To: Kaitlyn Jared, Southeast Conference

From: Patrick Cotter, RESPEC

Date: March 11, 2026

RE: Review of Solid Waste Management in Eastern Canadian Provinces

Canada and the United States share an integrated solid waste relationship governed by agreements on the movement of both hazardous and non-hazardous waste. Like the United States, Canadian solid waste management follows a multi-jurisdictional model, with responsibilities shared among municipal, regional, provincial/territorial, and federal entities. In recent years, Canadian provinces have adopted solid waste management strategies that promote circularity and sustainability. Canada has also become home to companies that are researching and developing alternative technologies to create useful materials from waste while establishing research and commercial partnerships in the United States.

This memorandum presents high-level findings on waste diversion and disposal, public education and outreach initiatives, and emerging solid waste technologies across four eastern Canadian provinces: New Brunswick, Newfoundland and Labrador, Nova Scotia, and Prince Edward Island (see **Figure 1**). Southeast Alaska and Atlantic Canada both experience a maritime climate characterized by higher humidity levels, milder temperatures, and consistent precipitation. The two regions have also historically relied on natural resources, including forestry and aquaculture, which result in similar major waste streams. Moreover, both regions are home to numerous inhabited islands, which necessitate marine transportation, such as ferry services, for moving solid waste out of communities. Three of these provinces (New Brunswick, Nova Scotia, and Prince Edward Island) have total land areas that are less than or about the same as Southeast Alaska.

In preparing this document, RESPEC Company, LLC (RESPEC) staff relied on annual reports, research reports, news articles, and strategic planning documents made by government, private sector, and nonprofit entities. The information presented in this document is meant to inform internal discussions and broader decision-making. The four eastern provinces comprise a mix of urban, rural, and remote/isolated communities. As a result, consideration should be given to these findings' applicability to Southeast Alaska's conditions.

***Figure 1**. Map of Eastern Canadian Provinces.*

Waste Generation and Diversion at a Glance

The *2022 to 2026 Federal Sustainable Development Strategy* (FSDS) outlines Canada's approach to achieving sustainable development.[1] Goal No. 12 of the FSDS focuses on reducing waste and tracking the amount of solid residential and non-residential waste diverted and disposed of in Canada (see **Table 1**). Through the FSDS, Canada tracks waste diverted and disposed of using diversion and disposal indicators from a biennial Statistics Canada survey. For these indicators, waste includes non-hazardous residential and non-residential solid wastes disposed of or diverted through municipal governments and the waste management industry. Therefore, any waste diversion done by residents (e.g., community composting, reuse initiatives) may not be fully captured in these numbers.

Waste diversion was lowest in Newfoundland and Labrador (12%) and highest in Prince Edward Island (51%). Diversion rates are approximate. The most commonly diverted materials were paper (e.g., cardboard, mixed paper, newsprint), followed by organic materials, metals, other materials, construction and demolition (C&D) materials, glass, plastics, and household appliances.

***Table 1**. Waste Generation Across the Eastern Canadian Provinces.*

	Area	Population[2]	Rural	Annual Waste Generation	Annual Waste Generation Per-Capita[3]	Annual Waste Diverted[4]
Newfoundland and Labrador	138,290 mi^2	510,550	47%	445,200 tons	0.872 tons (1,744 lb)	12%
Prince Edward Island	2,193 mi^2	154,331	37%	119,760 tons	0.776 tons (1,552 lb)	51%
Nova Scotia	20,395 mi^2	969,383	31%	765,813 tons	0.790 tons (1,580 lb)	43%
New Brunswick	27,509 mi^2	775,610	35%	725,971 tons	0.936 tons (1,871 lb)	25%

[1] Government of Canada. (n.d.). *Federal sustainable development strategy*. Government of Canada. https://www.canada.ca/en/environment-climate-change/services/climate-change/federal-sustainable-development-strategy.html

[2] Statistics Canada. 2023. Census Profile. 2021 Census of Population. Statistics Canada Catalogue number 98-316-X2021001. Ottawa. Released November 15, 2023. https://www12.statcan.gc.ca/census-recensement/2021/dp-pd/prof/index.cfm?Lang=E

[3] Environment and Climate Change Canada (2023) Canadian Environmental Sustainability Indicators: Solid waste diversion and disposal. Consulted October 2025. Available at: www.canada.ca/en/environment-climate-change/services/environmental-indicators/solid-waste-diversion-disposal.html

[4] Percentages are approximate.

