Developing a
Waste Resource Management Strategy

WHAT WE HEARD - FALL 2017 / WINTER 2018 ENGAGEMENT

JUNE 2018 | JUIN 2018

Government of Northwest Territories
Gouvernement des Territoires du Nord-Ouest

Contents

Introduction

The Government of the Northwest Territories launched a public engagement process in November 2017 to gather input on the future of waste management in the Northwest Territories (NWT). A Discussion Paper, *Developing a Waste Resource Management Strategy,* was shared broadly and feedback collected is being used to shape the development of a Waste Resource Management Strategy (Strategy). The Strategy will serve as a ten-year road map for improving waste resource management in the NWT. A glossary is included at the end of this document.

Vision

The Strategy will foster a shift in the way we see waste as something to be buried in the ground to a valuable resource. We have many opportunities to improve how waste resources are managed to benefit the land, air and water, as well as the health of people, wildlife, plants and ecosystems in the NWT. The Government of the Northwest Territories (GNWT) committed to developing a strategy in its 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.*

Engagement

The Discussion Paper was published on Environment and Natural Resources' (ENR) website in November 2017, and an electronic copy was circulated to Indigenous and community governments, federal government departments, intergovernmental organizations, regulatory boards, land and water boards, land use planning boards, professional associations, non-government organizations (NGOs), academic institutions, and the industrial and commercial sector.

In January and February 2018, ENR hosted engagement sessions with interested parties in Yellowknife, Hay River, Inuvik, Fort Simpson and Norman Wells. Local governments from all communities were invited to attend and travel and accommodation was funded (for up to two representatives) to ensure attendance at the regional sessions was accessible. In addition to these sessions, staff held public open houses in all of the communities visited, as well as meeting in Fort Smith with the council, staff and Sustainable Development Committee members. Engagement also included face to face meetings with representatives from the land and water boards, the NWT and Nunavut Construction Association, and presence at the NWT Association of Communities Annual General Meeting.

All interested parties were invited to submit comments through a questionnaire on ENR's website, and written comments were encouraged.

Participation in Engagement

A total of 109 individuals attended face-to-face engagement meetings. Thirty-nine questionnaire responses and 17 written responses were received. A list of organizations that provided feedback in person or in writing is included in Appendix 1. ENR would like to thank all who provided input to the Strategy.

Feedback received through meetings, phone calls and engagement sessions is qualitative and it is difficult to present in a format that indicates the magnitude of support for any given comment. This document attempts to provide a high level summary of comments received from all sources, and highlights priorities that were raised by multiple sources.

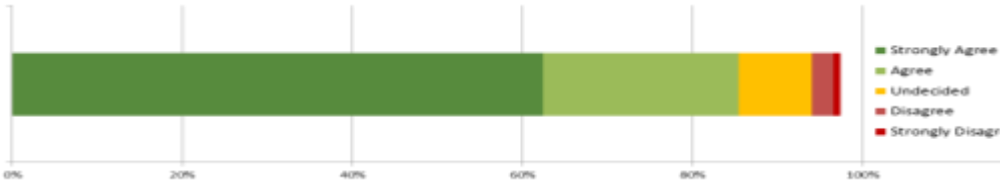
Report Overview

Feedback summarised in this document is organized under the four goals outlined in the Discussion Paper: 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 GNWT. Common themes that arose are presented under each of the four goals identified in the Discussion Paper.

Quick view of on-line questionnaire responses

The on-line questionnaire asked respondents to rank whether they strongly agreed, agreed, were undecided, disagreed or strongly disagreed with each priority area under each goal. For each goal, the responses for all its priority areas were averaged to give an overall idea of support for the goal.

These results are provided as a quick visual reference with each goal (as pictured below). Total percentages may not total 100% since they exclude instances where a respondent did not select any of the options. The full questionnaire is included in Appendix 2.



