Developing a
Waste Resource Management Strategy

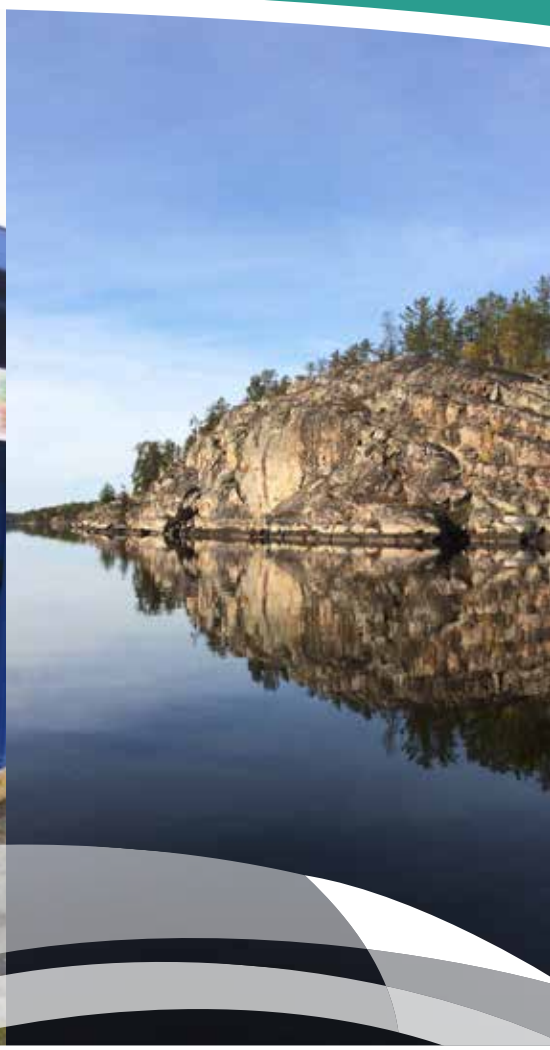
DISCUSSION PAPER

Élaboration de la
stratégie sur la gestion des déchets

DOCUMENT DE DISCUSSION

Le présent document contient la traduction française du résumé.

NOVEMBER 2017 | NOVEMBRE 2017



Government of Northwest Territories
Gouvernement des Territoires du Nord-Ouest

EXECUTIVE SUMMARY

Waste, and how we manage it, can impact the quality of our land, air and water, as well as the health of wildlife, plants, ecosystems and people living in the Northwest Territories (NWT).

Solutions for improving the management of waste resources need to consider the diverse interests of all groups producing and managing waste. The NWT's unique challenges, including our northern climate, small and isolated population, and a lack of all-season roads to many communities, also need to be taken into account.

The Government of the Northwest Territories (GNWT) will be developing a Waste Resource Management Strategy (Strategy) to serve as a ten-year road map for improving waste resource management throughout the Territory.

THE GNWT WANTS YOUR INPUT

This Discussion Paper presents the GNWT's overall goals in improving waste management in the NWT. We welcome your input to help create a 'made in the NWT' Strategy.

We want to hear from all who have an interest in, or work directly in, managing waste to ensure the priorities of the Strategy reflect key interests, needs and concerns.

As you read this Discussion Paper, please consider the following:

1. *Have we missed anything under each of the four goals? If so, what?*

2. *What comments do you have on the priority areas and potential actions identified?*

3. *What additional priority areas or potential actions could be added to improve the Strategy?*

4. *What types of programs should be implemented to target different waste materials (e.g., programs to reduce waste materials before the waste is created; programs to reuse certain material types; programs to recycle certain materials; etc.)?*

5. *What improvements would you like to see to waste management facilities in the NWT?*

6. *How do you think the GNWT could 'green' its operations?*

7. *How can we track our performance under the Strategy?*

Please feel free to answer as few or as many of the questions that are important to you, ask us any questions you might have, or tell us what you think about the GNWT's plan to develop a Waste Resource Management Strategy.

Feedback can be submitted online under Have Your Say! at www.enr.gov.nt.ca, or via email at wastestrategy@gov.nt.ca.

Please note that comments will be accepted until February 28, 2018.

Your comments will be used to create a draft Strategy and implementation plan that will include timelines for completing actions and measures for tracking progress.

There will be another opportunity to provide feedback once the draft Strategy and implementation plan are complete.

WHY DO WE NEED A STRATEGY?

Shifting the way we see waste from something to be buried in the ground to a valuable resource enhances our environmental stewardship efforts. We have many opportunities to improve how waste resources are managed in order to benefit the land, air and water, as well as the health of people, wildlife, plants and ecosystems in the NWT. Developing a Strategy is also needed because:

- the NWT trails behind Canadian provinces in preventing waste from reaching landfills;
- illegal disposal of waste on public lands and stockpiles of hazardous waste at several municipal landfills need to be addressed;
- support is needed to improve proper containment and disposal at solid waste facilities to prevent contaminants from entering the surrounding environment; and
- potential economic benefits can be gained from improving our management of waste resources.

GUIDING PRINCIPLES

Four guiding principles will direct the development and implementation of the Strategy:

1. **Protection of the Environment**
   - Good waste management means waste is not contaminating the air, land and water.
   - Reusing and recycling materials reduces environmental impacts.

2. **Economic Development and Financial Liability**
   - Diverting waste can help foster a green economy.
   - Improvements to waste management can minimize current and future landfill costs.

3. **Environmental Stewardship**
   - Improving waste management requires participation from all stakeholders, and Aboriginal and community governments.
   - Environmental stewardship of waste is evident in Aboriginal teachings.

4. **Collaborative Approaches**
   - Managing waste is a shared responsibility at all levels.
   - Developing partnerships to improve waste management is mutually beneficial.

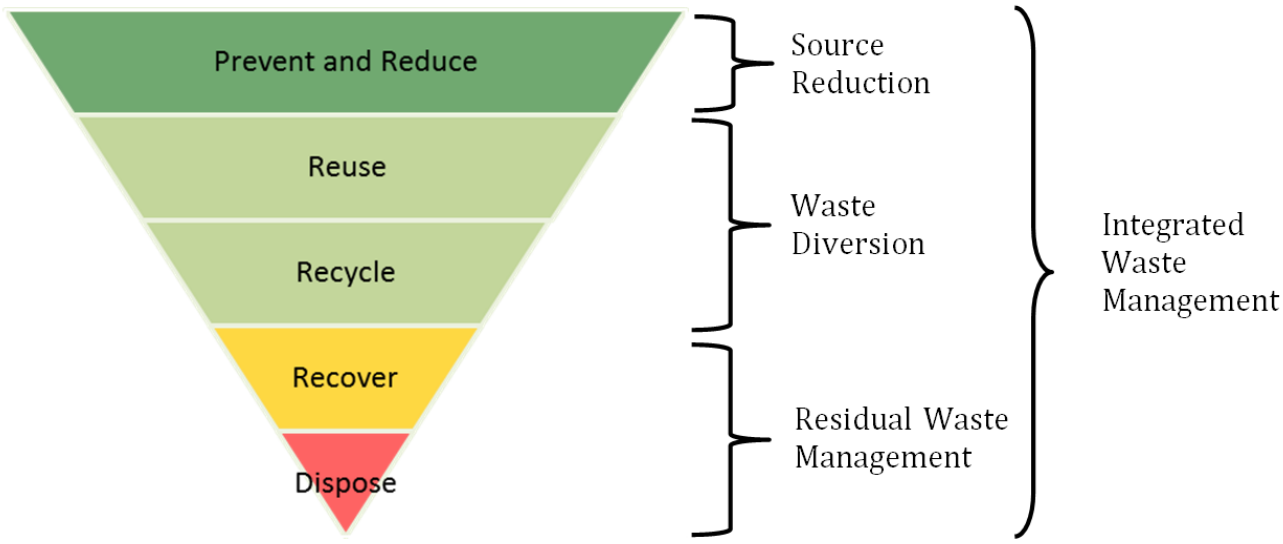
FOUR GOALS

The Strategy will include actions under four overarching goals:

1. **Prevent and reduce waste generated at the source;**
2. **Divert waste disposed in landfills;**
3. **Improve waste management facilities and practices; and**
4. **Lead by example – Greening the Government of the Northwest Territories.**

These goals are based on the waste management hierarchy to foster a shift in how waste is viewed and managed in the NWT focusing first on prevention and reduction of waste.

WASTE MANAGEMENT HIERARCHY



All NWT communities, with the exception of Yellowknife, dispose most of their waste directly to a landfill. A major focus of the Strategy is to shift away from this disposal model to an integrated waste management approach, which will reduce the amount of waste sent to a landfill. It will mean putting more effort into preventing the creation of waste, such as buying goods with less packaging and diverting waste from landfills by reusing and recycling materials.

The Strategy will also focus on improving the management of waste sent to landfills to minimize negative impacts. The Strategy will address both residential and non-residential sources of waste.

PRIORITY AREAS

Proposed priority areas have been identified under each of the Strategy's goals. We would like your feedback on these priority areas, as they will guide the establishment of objectives and potential actions to help achieve the goals.

Goal 1: Prevent and reduce waste generated at the source
Priority Areas

A. Provide tools and information necessary to reduce the amount of waste generated
B. Reduce food waste from residential and non-residential sectors
C. Keep our communities clean and reduce litter

Goal 2: Divert waste disposed in landfills
Priority Areas

A. Establish new waste diversion programs and initiatives
B. Improve existing waste diversion programs and initiatives
C. Divert organic waste from residential and non-residential sectors

Goal 3: Improve waste management facilities and practices
Priority Areas

A. Modernize waste management facility operations
B. Collect and manage hazardous waste
C. Develop policies and regulations to support GNWT strategies in the area of waste management
D. Gather information to facilitate decision-making at waste management facilities

Goal 4: Lead by example – Greening the GNWT
Priority Area

A. Lead by example through greening government

We look forward to your input. Visit Have your say! at www.enr.gov.nt.ca to provide comments.