Provincial and federal solid waste policy and strategy emphasize the creation of a *circular economy*, in which society retains and recovers as much value as possible from resources through reusing, repairing, refurbishing, remanufacturing, repurposing, or recycling products and materials.[5] New Brunswick and Nova Scotia explicitly state their goal or preference for a circular economy in their solid waste strategies.[6,7] The Government of Canada is also working to support businesses and communities that are creating new economic opportunities to keep the value of resources in the economy and out of the landfill.

WASTE DIVERSION INITIATIVES

Funding sources for provincial/municipal diversion programs (and the entities overseeing such programs) included user fees, landfill disposal (tipping) fees, waste management fees received from municipal levies, the sale of recyclable materials collected through division programs, deposits applied on beverage containers (collected through beverage container recycling programs), surcharges on improperly sorted materials, royalties received for hosting a waste disposal facility, grants, interest-free loans, and federal or provincial government funding.

Landfill Bans

Eastern Canadian provinces implemented bans on the disposal of certain materials in landfills, such as recyclables, organics, and toxic materials. Implementing bans can help divert recyclable and compostable materials from landfills, thereby reducing greenhouse gas emissions (e.g., methane) and harmful pollutants that can leak into surrounding soil and groundwater. They can also support the development of recycling programs as alternatives to landfill disposal, though these alternatives require municipal and/or provincial implementation as well as continuous monitoring and enforcement.

For example, Prince Edward Island and Nova Scotia have had provincial bans on organic waste in landfills since 1998, which have minimized pollution and supported the creation of jobs for their organics facilities. Newfoundland and Labrador's ban on highway tires from

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[5] Government of Canada. (n.d.). *Circular economy*. Government of Canada. https://www.canada.ca/en/services/environment/conservation/sustainability/circular-economy.html

[6] Government of New Brunswick. (2023). *New Brunswick's strategic action plan for solid waste management 2023–2030: A roadmap for transforming our waste into materials for tomorrow*. Government of New Brunswick. https://www2.gnb.ca/content/gnb/en/corporate/promo/waste-reduction-diversion/action-plan.html

[7] Government of Nova Scotia. (n.d.). *Circular economy and waste engagement*. Government of Nova Scotia. https://novascotia.ca/circular-economy-and-waste-engagement/

landfills paved the way for a return-to-retailer program that allows residents to dispose of their used tires at no cost. The tires can be transformed into tire-derived aggregate, which is a material used for construction, transportation, and landfill design.

Source Separation

Mandated Waste Separation

Waste collection responsibilities generally reside with municipalities and waste management regions. Those that offer curbside collection provide residents with carts (or bins) for separated waste (although not all municipalities across the provinces offer curbside collection for organics), or they partner with private contractors to perform the service. Nova Scotia and Prince Edward Island mandate province-wide waste separation at the source.

Prince Edward Island's Waste Watch program enforces its mandate through compliance checks. A Program Compliance Inspector works with contracted collection drivers to identify and address challenges among collection routes. Drivers leave attention tags with carts requiring improved sorting. If no evidence of sorting is observed, the inspector attaches a rejection notice to the cart and notifies the collection driver. Non-participation is penalized through higher costs.[8] The island's relatively small population, smaller land area, and highly centralized solid waste collection network make it easier to implement and enforce such a program.

Online Tools and Guides

Prince Edward Island and Nova Scotia offer province-wide online collection and sorting tools and guides for their customers. Prince Edward Island's waste management corporation developed informational tools, including a semi-annual newsletter, a collection calendar, printed and interactive sorting guides, and a free mobile app called Recycle Coach that sends collection reminders. In Nova Scotia, Divert NS, a nonprofit organization that manages the province's recycling programs, has an online sorting tool. Users enter their addresses to locate curbside recycling and composting collection in their area. Divert NS's sorting guide includes instructions for recycling and disposing of waste items, locations to donate clothing, and collection calendars.[9]

[8] Island Waste Management Corporation. (2024). *2023–2024 annual report*. IWMC. https://iwmc.pe.ca/wp-content/uploads/2025/06/2023-2024-Annual-Report.pdf
[9] Divert NS. (n.d.). *Sorting guides*. Divert NS. https://divertns.ca/sorting-guides

Drop-off Centers

Drop-off centers are facilities where residents can bring in materials not accepted in regular curbside collection, such as bulky items or certain recyclables. These facilities may charge for drop-offs. For example, on Prince Edward Island, Waste Watch Drop-Off Centers (i.e., facilities managed by the province's waste management corporation) accept source-separated materials from businesses and residents for a charge. Nova Scotia's *Enviro-Depots* (a trademarked network of locations that are eligible to collect certain recyclables) accept recyclables such as beverage containers, paint, and textiles.