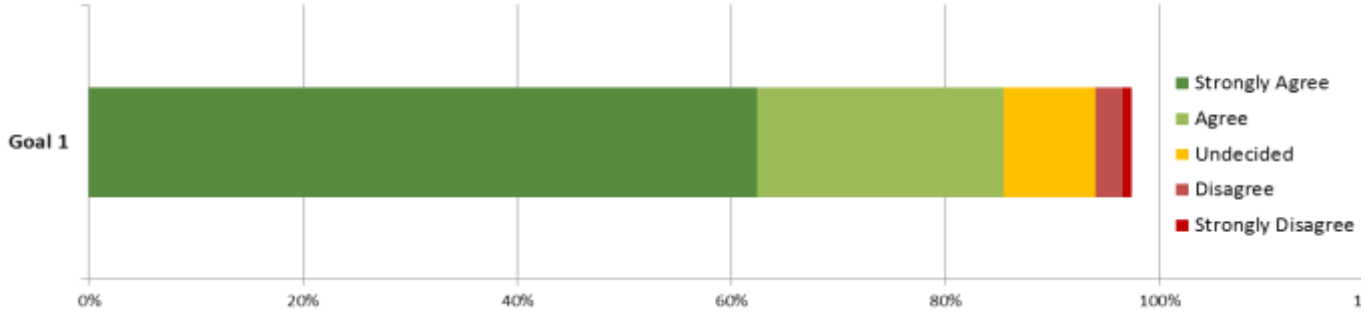
Input Received

In general, all parties that provided feedback were largely in favour of the development of the Strategy. Feedback generally focused on identifying priorities, potential barriers to action, and possible implications to consumers, communities, businesses and the GNWT, that might arise from implementing certain actions. Many also desired a strategy with clear targets, including measurable and time-bound outcomes.

Responses to the on-line questionnaire showed strong support for each of the proposed priority areas: between 79% and 90% people agreed with each of the priority areas (includes respondents that strongly agreed). The proportion of respondents that disagreed (including strongly disagreed) with any given priority area ranged from zero to five per cent. The questionnaire aimed to capture qualitative comments and a quantitative measure of support for each of the goals. It did not ask respondents to rank goals in order of importance. See Appendix 3 for a break-down in responses by priority area.

Goal 1: Prevent and Reduce Waste Generated at the Source

Average agreement with proposed priority areas under Goal 1 (on-line questionnaire responses)



The first goal outlined in the Discussion Paper is to prevent and reduce waste generated at the source. Feedback on this goal, received in writing, through the questionnaire and at engagement sessions, generally fell into the following themes, which are described in more detail below.

- Education and Awareness
- Local Reuse Solutions
- Local Foods
- Reduce Waste through Legislation, Regulation, Bylaws and Enforcement
- Litter Prevention and Community Clean-ups

Education and Awareness

Education and training was a top priority at all engagement sessions, and it cross cuts all four goals of the Strategy. With regard to waste reduction and prevention, public education programs and campaigns were suggested to create awareness of the importance of reducing waste, as well as options available at all levels (residents, retailers and the Industrial, Commercial and Institutional (ICI) sector in general). Some suggested school programs and contests to help youth lead the way and train their families, while others proposed targeting adults and elders.

Other ideas proposed included:

- working with retailers and restaurants to encourage use of more sustainable packaging;
- partnering with other organizations, such as Ecology North, Arctic Energy Alliance, and community-based monitoring programs to enhance campaigns for waste-free living;
- celebrating local successes, such as Gamètì's example of local food security and waste reduction;
- public awareness campaigns around the difference between best-before dates and expiry dates to prevent food waste;
- promoting the practice of bringing your own reusable plate to community feasts;
- encouraging caterers to provide reusable dishes;
- encouraging services such as repairing, mending, cleaning or knife/tool sharpening (with potential economic development opportunities);
- celebrating waste reduction week and/or other designated days across the NWT;

- public education and awareness activities highlighting alternatives to hazardous materials such as cleaning products and pesticides; and
- encouraging a shift to a circular economy (see glossary).

Local Reuse Solutions

Finding local solutions to waste management issues was another theme that was raised for consideration under each goal. In the case of waste prevention, most suggestions addressed food waste by eating locally. More information on this is presented under 'Local Foods' below.

