lieu into a government cleanup fund as part of Court judgments for violations; and
 - (C) Regional service boards allocate funds annually for cleanups.
- 6.12 Regional service boards and waste management authorities develop and implement a comprehensive waste diversion enforcement regime and report on the effectiveness of same in their annual public reporting.
- 6.13 Guidance Document GD-PPD-073 - "Environmental Standards for Labrador Landfills" - be rescinded.

Chapter 7: Economic and Employment Opportunities

- 7.1 The Department of Tourism, Culture, Industry and Innovation and the Multi-Materials Stewardship Board co-lead the development of a provincial economic development and innovation strategy along the lines discussed in Chapter 7.

Chapter 8: Education and Awareness

- 8.1 The Department of Education and Early Childhood Development consider adding waste management to the school curricula for all grades, kindergarten through high school.
- 8.2 The Multi-Materials Stewardship Board (Lead), in collaboration with appropriate regional and local waste management authorities, indigenous groups, provincial government departments, and stakeholder groups representing key target audiences, develop a comprehensive, integrated provincial education and awareness strategy along the lines discussed in Chapter 8.

Chapter 9: System Accountability

- 9.1 The Multi-Materials Stewardship Board be designated the lead agency with responsibility for overseeing, promoting, monitoring and public reporting on the Provincial Solid Waste Management Strategy.
- 9.2 The current interdepartmental Waste Management Technical Committee be re-constituted as the Waste Management Committee and chaired by the Multi-Materials Stewardship Board, and the mandate of the committee expanded to include provincial waste management strategy, planning and policy, and assessments of major program and funding proposals.
- 9.3 Each regional board or waste management authority, as appropriate, submit for the approval of the Minister of Municipal Affairs and Environment, via the Multi-Materials Stewardship Board, a comprehensive waste management strategy at five-year intervals, inclusive of key performance indicators, supported by annual implementation plans.
- 9.4 The Multi-Materials Stewardship Board review the current financial and data collection and reporting requirements by regional service boards and other waste management authorities with a view to standardizing same wherever possible.
- 9.5 In light of the proposed expanded mandate for the Multi-Materials Stewardship Board, a corporate name change for the entity be considered, and the skills competency profile for its Board of Directors reviewed for continued relevance.
- 9.6 The interdepartmental Waste Management Committee lead development of an integrated provincial waste management systems plan, working in concert with other key stakeholders.

Chapter 10: Additional Legislative and Policy Proposals

- 10.1 The disposition of legislative and policy items discussed in Attachment 10.1 be accepted.



Solid Waste Management in Newfoundland and Labrador

Finishing what we started