Recycling Programs

All four eastern Canadian provinces have provincially regulated recycling programs to divert certain types of waste from landfills. Regional waste management bodies, municipalities, and other industry organizations also have requirements or offer services that surpass those required by the province.

Product Stewardship

Provincial/territorial or municipal governments manage product stewardship programs. These programs are financially supported through legislated environmental fees and/or public funds, and no financial responsibility is typically allocated to producers. Stewardship programs can be either voluntary or required by law.

Extended Producer Responsibility

Extended Producer Responsibility (EPR) is a legislative approach in which a producer's responsibility for a product extends to the post-consumer stage of a product's life cycle. Producers are responsible for the collection, recycling, and disposal of their products.[10] This approach can potentially shift the cost burden away from municipalities and taxpayers. Programs that exist through EPR across eastern Canada include e-waste, oil and glycols, paints, medications, car and bicycle tires, and beverage containers. All four provinces anticipate designing EPR policies for more product categories through 2026 (see **Table 2**).

[10] Government of Canada. (n.d.). *Introduction to extended producer responsibility*. Government of Canada. https://www.canada.ca/en/environment-climate-change/services/managing-reducing-waste/overview-extended-producer-responsibility/introduction.html

Table 2. *Recycling Programs across Eastern Canada.*

	Newfoundland and Labrador	Prince Edward Island	Nova Scotia	New Brunswick
Beverage Containers	X	S by 2026	X	S
Tires	X	X	X	S
E-Waste	S	S	S	S
Oils and Glycols	S	S		S
Paint	S	S	S	S
Batteries		S		S by 2026
Medications		S	S	S
Sharp Objects (e.g., needles, insulin pens)		S	S	S
Light Bulbs		S		S by 2026
Agricultural Plastics		S		
Ink Cartridges		X		
Construction and Demolition Waste		X		
Propane Tanks		X		
Paper and Packaging			S	S
Textiles			S	

This table focuses on recycling programs that are available province-wide or in most regions. S = Voluntary and Mandatory (EPR) Stewardship programs. X = non-stewardship regulated programs.

Deposit/Refund

Deposit/refund programs for beverage containers are designed to incentivize recycling and reduce litter. These programs apply a deposit to most beverages, which is then partially or fully reimbursed when a customer returns the product for reuse or recycling. In both Newfoundland and Labrador and in Nova Scotia, networks of licensed enterprises may collect used beverage containers from consumers for a refund. New Brunswick's deposit/refund program is through EPR and operates on a "full-back" system (i.e., it gives consumers a 100% refund on deposit-bearing beverage containers). Prince Edward Island will also implement a full-back program by 2026.

Organics and Composting Initiatives

Infrastructure for diverting organic materials from landfills varies by province. Prince Edward Island and Nova Scotia have large organics facilities with in-vessel composting, windrow composting, and aerobic composting. Both provinces also have province-wide landfill bans on organic waste.

New Brunswick has a few privately-owned organics facilities, and a few waste management regions offer curbside organics collection. Others offer equipment for at-home composting.

In Newfoundland and Labrador, about half of the population lives in areas with some form of composting for yard and leaf waste. The province lacks a provincial organics waste management strategy, but communities have developed their own small-scale initiatives, such as shared rotating composting carts and community composting programs.[11,12] Some Newfoundland communities joined a pilot program for a small composting appliance that turns table scraps into dry, shelf-stable fertilizer.[13]

Recent Technological Developments in Waste Diversion

Tire Recycling Facility (Newfoundland and Labrador)

In 2023, the island portion of Newfoundland and Labrador opened the Coastal Tire Recycling facility, which recycles used tires into tire-derived aggregate. Tire-derived aggregate (TDA) is a product used in civil engineering and construction (sometimes in place of rock) for lightweight fill, drainage, thermal insulation, and backfill. TDA can also be used for leachate collection or vibration damping. The facility was established as a partnership between Halifax C&D Recycling (a recycling center) and Newfoundland and Labrador's Multi-Materials Stewardship Board, which is a Crown agency of the Government of Newfoundland and Labrador. Before the opening of this new facility, the tires were transported to Quebec to be used as tire-derived fuel. The facility can recycle approximately 500,000 tires per year.[14]