Setting up re-stores and promoting repair of broken furniture and appliances, through community maker spaces (collaborative spaces for making, learning, exploring and sharing) or through access to trained technicians and parts, were also seen as means to reduce waste.

Local foods

Increasing and promoting the consumption of local foods (fruits and vegetables from farms, community gardens and greenhouses; livestock; fish; game and other wild foods like mushrooms and berries) were proposed as means to reduce food and packaging waste (foods that travel long distances are often over-packaged for protection, and local foods are less likely to perish en route to consumers). Increased local food production may present opportunities for economic development. Increased funding for agriculture was also discussed, which is out of the scope of this Strategy but is in line with the NWT Agriculture Strategy.

Support was voiced for food re-distribution programs, such as Yellowknife's Food Rescue.

Reduce Waste through Legislation, Regulation, Bylaws and Enforcement

Fees and bans (supported by regulations and bylaws) were proposed in various forums as means of reducing waste, mostly packaging, and reducing litter. Single-use items, such as water bottles, plastic straws, plastic bag, plastic wrap, k-kups, and polystyrene (Styrofoam), were the most commonly mentioned targets for bans or waste reduction regulations. Community-level bans (e.g., through bylaws) were also identified as means to address local concerns, and there was a further suggestion that template bylaws that could be implemented by communities could be helpful.

Many respondents emphasized that any legislation, regulation or by-law should be accompanied by appropriate education and enforcement in order to be effective.

Litter Prevention and Community Clean-ups

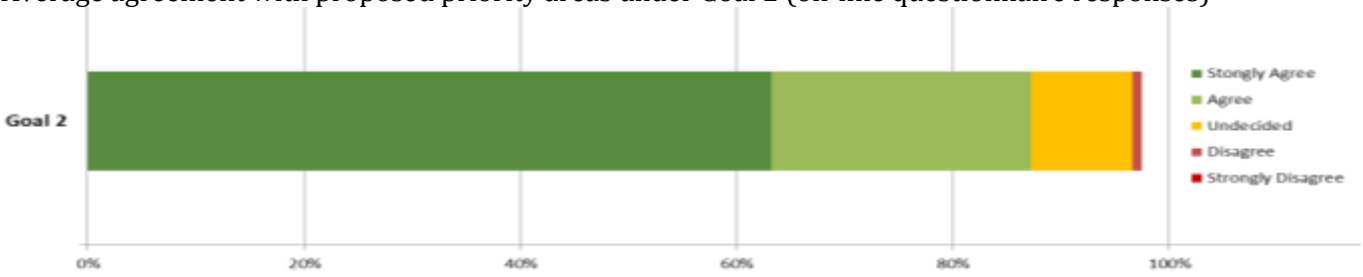
Litter, illegal dumping and civic pride were important to some session attendees. Spring clean-up and community beautification events take place in a number of communities, with incentives provided by local businesses and governments. Education and enforcement were listed as means to address litter and illegal dumping. Further feedback over factors that may encourage illegal dumping is summarized in this document under Goal 3.

Additional considerations received in written comments and questionnaire responses to Goal 1:

- Prioritize by level of risk – manage the hazardous or toxic materials/conditions first before moving to actions that reduce volume or create economic opportunities from recycling relatively benign materials.
- Textiles, electronics and vehicles were identified as potential materials for waste reduction.

Goal 2: Divert Waste Disposed in Landfills

Average agreement with proposed priority areas under Goal 2 (on-line questionnaire responses)



Goal 2 is to divert waste disposed in landfills. Feedback on this goal, received in writing, through the questionnaire and at engagement sessions, generally fell into the following themes, which are described in more detail below.

- Education
- New Diversion Programs
    - Tires
    - Organics/Compost
    - Vehicles and appliances
- Regional Collaboration
- Local Solutions
- Funding/Costs
- Legislation and Enforcement

Education

Education featured prominently at engagement sessions and in written responses. Respondents wanted to see the promotion of existing programs and opportunities. Education could be delivered through school programs, strategic partnerships and training programs (e.g., 'Master Composter Programs' could be used to train volunteers who could then be resources in communities).