RÉSUMÉ

Les déchets et la façon dont nous les gérons peuvent influencer la qualité de nos terres, de notre air et de notre eau, ainsi que la santé de la faune, de la flore, des écosystèmes et des résidents des Territoires du Nord-Ouest (TNO).

Pour améliorer la gestion des déchets, nous devons tenir compte des différents intérêts des groupes qui produisent et gèrent ces déchets. Nous devons également prendre en compte les défis propres aux TNO, notamment leur climat nordique, la petite taille et l'isolement de leur population, et l'absence de routes toutes saisons pour desservir de nombreuses localités.

Le gouvernement des Territoires du Nord-Ouest (GTNO) élaborera une stratégie de gestion des déchets (la Stratégie) qui servira de feuille de route décennale pour améliorer la gestion des déchets dans l'ensemble du territoire.

LE GTNO SOUHAITE CONNAÎTRE VOTRE OPINION

Le présent document de discussion énonce les buts généraux du GTNO pour l'amélioration de la gestion des déchets aux TNO. Nous vous invitons à nous faire part de vos commentaires pour nous aider à élaborer une stratégie adaptée aux TNO.

Nous aimerions entendre tous ceux qui s'intéressent à la gestion des déchets ou travaillent dans ce domaine afin que les priorités de la Stratégie tiennent compte de leurs principaux intérêts, besoins et préoccupations.

À la lecture de ce document, veuillez réfléchir aux questions suivantes :

1. *Avons-nous oublié quelque chose dans l'un des quatre buts? Dans l'affirmative, veuillez préciser.*

2. *Quels commentaires formuleriez-vous sur les mesures potentielles et les domaines prioritaires décrits?*

3. *Quels domaines prioritaires ou mesures potentielles pourraient être ajoutés pour améliorer la Stratégie?*

4. *Quels types de programmes devraient être mis en œuvre pour gérer les différentes catégories de déchets (p. ex. programmes de réduction des déchets, programmes de réutilisation, programmes de recyclage, etc.)?*

5. *En quoi les installations de gestion des déchets des TNO pourraient-elles être améliorées?*

6. *Comment le GTNO pourrait-il réduire les répercussions de ses activités sur l'environnement?*

7. *Comment mesurer les résultats obtenus dans le cadre de la Stratégie?*

N'hésitez pas à répondre aux questions qui vous semblent importantes, à nous en poser ou à nous donner votre avis sur le plan d'élaboration de la Stratégie de gestion des déchets du GTNO.

Vous pouvez présenter vos commentaires en ligne à Have Your Say! à l'adresse **www.enr.gov.nt.ca** ou par courriel à wastestrategy@gov.nt.ca.

Vous avez jusqu'au 28 février 2018 pour nous envoyer vos commentaires.

Vos commentaires serviront à élaborer une stratégie provisoire et un plan de mise en œuvre qui comprendra un calendrier et des indicateurs de résultats.

Vous pourrez donner votre avis sur la stratégie provisoire et le plan de mise en œuvre lorsqu'ils seront terminés.

POURQUOI AVONS-NOUS BESOIN D'UNE STRATÉGIE?

En ne voyant plus les déchets comme des résidus à enfouir, mais comme des ressources précieuses, nous améliorerons notre gérance environnementale. Il existe de nombreuses façons d'améliorer la gestion des déchets pour protéger les terres, l'air et l'eau ainsi que la santé de la faune, de la flore, des écosystèmes et des Ténois. En outre, nous avons besoin d'une stratégie, car :

- les TNO sont en queue de peloton au Canada pour détourner les déchets des sites d'enfouissement;
- nous devons nous attaquer à l'élimination illégale des déchets sur les terrains publics et à l'accumulation de déchets dangereux dans plusieurs sites d'enfouissement municipaux;
- nous avons besoin d'aide pour améliorer le confinement et l'élimination des déchets solides afin d'éviter que les contaminants ne polluent l'environnement immédiat;
- l'amélioration de la gestion des déchets peut avoir des avantages économiques.

PRINCIPES DIRECTEURS

Quatre principes directeurs orienteront l'élaboration et la mise en œuvre de la Stratégie.

1. **Protection de l'environnement**
   - Des déchets bien gérés ne polluent pas l'air, la terre, ni l'eau.
   - La réutilisation et le recyclage des déchets réduisent notre impact sur l'environnement.

2. **Développement économique et responsabilité financière**
   - Le réacheminement des déchets peut favoriser le développement d'une économie verte.
   - L'amélioration de la gestion des déchets peut réduire au minimum les coûts actuels et futurs d'enfouissement.

3. **Gérance environnementale**
   - L'amélioration de la gestion des déchets nécessite la participation des parties prenantes, des gouvernements autochtones et des administrations communautaires.
   - La gérance environnementale fait partie intégrante des enseignements autochtones; elle s'applique aussi aux déchets.

4. **Stratégies collaboratives**
   - La gestion des déchets est une responsabilité partagée par tous les ordres de gouvernement.
   - L'établissement de partenariats pour améliorer la gestion des déchets est avantageux pour tous les partenaires.

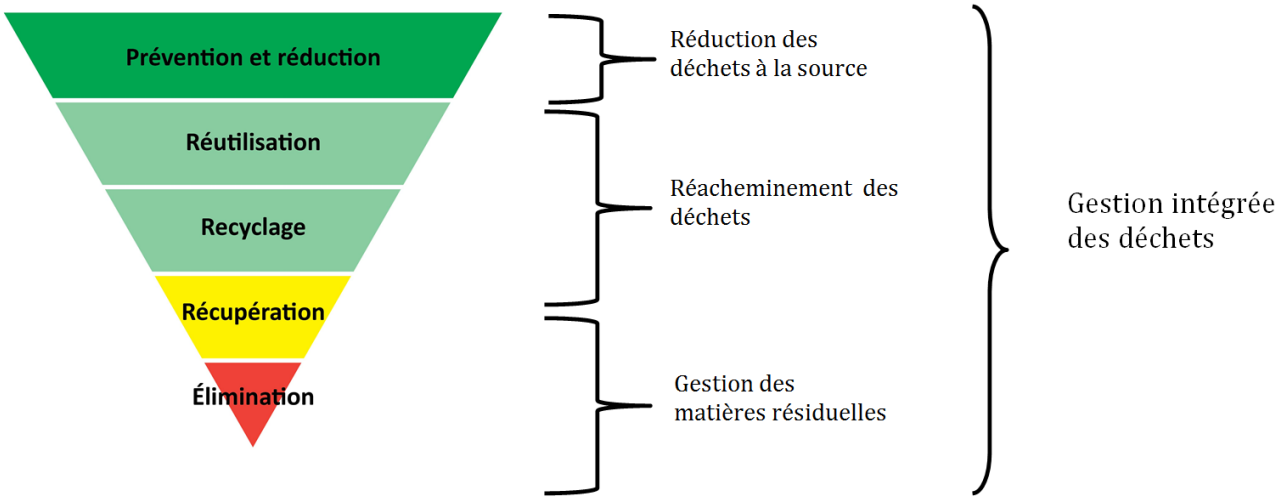
QUATRE BUTS

La Stratégie visera quatre buts généraux :

1. **Prévenir et réduire la production de déchets à la source;**
2. **Détourner les déchets des sites d'enfouissement;**
3. **Améliorer les installations et les pratiques de gestion des déchets;**
4. **Donner l'exemple – Verdir le gouvernement des Territoires du Nord-Ouest.**

Fondés sur la hiérarchie des modes de gestion des déchets, ces buts impliquent de changer la façon dont nous envisageons et gérons les déchets aux TNO; il s'agira premièrement de prévenir et de réduire la production de déchets.

HIÉRARCHIE DES MODES DE GESTION DES DÉCHETS



Toutes les localités des TNO, à l'exception de Yellowknife, enfouissent systématiquement la plupart de leurs déchets. La Stratégie visera principalement à passer d'un modèle d'enfouissement à une approche intégrée de gestion des déchets en vue de réduire la quantité de déchets acheminés vers des sites d'enfouissement. Pour ce faire, nous devrons axer nos efforts sur la prévention, notamment en réduisant les emballages des marchandises et en détournant les déchets des sites d'enfouissement par la réutilisation et le recyclage.

La Stratégie visera également à améliorer la gestion des déchets acheminés vers des sites d'enfouissement pour réduire au minimum leurs répercussions négatives. Elle portera sur les sources de déchets résidentielles et non résidentielles.

DOMAINES PRIORITAIRES

Pour chaque but, plusieurs domaines prioritaires ont été proposés. Nous souhaitons connaître votre avis sur chacun d'eux, car ils orienteront l'établissement des objectifs à fixer et des mesures potentielles à prendre pour atteindre ces buts.

But 1 : Prévenir et réduire la production de déchets à la source
Domaines prioritaires

A. Fournir les outils et les renseignements nécessaires pour réduire la quantité de déchets produits.
B. Réduire les déchets alimentaires des secteurs résidentiels et non résidentiels.
C. Maintenir nos localités propres et réduire les déchets sauvages.

But 2 : Détourner les déchets des sites d'enfouissement
Domaines prioritaires

A. Élaborer des initiatives et des programmes de réacheminement des déchets.
B. Améliorer les initiatives et les programmes de réacheminement des déchets existants.
C. Réacheminer les déchets organiques des secteurs résidentiels et non résidentiels.

But 3 : Améliorer les installations et les pratiques de gestion des déchets
Domaines prioritaires

A. Moderniser le fonctionnement des installations de gestion des déchets.
B. Collecter et gérer les déchets dangereux.
C. Élaborer des politiques et des règlements pour soutenir les stratégies du GTNO dans leurs aspects qui traitent de la gestion des déchets.
D. Recueillir des informations pour faciliter la prise de décision dans les installations de gestion des déchets.

But 4 : Donner l'exemple – Verdir le GTNO
Domaine prioritaire

A. Donner l'exemple en verdissant le GTNO.

Nous attendons vos commentaires. Rendez-vous à Have Your Say! à l'adresse www.enr.gov.nt.ca.

GLOSSARY

Aboriginal governments – governments that have negotiated, or are in the process of negotiating, self-government agreements with the GNWT and the Government of Canada.