Development of a Mobile Plastic Shredding Technology (Newfoundland and Labrador)

ASL Energy Corporation, an Indigenous-led company that is now rebranded as Eco Axis, developed a mobile plastic shredding technology that transforms aquaculture waste (e.g., feedbags, cage netting, floats, and rope) into high-density polyethylene (HDPE), which can be recycled to make products like composite wood and plastic lumber.[15] Eco-Axis has a recycling plant that processes (i.e., shreds and chips) HDPE plastic waste from aquacultural sources that the organization partners with. According to their social media,

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[11] Waste & Environmental Community Network (WECN). (n.d.). *Community compost*. WECN. https://www.wecnl.ca/community-compost

[12] CBC News. (2021, October 29). *Community composting project in St. John's aims to reduce food waste*. CBC. https://www.cbc.ca/news/canada/newfoundland-labrador/community-composting-project-st-johns-1.6228156

[13] CBC News. (2024, January 12). *FoodCycler program expands in Newfoundland and Labrador to tackle food waste*. CBC. https://www.cbc.ca/news/canada/newfoundland-labrador/foodcycler-nl-1.7597354

[14] Government of Newfoundland and Labrador. (2023, June 5). *Provincial government announces new environmental initiative*. Government of Newfoundland and Labrador. https://www.gov.nl.ca/releases/2023/ecc/0605n01/

[15] Springboard Atlantic. (2023, November 24) *Case Study: Springboard's 360 Cleantech project inspires an award-winning sustainable innovation*. Springboard Atlantic. https://springboardatlantic.ca/case-study-springboards-360-cleantech-project-inspires-an-award-winning-sustainable-innovation/

Eco-Axis partners with a trucking company to transport the plastic feedstock that is produced.

Circular Production of Clinker (Nova Scotia)

The companies Lafarge Canada and Geocycle Canada completed a pilot test at the Lafarge Brookfield Cement Plant, where recycled minerals were recovered from waste sources to produce clinker, which is an active ingredient in concrete. This pilot test is reported to be the first-ever conducted in North America and the second worldwide.[16]

Waste Disposal

Waste disposal infrastructure varies by province and is influenced by geography and population distribution. Newfoundland and Labrador have about 62 operational landfills, but many are destined for closure because of landfill space and cover constraints.[17] Two fully lined regional landfills on the island are permitted to accept waste for final disposal, one of which has methane and leachate systems.

Prince Edward Island has only one active landfill that is fully lined with on-site wastewater treatment and a windrow composting facility. All six of New Brunswick's regional landfills have landfill gas capture infrastructure to help mitigate the release of greenhouse gases. Five of these facilities generate electricity from methane, and the other burns the gas.[18]

Recent Technological Developments in Waste Disposal

Waste-to-Energy Plant Expansion (Prince Edward Island)

Waste-to-energy (WtE) technology is any waste treatment process that generates electricity or heat from various types of waste. WtE encompasses thermal and biological technologies such as incineration, gasification, pyrolysis, and anaerobic digestion.

Prince Edward Island's WtE facility burns municipal solid waste and biomass (e.g., scrap wood), which produce hot water and steam thermal energy for more than 145 buildings in the capital region. Enwave Energy Corporation owns and maintains Prince Edward Island's WtE plant. The plant is approaching the end of its life and will be replaced with a new,

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[16] Geocycle. (n.d.). *Geocycle and Lafarge Canada pilot 100% circular production of clinker in Nova Scotia*. Geocycle. https://www.geocycle.com/geocycle-and-lafarge-canada-pilot-100-circular-production-clinker-nova-scotia

[17] Government of Newfoundland and Labrador. (2023). *Final report: Review of provincial solid waste management strategy*. Government of Newfoundland and Labrador. https://www.gov.nl.ca/eccc/files/waste-management-final-report-review-pswms.pdf

[18] Government of New Brunswick. (2020). *Solid waste management report*. Government of New Brunswick. https://www2.gnb.ca/content/dam/gnb/Corporate/Promo/waste-dechets/reports-rapports/solid-waste-management-report-e.pdf

expanded facility capable of processing 90% of the province's total black cart residential waste, which will significantly reduce landfill waste.[19] A municipal-provincial-Crown corporation partnership on Prince Edward Island is behind the island's planned expansion of its WtE facility.

