

Waste Disposal and Diversion:
Reaching Nova Scotia's Goal

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Executive Summary

Reducing the amount of waste generated has been an important goal for Nova Scotians, especially in the previous decade. A lot of work has been done to limit the amount of waste per person to approximately 400 kg, however, more can be done. The Environmental Goals and Climate Change Reduction Act's solid waste disposal target of 300 kg per person is a big step in the fight against climate change. This essay will discuss both current waste disposal and diversion practices within the province, as well as possible initiatives that could be implemented to help reach the 300kg per person goal.

An important part in Nova Scotia's current waste management action plan, has been placing bans on the discarding of certain recyclable materials such as selective plastics. The Government of Nova Scotia has increased employment in the environmental industry, ensuring an increase in economic growth in the waste management sector. As well, the province has worked with federal programs such as the Ocean Plastics Charter and the Canada-wide strategy on Zero Plastic Waste.

Education and awareness are two major factors when considering the future of Nova Scotia's waste management. Education initiatives regarding the circular economy, and information being presented in a way that connects to the children, are key in ensuring the future generations take an interest in their province's waste diversion practices. Youth, when engaged in their communities' environmental efforts, are key contributors in deciding Nova Scotia's future.

Community based projects are extremely important when attaining to achieve waste reduction goals. Multi-stream recycling stations ensure that waste is diverted properly, saving both money and time when materials reach the sorting facilities. Toronto's Sewing Repair Hubs program encourages the reutilization of clothing that would otherwise become waste, a similar community program would benefit Nova Scotia's waste management system.

New technology, investigating turning waste into solid recovered fuel, is an untapped potential for the Nova Scotian Government to divert waste from landfills.

Many policies are currently in place in Nova Scotia that attempt to reduce the amount of waste being produced, and that aim to create more sustainable waste management systems. Current policies in place in Nova Scotia include bans on the disposal of beverage containers, selective plastics and other recyclable materials, and compostable organic materials, as well as the “Expansion of the current deposit/refund system on beer and liquor bottles to include all beverage containers with the exception of milk”, (Department of Environment and Climate Change, 2009). While solid waste management becomes one of the fastest growing sectors in the environmental industry, employment from diversion programs continues to increase (Department of Environment and Climate Change, 2009). This sector of employment not only benefits the Nova Scotian economy, but also helps push forward new innovative strategies. New federal regulations and initiatives have also been key in reducing Nova Scotia's waste, these include the Ocean Plastics Charter (Government of Canada, 2021), and the Canada-wide strategy on Zero Plastic Waste (Canadian Council of Ministers of the Environment , 2020). These programs work directly with provinces in order to make producers responsible for the plastic waste generated by their products (Government of Canada, 2022b).

Education initiatives on waste management are key in helping to develop waste reduction strategies. An opportunity to increase knowledge on the current solid waste strategy, and to also increase interest in the waste management sector, could include an information initiative in schools; dedicated to educating young people on circular economy. The circular economy proposes redesigning the typical linear pathway into a circular pathway, turning waste itself into a resource through reuse, repairs, refurbishing, remanufacturing, repurposing, and recycling (Chizaryfard et al., 2021). By using valuable resources wisely, and finding innovative and creative ways to better both communities and the economy, the circular economy ensures that nothing is considered waste (Government of Canada, 2022a). Based on the principle of keeping materials and products in use, circular economy, when taught to young people, helps engage youth to get involved in their town or province's waste management. In Benin, making sure that the future generation is concerned about

environmental issues, particularly waste management, is a top priority. Through regular environmental classroom sessions in the form of things accessible to youth such as video games, audio-visual activities and drawing competitions, they have been able to connect directly with youth through the education sector in order to engage them in environmental issues (UN Habitat, 2019). Nova Scotian youth would greatly benefit from a program similar to that in Benin, as it brings about important topics while using media that youth already understand and use. Increasing people's understanding of both problems and their solutions in regards to waste management, would greatly benefit the province when attempting to reach their three-hundred kilograms per person goal. Getting young people interested and involved is necessary when wanting to attain a sustainable future for preceding generations.

Town councils and community leaders have the biggest opportunity to directly implement climate initiatives and small but important changes in their communities. Multi-stream recycling stations should replace nearly all individual garbage cans, in order to provide access to recycling in virtually all locations. Multi-stream recycling has been proven to be more effective at diverting recyclable materials from landfills (Lakhan, 2015). Many communities in Nova Scotia have had the systems placed in both schools and government funded facilities, however there is a lack of multi-stream stations in more rural areas or in downtown spaces. The efficiency of a typical single-stream recycling station has been estimated to be approximately 85%, meaning that 15% of the waste collected from these bins contains unwanted fibers (Waste Diversion Ontario , 2013). Multi-stream stations also have the capability to decrease necessary investments in Materials Recovery Facility capital, money that can be better contributed elsewhere (Waste Diversion Ontario , 2013).

In Toronto, the Sewing Repair Hubs program encourages the repair and reuse of textiles that would otherwise become waste (City of Toronto, 2021). This community program offers instructions on the basics of clothing alteration and repairs, and provides all necessary tools and equipment that

residents may need in order to repair their own clothing (City of Toronto, 2021). The Sewing Repair Hubs program has been extremely successful, with over 1,379 kilograms of clothing and textiles diverted from city landfills (City of Toronto, 2021). This program could be easily implemented in communities across Nova Scotia. When residents are able to redesign and repurpose their clothing, the amount of textiles discarded per year could greatly decrease. Community based initiatives encourage direct community-member engagement and accountability, this responsibility drives habitants to not only achieve waste reduction but to feel a sense of pride in their accomplishments as well.

Technology has the capability to increase operating efficiencies, which have already been shown in the waste management sector through routing software and automated collection vehicles (Greenwalt , 2018). However, there is an opportunity to invest in new technology that could divert even more waste from landfills. In America, corporations like Gold Medal Environment have found new technology capable of turning broken down mixed waste into Environmental Protection Agency-recognized solid recovered fuel (Greenwalt , 2018). Exploration into the waste to fuel area, with funding going towards new technology is something the government should investigate. Through research, the technology sector could be a huge factor in reaching Nova Scotia's waste diversion goals.

A lot of work has been done to limit the amount of waste produced by Nova Scotians. Placing bans on the discarding of certain recyclable materials has had a huge effect on the waste management sector. Increased employment in the environmental industry has promoted economic growth. The province's work with federal programs such as the Ocean Plastics Charter and the Canada-wide strategy on Zero Plastic Waste, have all been important steps in the goal of waste reduction (Government of Canada, 2021). Education initiatives regarding the circular economy are crucial when ensuring the future generations take an interest in their province's waste diversion practices. Presenting new concepts using strategies familiar to youth engage students to be more aware

of their province's policies and strategies. Community based projects such as multi-stream recycling stations ensure that waste is diverted properly. The reutilization of clothing that would otherwise become waste, would be a great community project especially in urban areas. Research done in the waste to fuel area, along with investigation into new technology could help Nova Scotia reach their waste diversion goals.

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