Bulky waste – waste types that are too large to be accepted by regular waste collection. This includes discarded furniture, large appliances and plumbing fixtures.

Circular economy – an alternative to a traditional linear **economy** (make, use, dispose) in which we keep resources in use for as long as possible, extract the maximum value from them while in use, then recover and regenerate products and materials at the end of each service life.

Community government – a corporation established under or continued by the *Charter Communities Act*, the *Cities, Towns and Villages Act*, and the *Hamlets Act*, *Tłı̨chǫ Community Government Act*, or Recognized First Nations Councils delivering Municipal type services to the residents (in Municipal and Community Affairs terms - Designated Authorities).

Construction, renovation and demolition waste (CRD) – waste that includes wood, scrap metal, drywall, concrete, brick and various packaging materials and can make up as much as 25 percent of the solid waste going to landfill. It comes from residential and non-residential waste sources.

Extended Producer Responsibility (EPR) – a policy approach to managing waste in which a producer's responsibility, physical and/or financial, for a product is extended to the post-consumer stage of a product's life cycle. EPR shifts the cost of managing the end-of-life phase of a product away from tax-payers to producers and consumers.

First Nations (Designated Authorities and Reserves) – nine communities where a community government is governed by a First Nations' Band Council on or off-reserve, and is recognized by the Minister of Indigenous and Northern Affairs Canada. The First Nations are the primary authority in a community to deliver municipal services.

Green economy – is defined as an economy that aims at reducing environmental risks and ecological scarcities, and that aims for sustainable development without degrading the environment.

Hazardous wastes – are materials that are toxic, corrosive or flammable (e.g., oil, paints, batteries, solvents). They can be very harmful to the environment or human health. They come from residential and non-residential waste sources.

Non-residential waste – waste generated by industrial (e.g., construction, agriculture, resource development), commercial (e.g., retailers, accommodation and food services, commercial fishers) and institutional (e.g., government, schools, hospitals) sectors. It can also include hazardous waste. This is also referred to as ICI waste (industrial, commercial and institutional).

Organic waste – waste that includes food waste and various compostable materials. It comes from residential and non-residential waste sources.

Product Stewardship – a policy approach to managing waste that shifts the cost of managing the end-of-life phase of a product away from municipalities and tax payers to producers and consumers, but in which manufacturers and importers are neither directly responsible for program funding or operations.

Recyclable materials – materials for which recycling markets are well developed. Some examples include beverage containers, electronics, paper, cardboard, metal, glass and some plastics.

Residential waste – waste generated by both single-family households and multi-family buildings. It typically consists of about 40 percent recyclable materials, 40 percent organic materials, 10 percent bulky goods and 10 percent other materials.

GLOSSAIRE

Administration communautaire – organisation constituée ou perpétuée en vertu de la *Loi sur les collectivités à charte*, de la *Loi sur les cités, villes et villages*, de la *Loi sur les hameaux*, de la *Loi sur le gouvernement communautaire Tłı̨chǫ* ou d'un conseil des Premières Nations reconnu responsable de la prestation des services municipaux (le ministère des Affaires municipales et communautaires emploie le terme d'« autorité désignée »).

Déchets dangereux – matières toxiques, corrosives ou inflammables (p. ex. huile, peintures, batteries ou solvants). Ils peuvent être très nocifs pour l'environnement ou la santé humaine. Ils proviennent de sources résidentielles et non résidentielles.

Déchets de construction, de rénovation et de démolition – déchets tels que du bois, de la ferraille, des cloisons sèches, du béton, des briques et divers matériaux d'emballage pouvant représenter jusqu'à 25 % des déchets solides acheminés vers des sites d'enfouissement. Ils proviennent de sources résidentielles et non résidentielles.

Déchets non résidentiels – déchets produits par les secteurs industriel (construction, agriculture, mise en valeur des ressources, etc.), commercial (vente au détail, logement, restauration, pêche commerciale, etc.) et institutionnel (gouvernement, écoles, hôpitaux, etc.). Ils peuvent comprendre des déchets dangereux. On les désigne également sous le nom de déchets industriels, commerciaux et institutionnels.

Déchets organiques – déchets constitués de déchets alimentaires et de diverses matières compostables. Ils proviennent de sources résidentielles et non résidentielles.

Déchets résidentiels – déchets produits par les logements unifamiliaux et multifamiliaux. Ils sont généralement constitués de 40 % de matériaux recyclables, de 40 % de déchets organiques, de 10 % de déchets volumineux et de 10 % d'autres déchets.

Déchets volumineux – types de déchets trop volumineux pour être considérés comme des déchets ordinaires (meubles, gros appareils électroménagers et appareils sanitaires, etc.).

Économie circulaire – modèle qui rompt avec l'**économie** linéaire traditionnelle (fabriquer, utiliser, éliminer). Il consiste à utiliser les ressources le plus longtemps possible, à tirer profit au maximum de leur valeur lors de leur utilisation et, à la fin de leur cycle de vie, à les récupérer pour produire de nouveaux produits et matériaux.

Économie verte – économie qui vise à réduire les risques environnementaux et la rareté des ressources écologiques en faisant la promotion d'un développement durable qui ne nuit pas à l'environnement.

Gérance des produits – politique de gestion des déchets selon laquelle ce ne sont plus les municipalités et les contribuables qui assument les coûts de gestion d'un produit en fin de vie, mais les producteurs et consommateurs, et selon laquelle ni les fabricants ni les importateurs ne sont directement responsables du financement et de la mise en œuvre des programmes de gérance.

Gouvernements autochtones – gouvernements qui ont négocié ou négocient actuellement des ententes sur l'autonomie gouvernementale avec le gouvernement des Territoires du Nord-Ouest et le gouvernement du Canada

Matières recyclables – matières pour lesquelles le marché du recyclage est bien développé (p. ex. les canettes, les composants électroniques, le papier, le carton, le métal, le verre et certains plastiques).

Premières Nations (réserves et autorités désignées) – neuf localités administrées par un conseil des Premières Nations, dans une réserve ou non, reconnu par le ministre d'Affaires autochtones et du Nord Canada. Les Premières Nations constituent la principale autorité responsable de la prestation des services municipaux dans ces localités.

Responsabilité élargie des producteurs (REP) – politique de gestion des déchets où la responsabilité, tant matérielle que financière, d'un producteur à l'égard d'un produit est élargie à l'étape de la post-consommation du cycle de vie du produit. Avec la politique de REP, ce ne sont plus les contribuables qui assument le coût de gestion d'un produit en fin de vie, mais les producteurs et les consommateurs.

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1.0 INTRODUCTION

1.1 Why a Strategy?

Waste, and how we deal with it, can impact the quality of our land, air and water, as well as the health of wildlife, plants, ecosystems and people living in the Northwest Territories (NWT). Environmental stewardship related to waste management can help protect the health of our land, air, water and people. Shifting the way we see waste from something to be buried in the ground to a valuable resource can help us increase our stewardship efforts.

The NWT trails behind Canadian provinces in managing waste as a resource and implementing actions to improve waste management. Eight provinces and the Yukon have waste management strategies in place and Saskatchewan and Nunavut are developing strategies.

Strategies across Canada focus on economic and environmental benefits of waste reduction and diversion, improving waste disposal systems and hazardous waste management. Other areas of focus include circular economy, extended producer responsibility, public education and awareness, disposal bans and greening government.

The development of the NWT Waste Resource Management Strategy (the Strategy) is consistent with the 18th Legislative Assembly's priority to lead economic diversification and environmental stewardship in the NWT by improving coordination and effectiveness in resource management systems, recognizing traditional knowledge, land claim agreements and devolution. The Government of the Northwest Territories (GNWT) also committed to developing a strategy in the 2016-2019 Mandate:

> *1.3.3 – We will develop a strategy to manage the resources and potential economic and environmental benefits derived from household, commercial, and industrial garbage from private sector sources and in our municipalities.*

The Land Use and Sustainability Framework outlines the GNWT's vision for managing land, water and resources in the public interest. The principles and NWT land interests laid out in the Land Use and Sustainability Framework provide a basis for the development of the Strategy.

Collaborative working relationships and partnerships will be both necessary and beneficial to achieve the goals and implement the actions of the Strategy.

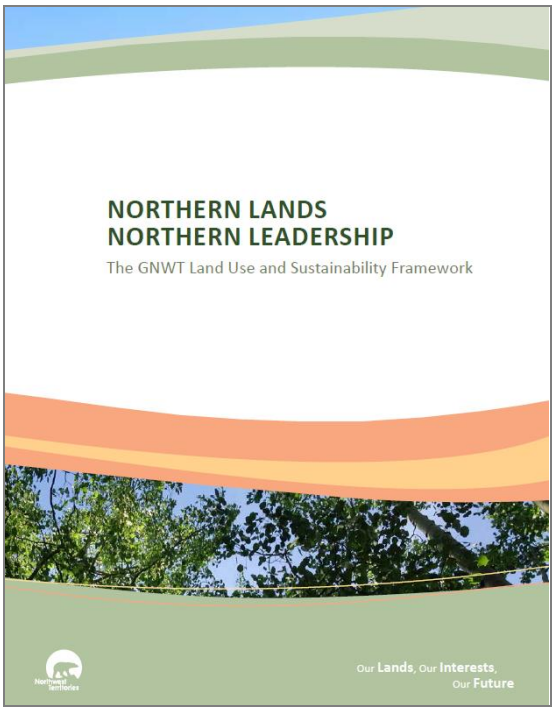
The Waste Resource Management Strategy will be informed by the Guiding Principles and NWT land interests established in the ***Land Use and Sustainability Framework***.

Guiding Principles

- ✓ Balanced and Sustainable
- ✓ Responsible and Responsive
- ✓ Respectful
- ✓ Relevant and Informed
- ✓ Coordinated and Collaborative
- ✓ Fair and Equitable
- ✓ Transparent and Accountable

NWT Land Interests

- ✓ The Land Sustains Us
- ✓ We Support the Sustainability of the Land
- ✓ The Land Provides Benefits and Wealth
- ✓ Land Use is Well Governed



The cost of implementing the Strategy will be an important consideration due to the small NWT population base, isolated communities and vast area. Waste resource management activities that may be easily achievable in a province such as Ontario may not be feasible in the NWT.