Training and education were also flagged as essential for better landfill management. Many community representatives raised concerns about the difficulty in managing how people deposit waste in landfills. While there may be clearly marked areas to deposit different types of materials (e.g. hazardous waste, paint, appliances), these attempts at segregation are often not respected.

New diversion programs

The creation of new territory-wide diversion programs, was a popular option for diverting materials such as: construction, renovation and demolition (CRD) waste; tires; vehicles; used oil and oil filters; appliances; packaging (tin, plastic, glass, cardboard, fibres); batteries; mercury-containing lamps; paint; aerosol paint cans; glycol; and larger rigid plastics.

There was support for EPR programs that require producers to take responsibility for the end-of-life phase of their products. Some saw EPR programs as having the potential to encourage more sustainable products. Product Stewardship-type programs which, like most EPR

programs, place an upfront fee on items that is then used to cover the cost of recycling items free of charge once they are no longer useful, were also popular among responses. Some suggested that upfront fees would also have the added benefit of discouraging illegal dumping if people could bring their appliances for proper management for free and not be charged significant tipping fees.

Piggy backing on existing programs was seen as a way to lower the costs of running recycling programs. Examples included, aligning or partnering with neighbouring jurisdictions and entities like the Alberta Recycling Management Authority (Alberta Recycling), and using existing local infrastructure such as Beverage Container Program (BCP) depots or space within landfills. By collaborating with Alberta Recycling, the NWT Electronics Recycling Program is able to use some of Alberta Recycling's services and databases at a lower cost than if we needed to create new systems.

A number of respondents commented on the importance of making diversion programs convenient to access. Suggestions included making curbside or convenient drop-off options available, ensuring multi-family residences compost or recycling bins on-site, and using clear garbage bags to prevent residents from discarding recyclables.

A summary of more in-depth discussion regarding diversion options for tires, organics, and vehicles and appliances is included below.

Tires

Many respondents were keen to see tires (current stockpiles and future discards) addressed across the NWT. Options proposed included a regulated territory-wide diversion program (EPR or Product Stewardship), seeking options for local use (as aggregate for roads, erosion control, as a waste to energy fuel, as planters, as aggregate in landfill cover), or assistance with equipment and/or funding to remove stockpiles. Mobile shredding equipment was proposed as a possible means to reducing tire volumes for shipping out, or to create aggregate for local uses.

Many believed an up-front fee at the time of purchase would be the most appropriate method of funding the ultimate recycling of tires. Others were concerned that upfront fees on goods may create barriers for individuals with low incomes, and expressed a preference for disposal fees or government assistance. A concern was raised that some retailers are charging recycling fees on tires without providing such a service.

Some raised concerns about ICI waste going to community landfills, which don't have the infrastructure or capacity to manage them. One company suggested exploring the potential for creating a local opportunity to process tires by combining residential sources with tires backhauled from mines.

Organics/compost

Organic material was widely accepted as having high potential for being managed locally, for example, through back-yard composting, or through the creation community-level compost facilities. Removing organic materials from landfills reduces the amount of leachate they produce, as well as the amount of greenhouse gases (GHGs) emitted. There were concerns expressed about attracting wildlife but if done properly, it can also prevent wildlife from being attracted to landfills. Composting requires little technology and is therefore a potential option for all communities. Fibre waste, like paper and cardboard, can also be composted and is an option for diverting these materials from landfills.

Vehicles and appliances

Vehicles, appliances and other bulky metal waste were recognized as a challenge for landfills across the NWT. These items are mostly recyclable and can occupy significant space in landfills. They may also contain hazardous or harmful substances like mercury switches, ozone depleting substances (ODS) and automotive fluids like glycol, fuel, oil, and steering/transmission/break fluids, that should be managed appropriately. However, getting them out of communities can be cost-prohibitive due to their size and weight, and the need to remove hazardous materials before shipping.

Additional discussion points on managing the hazardous substances from vehicles and appliances can be found under Goal 3.