Pyrolysis of Plastic Waste (Nova Scotia)

Pyrolysis is a thermochemical process for handling solid waste, in which organic materials (e.g., municipal solid waste, industrial waste, and sewage sludge) decompose at high temperatures in the absence of oxygen. It converts waste into outputs such as liquid fuels, char, and chemicals. Pyrolysis is efficient for reducing waste in landfills and is an environmentally friendly alternative to incineration.[20]

Sustane Technologies Inc. is a company that sources end-of-life plastic waste (e.g., plastic bags and film, end-of-life fishing/aquacultural gear, and agricultural waste) from partnering businesses and local municipalities to convert into engineered feedstocks for virgin plastic production using pyrolysis. With a facility expansion/upgrade in progress, the company expects to process more than 10,000 tons of plastic waste and produce slightly more than 8,000 tons of product.[21]

Public Education and Outreach

All four provinces have adopted various strategies to encourage their citizens to build awareness about waste and participate in waste diversion initiatives:

- **Sorting Tools**: Online or physical sorting tools help users identify their collection dates, know where to place waste materials, report illegal dumping, and find facilities that accept certain recyclables.
- **Social Media Campaigns**: Online campaigns can be tailored to specific audiences to encourage environmentally friendly behaviors. Nova Scotia launched a waste diversion campaign across digital, social, radio, and TV channels that resulted in a 28 percent increase in recycling at Enviro-Depots.[22]

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[19] GlobeNewswire. (2025, May 12). *Enwave announces expansion of energy-from-waste district heating facility in Prince Edward Island, avoiding landfill for nearly 90% of the black cart residential waste in province*. GlobeNewswire. https://www.globenewswire.com/news-release/2025/05/12/3078913/0/en/Enwave-Announces-Expansion-of-Energy-from-Waste-District-Heating-Facility-in-Prince-Edward-Island-Avoiding-Landfill-for-Nearly-90-of-the-Black-Cart-Residential-Waste-in-Province.html

[20] Czajczyńska, D., Anguilano, L., Ghazal, H., Krzyżyńska, R., Reynolds, A. J., Spencer, N., & Jouhara, H. (2017). Potential of pyrolysis processes in the waste management sector. *Thermal science and engineering progress*, *3*, 171-197.

[21] CBC News. (2020, November 29). *From trash to treasure: This Nova Scotia company wants the world to rethink garbage*. CBC. https://www.cbc.ca/news/canada/nova-scotia/from-trash-to-treasure-this-nova-scotia-company-wants-the-world-to-rethink-garbage-1.5817573

[22] Divert NS. (2024). *Annual report*. Divert NS. https://www.divertnsannualreport.ca/

- **Waste Education**: Some provinces offer classroom activities, lesson plans, videos, and waste educators to instruct students, businesses, and community groups about proper recycling and waste reduction.
- **Cleanup Programs:** Providing litter cleanup supplies to interested individuals or hosting community cleanups can foster community pride, leadership, and interest in waste reduction.
- **National or International Public Awareness Campaigns:** Participating in national and international initiatives such as Circular Economy Month and International Compost Awareness Week raises awareness about issues of waste, encourages choice for more environmentally responsible products, and promotes individual and community action to divert waste from landfills.

CONCLUSION

As Atlantic Canada progresses toward its solid waste management goals, it relies on a network of physical infrastructure and collaboration among citizens, private companies, nonprofit organizations, and other entities. Provincial regulations and landfill bans on certain recyclables are the building blocks for provincial product stewardship programs, and service providers encourage citizen participation through campaigns, education, and compliance enforcement. Southeast Alaska may explore product stewardship programs while recognizing that the examples provided in this memorandum were made possible by Canadian provincial law.

Canada's eastern provinces are also exploring innovative ways to turn end-of-life materials into new products while reducing landfilled waste. These technologies have the potential to create closed-loop economies, thus reducing resource consumption and minimizing overall environmental impacts.

The Southeast Alaska Solid Waste Authority may consider the use of alternative technologies, such as WtE, and the scales at which they would be most appropriate to best meet the region's needs. Atlantic Canada's larger urban populations are conducive to more efficient municipal solid waste management because larger populations create more consistent waste streams and a sufficient tax base to fund and maintain infrastructure. For example, materials recovery facilities and WtE technologies are typically built for large, concentrated amounts of waste and thus are very suitable when sited near larger populations.

This memorandum is not an evaluation of these provinces and does not encompass all individual communities' specific conditions, needs, and challenges. RESPEC will evaluate infrastructure, processes, equipment, and best practices for solid waste management in a separate memorandum.