Barriers can be overcome through investment in new technology, using and building on existing infrastructure, supportive legislation and increased collaboration within the NWT and with neighbouring jurisdictions.

Potential proposed actions could involve significant capital costs. These actions, however, could reduce some of the existing financial and environmental liabilities for communities and the GNWT.

1.2 Why a Discussion Paper?

This discussion paper is intended to get feedback from community and Aboriginal governments, residents and all stakeholders on improving waste management in the NWT to achieve economic and environmental benefits. It outlines broad goals for the Strategy along with draft priority areas and potential actions under each goal, which were developed with guidance from the Waste Reduction and Recovery Advisory Committee[1].

Input on the priority areas and potential actions will inform the development of Strategy objectives, actions, and measures to track progress. Objectives and actions will reflect the perspectives, interests and concerns of stakeholders, and community and Aboriginal governments.

1.3 Who Will Be Involved?

The Department of Environment and Natural (ENR) is responsible for the development of the Strategy and leading its implementation. However, improving waste management in the NWT will require involvement from many groups, organizations and different GNWT departments and other levels of government.

Regulatory Jurisdiction for Waste Management in the NWT

Community Governments and First Nations Designated Authorities provide services and programs that serve a municipal purpose, including, treatment and disposal of sewage and garbage. They are governed by territorial or federal legislation.*

GNWT provides support and funding to community governments and First Nation Designated Authorities (Department of Municipal and Community Affairs (MACA)), develops guidance on aspects of waste management (MACA/ENR), develops and manages territorial recycling programs (ENR), provides guidance to ensure hazardous waste is managed to prevent the discharge of contaminants into the environment (ENR), and inspects municipal and industrial landfills (ENR/Department of Lands).

Federal government plays a role in regulating hazardous substances and providing Canada-wide guidance on various aspects of waste management and planning.

Regulatory boards issue water licences for municipal and industrial landfills in the NWT and develop guidance documents in coordination with stakeholders, community and Aboriginal governments specific to waste management.

*www.maca.gov.nt.ca/wp-content/uploads/2011/09/Differences-in-Comm-Govts-2013.pdf

[1] The Waste Reduction and Recovery Advisory Committee was established by ENR under the *Waste Reduction and Recovery Act.* www.justice.gov.nt.ca/en/files/legislation/waste-reduction-recovery/waste-reduction-recovery.a.pdf

ENR will work collaboratively with community and Aboriginal governments, and stakeholders including GNWT departments, federal departments, regulatory boards, professional associations, non-government organizations, industry, commercial operators, academic institutions, businesses, and residents, to ensure their concerns and interests are reflected in the Strategy.

The final Strategy and implementation plan will have linkages to existing GNWT strategies, action plans and policies. ENR will work jointly with other GNWT departments to support advancing priorities related to waste management in the NWT.

Implementation of the final Strategy will require support and coordination between stakeholders, community and Aboriginal governments who will play key roles in undertaking specific actions. Partnerships and collaboration will be essential to meeting shared objectives and priorities.

Related Territorial Strategies and Action Plans

Several Territorial initiatives are relevant to waste management. These, and others, will be further explored to collaborate on related actions where possible.

Action Plan for Improving Support to Community Governments in the NWT (2017) – The Department of Municipal and Community Affairs released this action plan in response to the Office of the Auditor General of Canada's performance audit. One of the recommendations is directly related to providing support and capacity building to address community waste management requirements.

NWT Water Stewardship Strategy (2010) – The vision, the waters of the NWT shall remain clean, abundant, and productive for all time, will be supported by improved waste management. Its Action plan (2016-2020) outlines items directly related to waste management.

NWT Climate Change Strategic Framework (to be released in 2017) – There will be links relevant to waste management. For example, Greenhouse Gas (GHG) reduction can be achieved through composting organic waste.

NWT Agriculture Strategy (**released March 2017)** – This strategy addresses the promotion of local food production and processing. Promotion of locally produced foods, composting of organic waste, and the production of waste-based products, such as fish fertilizer or compost, align with waste management goals. Ensuring waste is properly managed from commercial farms is also relevant to this Strategy

NWT Commercial Fishing Strategy (released March 2017) – This strategy aims to increase the catch and availability of fish, including NWT processing, to grow the NWT market and access export markets. Ensuring waste is properly managed is relevant to this Strategy, as is the possible creation of valuable waste-based products, such as fish fertilizer.

2.0 A SNAPSHOT OF WASTE MANAGEMENT

2.1 Waste Disposal in the NWT Compared to Other Jurisdictions

In 2014, an estimated 41,513 tonnes of waste, or 946 kg per person per year was disposed of in NWT landfills[2] (see Figure 1) from the residential and non-residential sectors. Nova Scotia disposed the least amount of waste in Canada at 386 kg per capita per year[3], almost 2.5 times less than the NWT. If all the waste we throw away annually was considered in terms of volume and was uncompacted, it would equal about 168 Olympic-size swimming pools!

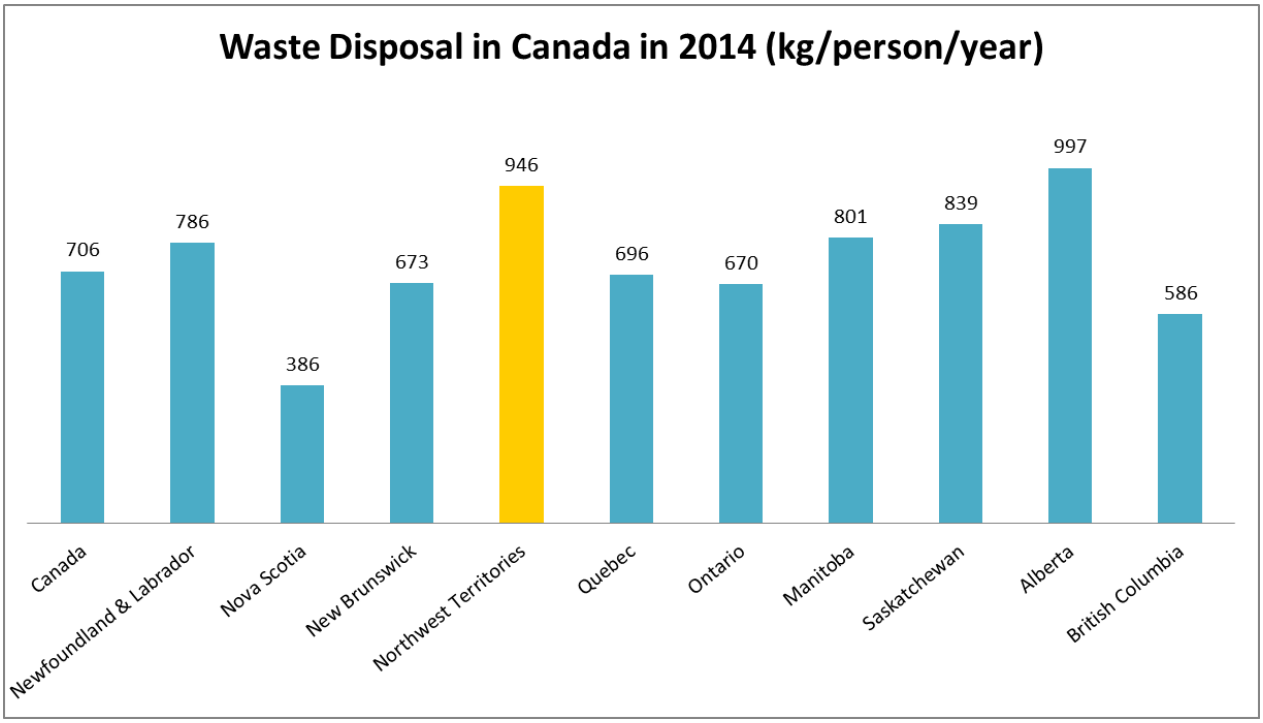


Figure 1: Waste Disposal in Canada from Residential and Non-residential Sources[4]

Defining the quantity of waste disposed from residential and non-residential sectors in the NWT—for example, waste from the construction industry, hospitals, schools and retailers—is challenging because waste is not weighed in any communities, except for Yellowknife and Inuvik.

[2] Estimated based on data from the Study of NWT Waste Management Systems. Golder Associates. 2016.
[3] Statistics Canada (2016). Disposal and diversion of waste, by province and territory for 2014. www.statcan.gc.ca/tables-tableaux/sum-som/l01/cst01/envir32b-eng.htm
[4] Canadian Province data from Statistics Canada (2016), and NWT data from Golder Associates (2016)
Note: This chart is intended to provide a rough idea of the disposal rate in the NWT relative to the rest of the country. The total disposal rate for the NWT was estimated by Golder Associates in a study of waste management systems in the NWT completed in 2016, and the remaining data were collected by Statistics Canada through its survey of the waste industry.

In Canada, about 40 percent of waste disposed comes from the residential sector while the other 60 percent is from the non-residential sector. Limited infrastructure in the NWT means some communities manage non-residential waste within the community landfill. Industrial waste, whether disposed in the NWT or shipped outside the NWT, is generally not well tracked.

2.2 The State of NWT Waste Management Facilities

There are 32 landfill sites in the NWT, one in each community with the exception of N'dilo, which accesses the solid waste management facility in Yellowknife. Eighteen of these landfill sites are situated on Commissioner's Land and the remaining are on community land. The majority of these landfills were built in the 1980s and 1990s and only one landfill is a second-generation landfill with an engineered lined cell. A snapshot of the state of landfill sites in the NWT is presented in Table 1.