Regional Collaboration

Options were discussed to collaborate regionally to increase diversion rates across the territory. By pooling resources, the GNWT and community governments could create regional transfer stations where recyclables could be stored until they reach volumes sufficient to ship to recycling markets. Alternatively, instead of regional centres, one individual could coordinate the transportation and logistics on behalf of multiple communities in a region, which would support recycling without taxing community resources. Another idea was having regional mobile shredders, crushers, balers or other equipment that could reduce the volume of recyclables such as tires, scrap metal, and large appliances. It was also proposed that it would be helpful if the GNWT could provide information to communities about potential markets for recycling materials.

Source segregation of materials was flagged as a key component to successful recycling. Not having the proper space and infrastructure at the landfill to keep these materials separate from waste was identified as a barrier. Education, incentives or disincentives may be required to ensure people deposit different materials where they belong at the landfill. Not having the sufficient space and collection systems in people's homes was also seen as a barrier to recycling.

Materials identified for potential regional collaboration include: appliances, scrap metal, paint, building materials, cardboard, tin cans, batteries, vehicles and tires.

Local Solutions

The potential for some materials to be managed locally was also discussed at engagement sessions, and proposed in a number of written responses. Such materials included organics, used oil, plastics, tires and glass. Some proposed having community-level oil burners that could offset heating costs for a community building or garage. Others proposed that existing used oil burners in communities should be required to accept used oil from other sources, not just from their own activities or from their customers[1].

A few proposed considering incentives to pilot innovative technologies to manage waste locally, including micro-scale recycling of plastics into useful items that could be sold locally, or partnering with industry and training institutions like the Aurora Research Institute to have locals trained on new technologies. Promoting or incentivizing deconstruction of buildings over

[1] The *Used Oil and Waste Fuel Management Regulations* under the *Environmental Protection Act* set out minimum purity standards for use in used oil burning devices. Controlling the source of used oil can be important to meeting these standards and to ensure proper maintenance and operation of the device.

demolition was also proposed as a means of preserving valuable construction and renovation materials that could be reused locally and save valuable space in community landfills.

Local salvaging was also recognized by a number of respondents as an opportunity to divert valuable resources and meeting local needs. Some suggested enhancing salvaging at landfills to encourage the highest and best use of materials. This included improving segregation and organization to facilitate salvagers finding what they seek, creating re-stores and creating tool libraries.

Funding/Costs

In general, ensuring adequate resources are available to manage waste was a high priority for all. All agreed that current resources are insufficient to divert many materials and ensure proper management of hazardous materials that find their ways to community landfills. There were many divergent ideas about where such resources should come from, and how they should be used.

As mentioned above, EPR and Product Stewardship programs that could divert materials were options of managing recyclables without burdening community budgets. A few raised concerns about the potential of up-front fees adversely affecting low income residents. While some proposed ensuring appropriate tipping fees be charged to ensure the proper management of materials in landfills, others argued that tipping fees encourage illegal dumping, especially in the NWT, where land is easily accessible to would-be dumpers.

Other comments received include the GNWT should provide ultra-low cost backhauls for recyclables and hazardous materials from communities; and be cognizant of the potential cost to businesses from changes to waste management and recycling practices.

Community staff highlighted the challenges for communities in allocating significant funds to improve waste management given their finite resources and numerous competing priorities. Some suggestions of desired improvements included staff on-site at landfills (which might require additional infrastructure such as a heated building with electricity, a washroom and telephone access), and funds to transport recyclable materials to markets.

See Goal 3 for more feedback regarding cost and funding.