Table 1: State of NWT Landfills – a Snapshot

The number of community landfills that have…	
An approved water licence	24
An approved operations and maintenance plan	12
Partial or full site access control	24
An electric fence (to deter wildlife from entering landfill)	5
Historical hazardous waste (stored at site for two or more years)	20
Minimal to no waste segregation (may contain some proportion of hazardous waste in non-hazardous waste cells)	8
Visible leachate seep, with documented or monitored impact to groundwater that pose known potential risk	5
The number of community landfills that are…	
Located within 500 m of nearest water body	13

Best management practices, like using electric fences, can reduce instances of wildlife habituation to landfills, which reduces risks to wildlife and humans.

The disposal of waste on public lands and stockpiles of historical hazardous waste at numerous municipal landfills throughout the NWT also need to be addressed. If these materials leak or spill, they may harm people, wildlife and the environment, and also cause significant financial liabilities for community and Aboriginal governments, and for the GNWT.

For example, hazardous waste inventories completed between 2014 and 2015 of landfills located in the Inuvik and Sahtu Regions estimated that the transportation and disposal cost is $3.3 million dollars in those communities. These costs do not account for any clean-up costs.

Hazardous waste stockpiles are common in many NWT landfills. Their presence cause significant financial liabilities to governments, and if they leak or spill, they may harm people, wildlife and the environment.

Proper containment and disposal at appropriate facilities are needed. Financial resources and human capacity in most communities are limited and many landfills are not operated to meet modern environmental standards. More support is required to ensure waste is effectively managed to prevent contaminants from entering the surrounding environment.

Solutions for improving the management of waste resources need to consider the diverse interests of all groups producing and managing waste as well as the unique challenges in the NWT including our northern climate, small and isolated population and a lack of all-season roads to many communities.

2.3 NWT Success Stories in Waste Diversion

Despite the many challenges that exist, successful waste resource management programs that operate NWT-wide still exist. These include the Beverage Container Program, Electronics Recycling Program and Single-use Retail Bag Program. These programs have been a success because they have utilized and built upon existing infrastructure, collaborated with partners within the NWT and with neighbouring jurisdictions to take advantage of the economy of scale and most importantly, they have had high participation by NWT residents.

Beverage Container Program
More than 28 million beverage containers were returned in the NWT during the 2015-2016 fiscal year, through the Beverage Container Program. Greenhouse gas emissions savings from recycling the containers were equivalent to taking 554 cars off NWT roads.

Electronics Recycling Program
The Electronics Recycling Program was launched in 2016. It built upon the existing Beverage Container Program network of depots and included collaboration from the Alberta Recycling Management Authority. The program has collected more than 100 tonnes of electronics for recycling, enough to fill about ten 53-foot van trailer loads.

Single-use Retail Bag Program
The Single-use Retail Bag Program, requiring NWT retailers to charge 25 cents per bag, led to residents avoiding the use of 6.7 million bags (approximately 153 bags per person) in the 2015-2016 fiscal year.

Bales of aluminum at the Hay River processing centre awaiting shipment to a recycler. The NWT Beverage Container Program has recycled over 2295 tonnes of aluminum.

3.0 STRATEGY OVERVIEW

The Strategy will follow the waste management hierarchy (see Figure 2) to foster a shift in how waste is viewed and managed in the NWT. It will serve as a ten-year road map for improving waste resource management throughout the Territory.

All NWT communities, with the exception of Yellowknife, dispose most of their waste directly to a landfill. A major focus of the Strategy is to shift away from this disposal model to an integrated waste management approach, which will reduce the amount of waste sent to a landfill. It will mean putting more effort into preventing the creation of waste, such as buying goods with less packaging and diverting waste from landfills by reusing and recycling materials.

Improving the management of waste[5] sent to landfills will be another major focus of the Strategy. This will require modernizing waste management facilities to ensure waste in landfills is managed to minimize negative environmental impacts and costs resulting from contaminated land and water. Stockpiles of hazardous waste, which have accumulated in landfills over many years, will also be addressed.

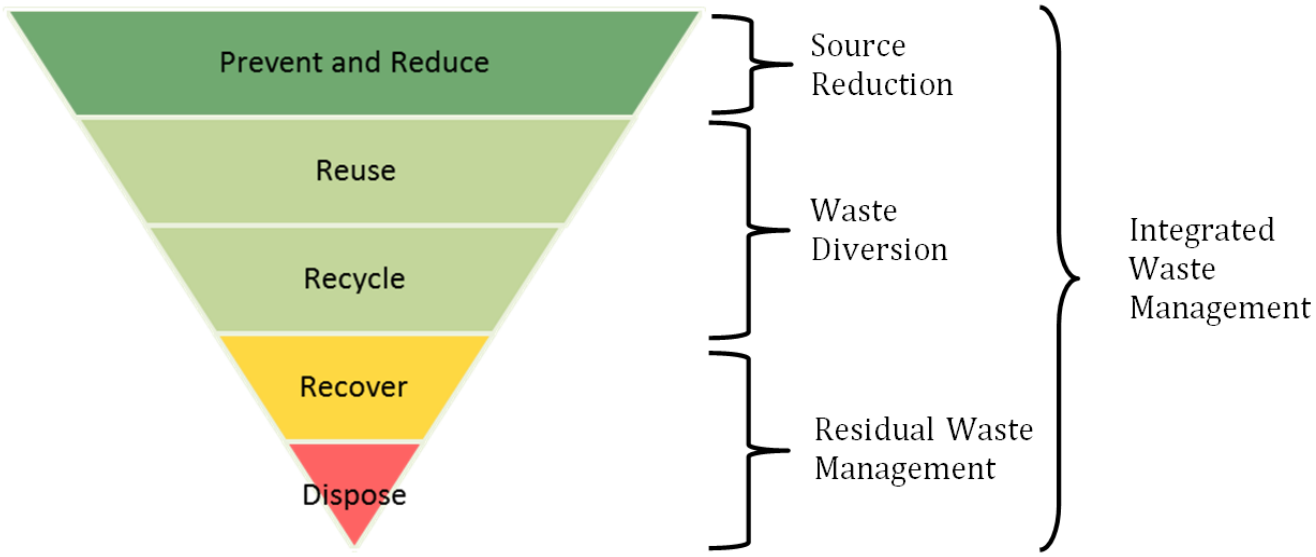


Figure 2: Waste Management Hierarchy

Litter and waste disposed on public lands can be an aesthetic, public safety and environmental issue. This problem can be particularly acute at high use recreational sites or in other locations when disposal on public land is seen as a way of avoiding tipping fees. Litter and unauthorized disposal of waste on public lands on or along highways needs to be better managed. Addressing this issue requires cross-departmental collaboration and strengthening of GNWT policy and legislation.

[5] The Strategy is focused on solid waste management, but does include some liquid wastes that would be found in landfills e.g., used oil, solvents. It does not address sewage waste.

Solid waste managed at facilities run by community governments, which include First Nations Designated Authorities, generally originates from within a community and is generated from residential and non-residential sectors. The Strategy will focus on working with these governments to improve landfill management and operations. Capacity and resource challenges of NWT community governments will be considered in the development and implementation of the Strategy.

Most municipal landfills in the NWT are regulated through water licences[6]. Waste generated from primary industries such as mining and oil and gas are also regulated through project-specific water licences and land use permits. The development of the Strategy will consider and address possible regulatory gaps related to the management of waste from sectors slated for growth, such as commercial agriculture and fisheries, that may not currently require water licences or land use permits.

The Strategy will also promote improvements to waste management practices in the GNWT through greening government.

[6] Water licences that regulate the use of water and deposit of waste are issued by one of several regulatory boards in the NWT (Mackenzie Valley Land and Water Board, Wek'èezhìi Land and Water Board, Sahtu Land and Water Board, Gwich'in Land and Water Board and Inuvialuit Water Board). Each board has a public registry with detailed information on water licences.

4.0 KEY ELEMENTS OF THE STRATEGY

4.1 Guiding Principles

Four guiding principles will direct the development and implementation of the Strategy.

1. Protection of the Environment

- **Good waste management means waste is not contaminating the air, land and water**. Designing, building and operating landfills to modern standards and eliminating improper practices, such as burning waste or illegal disposal of waste on public lands, helps protect the environment and the health of the ecosystem including humans and wildlife.

- **Reusing and recycling materials reduces environmental impacts.** Reusing and recycling materials reduces environmental impacts and decreases greenhouse gas (GHG) emissions associated with these activities. Creating new materials also requires significant amounts of energy to produce. For example, recycled aluminum production requires approximately 90 percent less energy than production from mined raw materials[7].

2. Economic Development and Financial Liability

- **Diverting waste can help foster a green economy**. Waste reduction and recycling can create more jobs than simply disposing waste[8]. The Ontario Ministry of Environment and Climate Change reports its existing waste diversion programs can create up to 10 times more jobs than waste disposal and that diversion of organics results in 60 percent more gross domestic product than disposal[9]. Ontario also estimates that for every 1000 tonnes of waste diverted in Ontario, seven jobs are created through its Blue Box, Waste Electrical and Electronic Equipment, Municipal Hazardous or Special Waste Programs. In the NWT, the Beverage Container Program and the Electronics Recycling Program generate about 13 full-time and 30 part-time jobs at depots and processing centres throughout the Territory[10].

- **Improvements to waste management can minimize current and future landfill costs.** Sending specific recyclable materials to markets in the south costs money however in some cases, these costs are less than disposing of them in landfill, when considering the cost of siting and building new modern landfills as well as managing and closing landfills properly at the end of their life to prevent pollution. For example, the new cell at the Yellowknife landfill will cost $3.5 million to build. It is predicted to be full in seven years.

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[7] U.S. Energy Information Administration. U.S. Department of Energy. 2014. www.eia.gov/todayinenergy/detail.php?id=16211

[8] Opportunities for Ontario's Waste: Economic Impacts of Waste Diversion in North America. 2014. The Conference Board of Canada. www.conferenceboard.ca/e-library/abstract.aspx?did=6233

[9] Ontario Ministry of Environment and Climate Change. 2015. www.downloads.ene.gov.on.ca/envision/env_reg/er/documents/2015/012-5834_DraftStrategy.pdf

[10] Waste Reduction and Recovery Program 2015-2016 Annual Report. Government of the Northwest Territories. www.enr.gov.nt.ca/sites/enr/files/128-wrrp_ar_press.pdf

3. Environmental Stewardship

- **Improving waste management will require participation from all stakeholders, and community and Aboriginal governments**. An understanding of the shared responsibility for waste management needs to be recognized by communities, residents, governments, businesses and manufacturers. Education can improve awareness and help develop environmental stewardship.

- **Environmental stewardship of waste is evident in Aboriginal teachings**. For example, reducing waste at the source is demonstrated in the practice of using all parts of an animal during a subsistence hunt.

4. Collaborative Approaches

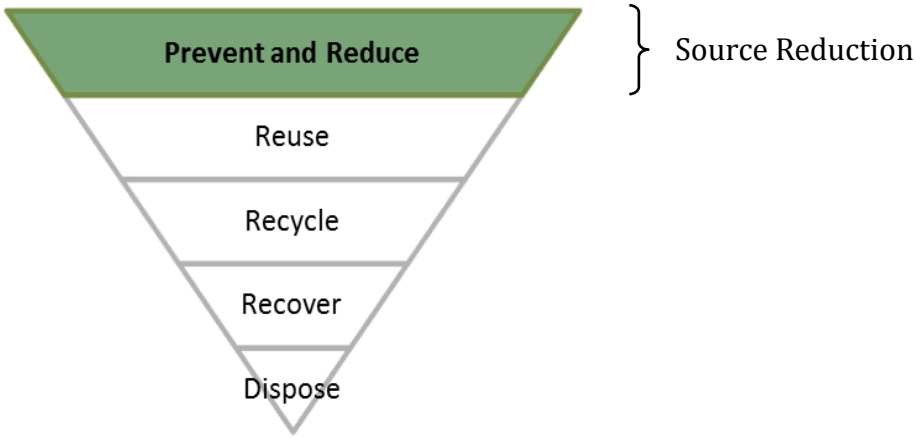
- **Managing waste is a shared responsibility at all levels**. Improved outcomes from sharing best practices and lessons learned will result as stakeholders, community and Aboriginal governments work together and support one another's efforts to improve waste management.

- **Developing partnerships to improve waste management is mutually beneficial**. Partnerships among GNWT departments, stakeholders, and community and Aboriginal governments will be necessary to better manage waste throughout the NWT and achieve shared objectives and priorities. Efficiency can be gained when partners are able to share infrastructure and logistical costs.

NWT recycling programs rely on barges to transport recyclables from communities in the high arctic and those along the Mackenzie River. Beverage containers and electronics are shipped in sea cans to a processing centre in Inuvik or Hay River before heading south to recycling markets.

4.2 Goal 1 – Prevent and Reduce Waste Generated at the Source

Preventing and reducing waste at the source is the first step in the waste management hierarchy and the focus of this goal. It means not producing waste in the first place.



The Single-use Retail Bag Program is an example of a source reduction program. During the past six years of operation, NWT residents and retailers have reduced the number of bags used in the NWT by 73 percent[11]. Changing even a few habits can considerably reduce waste from both residential and non-residential sectors. Minimizing waste generated at the source makes economic sense, especially in the NWT, where southern recycling markets are far away. Food waste is another important area for source reduction.

4.2.1 Priority Area A: Provide Tools and Information Necessary to Reduce the Amount of Waste Generated

Increasing the awareness of the economic and environmental benefits of improved waste management by both residential and non-residential waste generators is key to encouraging and adopting practices to prevent and reduce waste.

Potential Actions

1. Deliver public awareness campaigns on the environmental and economic benefits of improved waste management.
2. Promote environmental stewardship and the adoption of behaviours that reduce waste—for example, reusing goods, buying less and only what is needed, buying used, buying goods with less packaging, growing one's own food, harvesting country foods, buying local goods and produce—through educational programs and/or campaigns in schools and communities.
3. Work with larger NWT retailers to provide product options with more sustainable packaging.

[11] Waste Reduction and Recovery Program 2015-2016 Annual Report. Government of the Northwest Territories. www.enr.gov.nt.ca/sites/default/files/128-wrrp_ar_press.pdf

4.2.2 Priority Area B: Reduce Food Waste from Residential and Non-residential Sectors

Food makes up a large amount of our waste. About 40 percent of the food produced in Canada is wasted[12], including fresh produce, grains, canned or packaged foods. Nearly fifty percent of this wasted food is wasted at the consumer level[13]. This waste accounts for huge losses in revenue from businesses such as restaurants and grocery stores.

A simple way to reduce large amounts of unnecessary waste in our landfills is to buy only what is needed and plan meals to make sure food is not wasted. The high cost of food in many isolated communities and the responsible consumption of harvested traditional foods or locally produced foods can also lead to waste reduction.

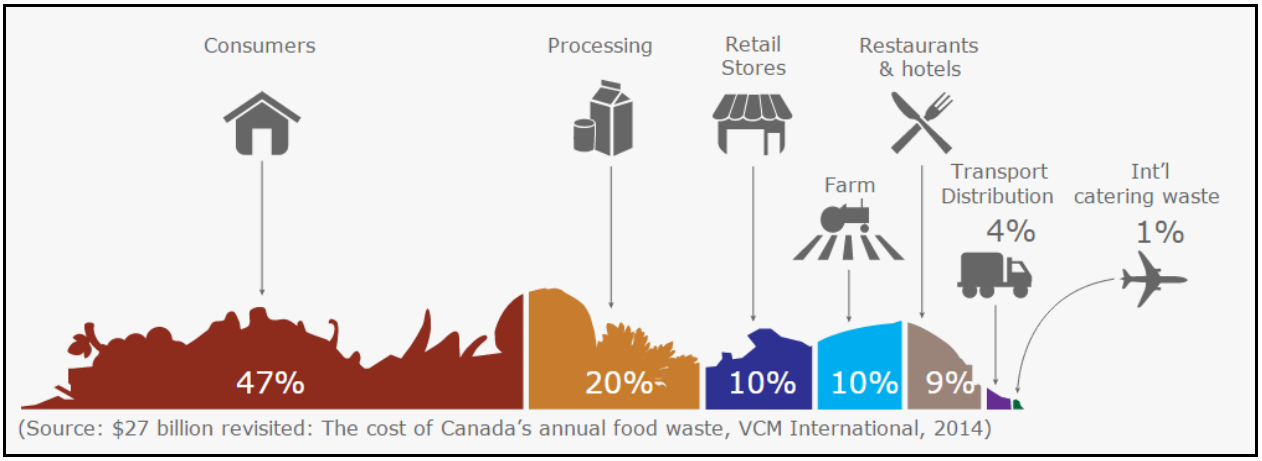


Figure 3: Food Waste in Canada (National Zero Waste Council, 2016)

Potential Actions

1. Develop tools to create awareness and minimize local food waste.
2. Support organizations that reduce food waste.

4.2.3 Priority Area C: Keep Our Communities Clean and Reduce Litter

Litter and illegal disposal of waste on public land are both unsightly and can pose risks to humans, wildlife and the environment. Reducing litter helps keep our communities and surrounding lands clean for present and future generations. Development of waste prevention programs focused on common sources of litter, such as the Single-use Retail Bag Program, is one tool for reducing litter on the land.

[12] National Zero Waste Council. 2016. www.nzwc.ca/focus/food/Pages/default.aspx

[13] According to a Value Chain Management International report from 2014, the value of food waste in Canada was estimated to be more than $31 billion, of which 47% was wasted at the consumer level. (vcm-international.com/wp-content/uploads/2014/12/Food-Waste-in-Canada-27-Billion-Revisited-Dec-10-2014.pdf)

Plastic bags littered the shore near the Ulukhaktok landfill prior to the implementation of the Single-use Retail Bag Program.

Shopping Bag-free Community
The Great Bear Co-op in Délîne chose to stop selling plastic shopping bags and only offer reusable bags to customers after the Single-use Retail Bag Regulations came into force. This led to a visible reduction in plastic waste at the community landfill and built awareness about the environmental benefits of reducing and reusing materials.

Potential Actions:

1. Collaborate with communities and GNWT departments to deliver public education and awareness campaigns to promote being litter-free and to prevent disposal of waste on public lands.
2. Encourage anti-litter campaigns and community clean-ups.
3. Amend the *Environmental Protection Act* to include anti-littering and disposal of waste on public land in the legislation.
4. Continually improve and promote the Single-use Retail Bag Program, and update the *Single-use Retail Bag Regulations* and/or the *Waste Reduction and Recovery Act* as needed.
5. Create or amend regulations targeting specific materials to be reduced—for example, the *Single-use Retail Bag Regulations*.
6. Celebrate and promote success stories across the territory.

Habitat for Humanity ReStore: An Example of Waste Reduction *and* Diversion

The ReStore is a non-profit home improvement store and donation centre that sells new and gently used furniture, home accessories, building materials, and appliances to the public at a fraction of the retail price.

1. **Reduce:** Shopping at the Yellowknife ReStore is an environmentally conscious decision. By not purchasing new items, fewer goods need to be produced. This illustrates Goal 1.
2. **Divert:** Bringing usable construction and renovation materials to the ReStore diverts them from disposal in the landfill. This illustrates Goal 2.