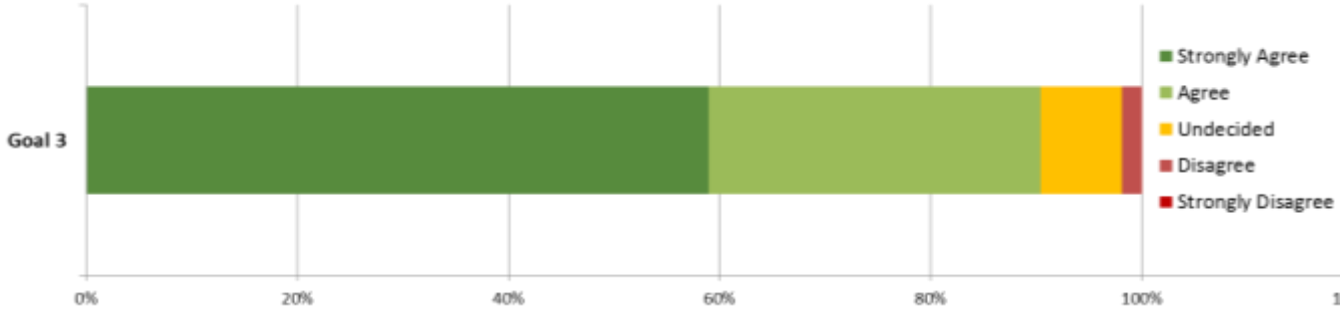
Legislation and Enforcement

Developing new EPR or Product Stewardship programs (see New Diversion Programs above) would require new Regulations and/or amendments to existing legislation.

It was widely noted that to be effective, legislation and regulations should be enforced. See Goal 3 for more discussion about enforcement.

Goal 3: Improve Waste Management Facilities and Practices

Average agreement with proposed priority areas under Goal 3 (on-line questionnaire responses)



Goal 3 outlined in the Discussion Paper is to improve waste management facilities and practices. Feedback on this goal, received in writing, through the questionnaire and at engagement sessions, generally fell into the following themes, which are described in more detail below.

- Education and Training
- Local solutions and/or Regional Collaboration and Coordination
- Funding/Costs
- Hazardous waste
- Landfill Standards & Best Practices
- Vehicles, Appliances and Bulky Metal Waste
- Regulation and Enforcement

Education and Training

With respect to improving waste management facilities and practices, most discussion of education and training fell under the categories described below.

a) Public Education:

Many representatives of community governments emphasized the role of residents in assisting with the proper management of local landfills. They described the challenge of getting landfill users to segregate their waste and put it where it belongs, instead of dumping it wherever is convenient to them. Even when communities put funds toward cleaning up and consolidating segregated areas for different types of waste, including some hazardous materials, they often find the results of these endeavours to be undone within weeks of the clean-up.

Better signage/segregation areas, public education on what to do with various types of waste, and staff presence to encourage landfill users to put materials where they belong were some of the solutions proposed to bring improvements under Goal 3.

Public education about alternatives to using hazardous materials was also proposed as a means to reduce the amount of hazardous materials building up in community landfills. Household cleaning products and pesticides were some examples given. Some respondents provided additional suggestions for how to communicate the impact of hazardous materials

to the public to help encourage to reduce their use and to understand what types of products may need special end-of-life treatment.

It was further suggested that partnerships with organizations like Ecology North, Arctic Energy Alliance, or community-based monitoring programs could be advantageous in encouraging the adoption of desired waste management behaviours. For example, in retrofitting communities with LED lights and switching out mercury-containing fluorescent lamps, Arctic Energy Alliance supported mercury-containing lamps being properly managed.

b) Training for Landfill Operators, Staff and Contractors:

It was recognized that communities often face capacity concerns when it comes to managing their landfills. When staff capacity is limited, and when staff are not adequately trained, it creates even greater challenges to ensuring landfills are responsibly managed. Many individuals recognized the merits of the Department of Municipal and Community Affairs' (MACA) School of Community Government training programs, and offered suggestions to improve their efficacy, such as:

- making training mandatory for all communities' landfill operators and staff (e.g., the Water Supply System Regulations requirement for mandatory operator certification);
- creating a model landfill for training in the NWT to give operators hands-on training at a facility that more closely mirrors the ones they operate;
- safety training to ensure safe management of hazards; and
- training for technicians to remove ozone-depleting substances, mercury switches and fluids from appliances and vehicles.