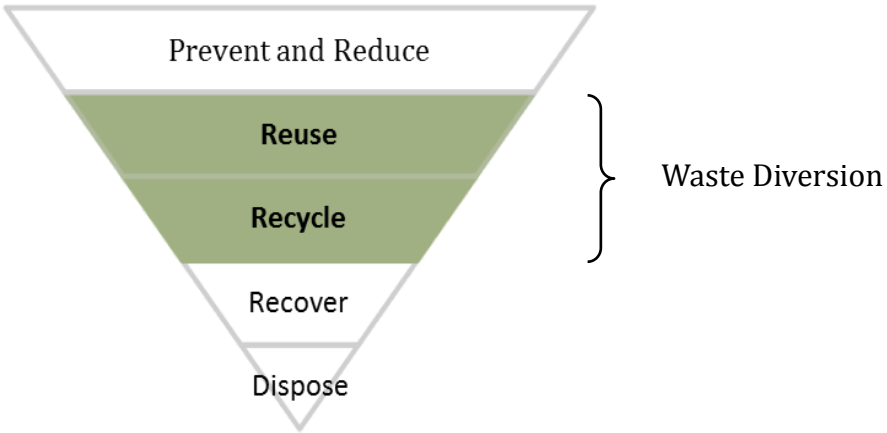
Questions for consideration:

- *Is there anything missing under this goal? Please describe.*
- *Do you have any comments on the above priority areas and potential actions to minimize waste at the source? If so, what are these comments, and how might they be addressed?*
- *Are there other priority areas and potential actions that should be considered to minimize waste at the source? How will suggested additions contribute to this goal? How should their results be measured?*
- *What materials should be addressed through source reduction?*

4.3 Goal 2 – Divert Waste Disposed in Landfills

Once efforts have been made to prevent and reduce waste under Goal 1, diverting waste disposed in landfills from residential and non-residential sectors by increasing reuse and recycling benefits the economy and helps protect the environment. Landfills are not only costly to build and manage, but they also spoil land that could be better used for wildlife habitat, agriculture or developed for residential or economic purposes. Less waste means longer landfill lifespans and reduces the need for the creation of new landfills.

Waste diversion also creates jobs. Environmental benefits include reducing GHG emissions and minimizing the risk of contaminants leaching from landfills into surrounding land and water.



Landfills vs. (Solid) Waste Management Facilities
These terms are often used interchangeably, with landfill being the most common. A landfill is a facility where waste is buried. A waste management or solid waste management facility is one that may contain a landfill and other infrastructure such as a bailing facility, a household hazardous waste drop off area, a reuse area, and a transfer station. This is for temporary storage of materials before they are consolidated and sent for recycling or proper disposal.

4.3.1 Priority Area A: Establish New Waste Diversion Programs and Initiatives

Under the *Waste Reduction and Recovery Act*, the GNWT has the authority to develop territory-wide recycling programs. Establishing new programs is one way to make recycling of specific materials available to residential and non-residential sectors. An extended producer responsibility approach should be considered for new programs.

Community governments, including First Nations Designated Authorities, are responsible for managing waste produced in their communities. They also have a key role in developing waste diversion programs. Currently Yellowknife is the only municipality with robust programs in place for recycling and composting.

Extended Producer Responsibility (EPR) versus Product Stewardship Programs
EPR is a policy approach to managing waste in which a producer's responsibility, physical and/or financial, for a product is extended to the post-consumer stage of a product's life cycle. EPR and product stewardship programs are very similar in that they shift the end-of life management and cost away from communities and tax payers. In product stewardship programs, government is still involved in the administration of the programs. To consumers, an EPR and a product stewardship program can look similar but it is the lack of ability of producers to directly influence program funding, cost, design and operations that distinguishes the two approaches.

Provincial/territorial tire recycling programs currently exist everywhere in Canada except for the NWT and Nunavut.

Potential actions:

1. Update and amend the *Waste Reduction and Recovery Act* to enable an extended producer responsibility framework and to improve the efficiency and effectiveness of related programs.
2. Develop new diversion programs, with supporting regulations under the *Waste Reduction and Recovery Act,* which use product stewardship and/or extended producer responsibility for materials, such as tires, used oil, paint, batteries and large appliances.
3. Support community and industry driven waste diversion initiatives.

4.3.2 Priority Area B: Improve Existing Waste Diversion Programs and Initiatives

Two NWT-wide recycling programs legislated under the *Waste Reduction and Recovery Act* are currently accessible to all residents and businesses. These product stewardship programs are managed by the GNWT (ENR), which works with community-based operators to ensure the programs are delivered in every NWT community.

NWT Waste Diversion Programs

The Beverage Container Program reused or recycled more than 270,000,000 beverage containers with an overall return rate of 87 percent between November 2015 and March 2016. A network of community depots and regional processing centers ensures a territory-wide recycling program.

The Electronics Recycling Program established in 2016 diverts specific electronics (e.g., computers and televisions) from landfills. This reduces potential contamination of the environment from harmful materials such as mercury and lead.

See rethinkitnwt.ca for details on both programs.

Potential Actions:

1. Improve and promote the Beverage Container Program and update the Beverage Container Regulations and the *Waste Reduction and Recovery Act* as needed.
2. Expand, improve and promote the Electronics Recycling Program and update the *Electronics Recycling Regulations* and the *Waste Reduction and Recovery Act* as needed.

4.3.3 Priority Area C: Divert Organic Waste from Residential and Non-Residential Sectors

Food, leaf and yard waste accounts for up to 40 percent of the residential waste stream in Canada[14]. In landfills, this organic waste breaks down without oxygen to release methane, a greenhouse gas with more than 25 times the warming potential of carbon dioxide. When efforts have been made to reduce organic waste, the remaining waste can be composted to produce a nutrient-rich soil additive and to reduce methane produced from landfills. Local sources of compost are currently limited in the NWT. Compost is an important resource for supporting efforts to expand the agriculture sector and improving food security.

[14] Technical Document on Municipal Solid Waste Organics Processing. Environment Canada. 2013.

Yellowknife operates a successful curbside composting program to divert waste and save valuable space in the landfill. Other communities and businesses could consider similar programs.

Photo: Shannon Ripley, Ecology North

The City of Yellowknife and Ecology North began a centralized composting pilot project in 2009. The pilot project diverted over 900 tonnes of organics and reduced the City's greenhouse gas emissions by 870 tonnes.

The turned windrow method of composting used here with readily available equipment makes it a practical example of a composting method that could be used by any other community in the NWT, regardless of size.

The City has expanded the pilot project to a full scale centralized composting program with curbside collection for the residential sector.

Potential actions:

1. Support community composting projects and programs.
2. Support the diversion of products, such as shredded paper, cardboard and woodchips, which are essential to composting pilot projects and programs.
3. Develop resources, and increase access to existing resources, to support composting projects for residential and non-residential waste—for example, operator training and promotional materials.
4. Create standards, guidelines and/or regulations under the *Environmental Protection Act* for compost facilities and compost quality to support the production of compost for beneficial uses.
5. Work with community and Aboriginal governments, regulatory boards, industry, GNWT departments and others to support organics diversion and promote production of valuable resources from waste products, such as fish fertilizer.

Composting at Ekati Diamond Mine

Dominion Diamond Corporation installed an in-vessel composter at the Ekati Diamond Mine in 2015, a first in the NWT. After three months of operation, the company saved more than 25,000 liters of diesel and reduced GHG emissions by eliminating organic waste incineration.

By switching to biodegradable take-out food containers, they also prevented almost 59,000 kilograms of plastics from being incinerated. The company is evaluating the use of compost for on-site reclamation work.

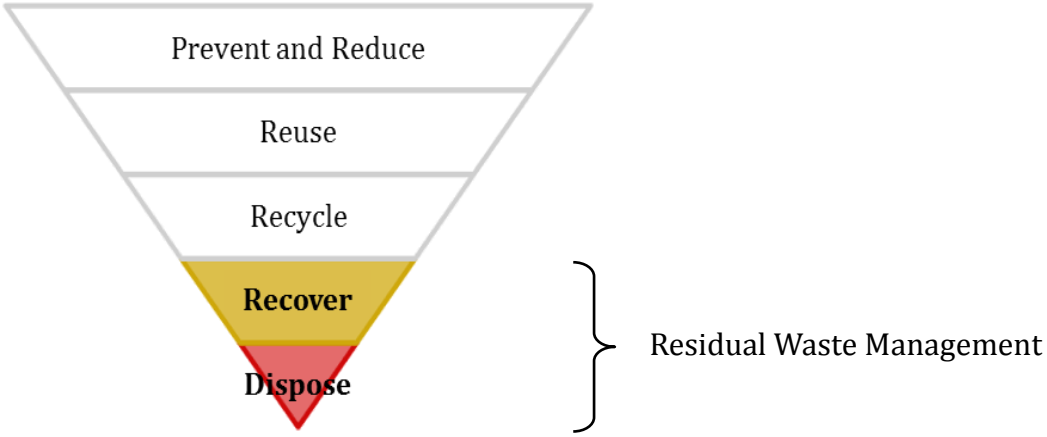
www.cim.org/en/News-and-Events/News/2016/Finalists-selected-for-2016-TSM-Awards.aspx

Questions for consideration:

- *Is there anything missing under this goal? Please describe.*
- *Do you have any comments on the above priority areas and potential actions to reduce waste disposed in landfills? If so, what are these comments, and how might they be addressed?*
- *Are there other priority areas and potential actions that should be considered to reduce waste disposed in landfills? How will suggested additions contribute to this goal? How should their results be measured?*
- *What materials should be addressed by waste diversion programs or activities?*

4.4 Goal 3 – Improve Waste Management Facilities and Practices

The management of waste, whether at a landfill or at an approved site under a water licence/land use permit, can have major impacts on the environment and the economy. Half of NWT communities do not have year-round road access. Most municipal landfills are basic facilities, with limited staff and resources and largely uncontrolled access. Many opportunities exist to improve waste management facilities operated by community governments, and industry.



4.4.1 Priority Area A: Modernize Waste Management Facility Operations

The health of residents, wildlife and the environment is important to NWT communities. Several approaches can be taken to minimize negative impacts caused by poor waste management practices through modernizing and improving waste management facilities. A collaborative approach can help improve waste management and water licence compliance, particularly at municipal waste management facilities. This will require working with the Department of Municipal and Community Affairs (MACA), regulatory boards, industry, and Aboriginal and community governments, to consider financial implications of implementing actions in the future.

It is also important in this priority area that measures—for example, public education and awareness, increased enforcement—are in place when implementing such potential actions to prevent any increase in illegal disposal on public lands.

Potential Actions:

1. Develop landfill standards, supporting guidance, and best practices for comprehensive and modern waste management under the *Environmental Protection Act*.
2. Ensure new landfills are built to modern standards in appropriate locations to protect the environment and communities.
3. Ensure old landfills are properly closed and remediated.
4. Implement best practices in waste management facilities.
5. Enhance and deliver training programs for staff at municipal waste management facilities to build knowledge and capacity in order to improve management.

6. Ensure adequate funding for municipal waste management is available.
7. Develop and implement a plan to enhance municipal water licence compliance, including support for community governments.
8. Participate in regular meetings with Aboriginal and community governments, regulatory boards and relevant stakeholders to discuss issues and develop plans to prevent foreseeable problems or deficiencies with municipal waste management facilities.
9. Seek opportunities for collaboration to manage residential and non-residential waste regionally using shared landfills and transfer facilities where communities are in close proximity.

Examples of Best Practices for Municipal Waste Management Facilities

- ✓ Properly fence landfills to deter wildlife and reduce wildlife-related safety risks in communities.
- ✓ Control access to landfills to ensure incoming waste is managed appropriately and to ensure public safety.
- ✓ Improve segregation of waste and recyclable materials at landfills through proper signage, education and management.
- ✓ Ensure unauthorized waste is not accepted at landfills.
- ✓ Support communities in developing bylaws to facilitate waste reduction and improved waste management.
- ✓ Collect appropriate fees from waste generators to reduce financial burdens on general tax payers.

4.4.2 Priority Area B: Collect and Manage Hazardous Waste

Hazardous wastes are materials that are toxic, corrosive or flammable—for example, oil, paints, batteries, solvents and pesticides. They require special handling, storage, transportation, recycling and/or disposal. It has been estimated at least 95 percent of hazardous waste in the NWT come from non-residential sources.

Hazardous waste disposed or improperly stockpiled in landfills can contaminate land, air and water. For example, there are concerns about hazardous wastes that have accumulated over several decades in many landfills.

Proper management of hazardous waste will reduce risks to humans, wildlife and the environment as well as decrease financial liabilities associated with the release of contaminants.

In 2017, the Łutsel K'e Dene First Nation received funding through the Waste Reduction and Recycling Initiative to remove hazardous waste from their community.

***Potential Actions*:**

1. Work with community and Aboriginal governments to secure funding sources to implement the Clean Up, Clean Start program,[15] beginning with the removal of stockpiled hazardous waste from municipal landfills.
2. Work with community governments and industry, to implement best practices to minimize pollution from hazardous waste, such as limiting the amount and duration of hazardous waste storage at landfills; ensuring safe collection and storage of household hazardous waste; and, managing non-residential hazardous waste at approved hazardous waste facilities.
3. Ensure communities and non-residential sectors have access to timely and regular hazardous waste management services.
4. Provide comprehensive technical guidance to community governments and the non-residential sector on various forms of hazardous waste management.
5. Lead a coordinated approach to hazardous waste collection.
6. Encourage the development of facilities to manage materials that should not be accepted at community landfills.

4.4.3 Priority Area C: Develop Policies and Regulations to Support GNWT Strategies in the Areas of Waste Management

Waste produced from primary industries is regulated through project-specific and industry-specific water licences, land use permits, acts and regulations. In March of 2017, an NWT Agriculture Strategy was developed to support the diversification of the NWT economy in the area of agricultural development. However, because the NWT agriculture industry is still young, some of the necessary regulatory frameworks are not yet in place to meet the needs of this industry and NWT residents. One of the actions under the Agriculture Strategy related to waste management is to develop and/or update policies and regulations to support the growth and management of agriculture development in the NWT.[16]

***Potential Actions*:**

1. Work with GNWT departments to determine the regulatory gap related to waste management in the agriculture industry and fisheries.
2. Develop specific waste management policies and regulations under the *Environmental Protection Act* to support the growth and management of the agriculture industry.

[15] Clean Up, Clean Start is a program designed to help communities manage stockpiles of hazardous waste stored in municipal disposal facilities in the NWT over many years. The first phase, Clean-Up, would require the clean-up of existing stockpiles of hazardous waste. The second phase, Clean-Start, would involve preventing the stockpiles of hazardous waste from reoccurring. Clean Up, Clean Start is a partnership between the NWT Association of Communities, MACA and ENR. Funding is not currently in place for program implementation and needs to be secured.

[16] Northwest Territories Agriculture Strategy – the Business of Food: A Food Production Plan 2017-2022. Government of the Northwest Territories. 2017.

4.4.4 Priority Area D: Gather Information to Facilitate Decision-making at Waste Management Facilities

Information obtained through monitoring, measurements or research is critical for supporting sound decision-making based on both economic and environmental priorities. More research specific to waste management in the north would be beneficial. This kind of information can help improve the management of waste at current facilities and plan for future facilities operated by community governments and industry.

***Potential Actions*:**

1. Encourage waste management facilities to track, and if possible weigh, incoming waste to better understand the quantity and type of waste disposed.
2. Create a record management system for solid waste facilities to track condition of assets at all facilities.
3. Use information gathered through groundwater monitoring at municipal waste management facilities currently identified on the GNWT Environmental Liabilities list to determine environmental risks from potential contaminants.
4. Monitor surface water for contamination from landfills.
5. Conduct research on waste management challenges specific to the NWT, such as impacts of climate change on the operations of landfills and resulting environmental risks—for example, increased melting of permafrost, shoreline erosion and GHG emissions from landfills.

Energy Recovery

Technologies to recover energy from waste are a component of waste management systems in some jurisdictions. These technologies are diverse and complex. The costs and benefits of their use—for example, financial costs, maintenance challenges, composition of air emissions and energy output—vary greatly. The Strategy will focus on reducing and diverting waste as a priority before energy recovery.

Questions for consideration:

- *Is there anything missing under this goal? Please describe.*
- *Do you have any comments on the above priority areas and potential actions to improve waste management facilities? If so, what are these comments, and how might they be addressed?*
- *Are there other priority areas and potential actions that should be considered to improve waste management facilities? How will suggested additions contribute to this goal? How should their results be measured?*

4.5 Goal 4 – Lead by Example – Greening the Government

Some GNWT day-to-day operations significantly affect the environment. These include the generation of waste and emission of GHGs from its operations, and the consumption of resources needed to make products used by government.

Greening government means making changes to business practices, procurement decisions and building management practices to reduce GHG emissions, energy and water use, and solid waste. The GNWT has a large purchasing power and making greener purchasing decisions can increase the demand for environmentally-friendly products and services across the NWT, which could lead to a greener economy. The GNWT is the largest employer in the NWT and small changes in how business is conducted can add up to substantial reductions of environmental impacts and save money.

The federal government and many other Canadian jurisdictions have already made greening government commitments. The Pan-Canadian Framework on Clean Growth and Climate Change, for example, has broad commitments from federal, provincial and territorial governments to set ambitious targets to reduce GHG emissions from its operations, cut emissions from government buildings and fleets, and scale up green procurement[17]. The GNWT Public Service Strategic Plan: 20/20: A Brilliant North identifies "Greening the Workplace" as one of its strategic goals. It is important for the GNWT to lead by example and find cost savings through greening its operations.

Composting by GNWT Employees

In Yellowknife, various GNWT departments worked together to implement a composting initiative for employees. The successful Scotia Center compost program collected approximately 4,620 pounds of organics between 2014 and 2016. This diversion of waste from the landfill was equivalent to two tonnes of GHG savings.

[17] Pan-Canadian Framework on Clean Growth and Climate Change – Canada's Plan to Address Climate Change and Grow the Economy. 2016.
www.canada.ca/content/dam/themes/environment/documents/weather1/20170125-en.pdf

Three GNWT departments currently have active Green Teams that work to reduce their respective department's environmental impact: ENR, Lands, and Education, Culture and Employment. Some of their past or current actions include education campaigns and training, making bicycles and reusable dishes available to borrow for functions and meetings, and conducting waste audits.

Some notable successes include the creation of a procurement policy of using 100% recycled paper for ENR, and implementing building-wide composting in the Scotia Centre.

4.5.1 Lead by Example through Greening Government

***Potential Actions*:**

1. Work with the Interdepartmental Green Advisory Team to facilitate greening government practices in waste management.
2. Build upon, promote, enhance and enforce existing initiatives and policies that support greening government.
3. Develop and implement an action plan for future initiatives in greening the GNWT.
4. Eliminate the use of bottled water at GNWT-organized meetings and conferences.
5. Create standard clauses in leases and consistent operational procedures for GNWT-owned buildings (by community) to ensure all departments have full and equal access to waste diversion programs available in their community.
6. Support departmental Green Teams by allowing members to allocate time to work on greening government initiatives.

Questions for consideration*:*

- *Is there anything missing under this goal? If so, what?*
- *Do you have any comments on the above priority area and potential actions to green the GNWT? If so, what are these comments, and how could they be addressed?*
- *Are there other priority areas and potential actions that should be considered to green the GNWT? How will suggested additions contribute to this goal? How should their results be measured?*

5.0 NEXT STEPS

ENR looks forward to receiving input from stakeholders, Aboriginal governments and community governments throughout the engagement period to ensure the NWT Waste Resource Management Strategy reflects their input as it is drafted. When the draft Strategy is complete it will be made available for public review prior to being finalized.

Ultimately education, outreach and support will be the foundations for changing behaviours and attitudes when it comes to improving solid waste management in the NWT. Having engaged citizens who make sound decisions when they purchase and discard items is very important. Collaboration between territorial, federal, community and Aboriginal governments; along with regulatory boards, businesses, and interested organizations; will be necessary to minimize waste generated at the source, reduce waste disposed in landfills, and improve waste management facilities. Additionally, through greening government initiatives, the GNWT will strive to lead by example.

As stated in the ENR Strategic Plan 2015-2020:

> *The environment is a critical priority for the people of the NWT. ENR recognizes the importance of the air, land, water, forests, and wildlife for traditional, cultural, economic, and spiritual purposes. Healthy ecosystems are essential for maintaining sustainable livelihoods in the NWT.*

Questions for Consideration:

- *Please provide any general comments about waste management in the NWT that you would like to see addressed as the Strategy is developed.*
- *What specific groups, businesses, non-government organizations, industrial and commercial users, or others, should be engaged as the Strategy is developed?*
- *Provide your feedback at Have Your Say! at www.enr.gov.nt.ca .*