Contractors manage landfill sites in some communities, and it is important that these contractors also undergo training.

c) Education for Waste Generators:

Some respondents felt education was important for waste generators, including being properly trained on their responsibilities with regard to manifests, transportation and disposal requirements for managing hazardous waste. They further stated there should be officer oversight to ensure that practices are consistent with the requirements.

d) Education for Community Governments and Decision Makers:

Some respondents observed a disconnect between community councils, Senior Administrative Officers (SAOs), and staff or contractors in some communities. They recommended this be addressed to ensure all understand the actions, policies and procedures required in order to operate those facilities properly.

Local solutions and/or Regional Collaboration and Coordination

Regional collaboration and coordination was seen as a necessary action to accomplish objectives related to removing hazardous and bulky materials from landfills. One suggestion was for communities to find efficiencies by collectively hiring technicians to depollute vehicles and appliances of ozone-depleting substances, mercury switches and automotive fluids. Other opportunities include coordinating regionally to inventory and ship out hazardous and bulky wastes. Additional funding would be required, but efficiencies could be found through a regional approach to cleaning up historical hazardous waste.

Contractors could collaborate regionally to create shared facilities or find efficiencies to manage their waste. Hydrocarbon-contaminated soil was identified as a waste material that is costly for proponents to dispose of when it must be shipped long distances. Some respondents proposed this could be an area where regional land farms could be established to reduce shipping costs.

A number of respondents further recommended exploring waste-to-energy opportunities to create energy while also reducing the volume of waste such as oil, vegetable oil, wood, cardboard, paper, tires and plastic.

At least one respondent suggested the potential to use regional landfills to service neighbouring communities to reduce costs and liabilities of operating and closing multiple landfills.

Funding/Costs

Costs and funding were significant areas of interest for many respondents in Goal 3 as well. It was widely acknowledged that resources for solid waste management in the NWT are limited. Managing waste is a challenge for governments of all levels, and is not an insignificant cost of doing business in the NWT for companies that manage it appropriately. Improving waste management at landfills will cost money (e.g., staffing; signage, education and material segregation; and removal of hazardous waste). In addition to regular operation and maintenance work at landfills, addressing hazardous waste stockpiles will be a further strain on budgets.

While all respondents agreed on the importance of Goal 3, many also acknowledged the importance of striking a balance ushering in much-needed improvements without incurring prohibitive costs to residents, taxpayers, consumers, and businesses. As in Goal 2, opinions diverged regarding who should bear the cost of responsible management of waste.

A number of respondents raised concerns about the unfair burden to community budgets when ICI generators dispose of materials in local landfills. Community landfills were not designed to accommodate large volumes of non-residential waste, so when fuel drums, hazardous waste and bulky items such as construction, renovation and demolition wastes are deposited, they significantly impact the landfill's lifespan and bottom line.

Others raised concerns that if non-residential generators of waste lack access to local disposal options, it creates incentive for them to leave waste on the land, potentially creating additional waste sites that will ultimately be the GNWT's responsibility to clean up. Waste is being deposited by various waste generators without community government knowledge.

Waste from GNWT projects was also identified as a challenge. In some communities without tipping fees, the cost of handling this waste stream (e.g., old fuel drums; construction, renovation and demolition waste) was challenging.

Some respondents were in favour of tipping fees to cover landfill costs, while others encouraged free disposal of vehicles and appliances to make sure they can be managed properly instead of being left on the land. Another respondent suggested rewards be issued for bringing such materials to landfills, as an incentive for these items to be managed properly.

One company suggested the Strategy include a fifth goal: facilitate cost competitive waste management and recycling. Examples included harmonization of waste definitions and manifesting requirements with other jurisdictions.

Hazardous waste

Hazardous waste was a topic of great concern at engagement sessions and in written responses. Many respondents were concerned about legacy hazardous waste in community landfills across the NWT. Many respondents would like to see these stockpiles removed and proper segregation, containment and transport to registered receiving facilities become standard operation at community landfills. Concern was also raised regarding whether hazardous waste in community landfills is being listed as liabilities in the GNWT's Public Accounts,[2] in comparison to similar wastes that are listed at various abandoned exploration sites that have been inventoried.

There was wide support for expanding the GNWT's pilot 'Clean Up, Clean Start' program[3]. This proposed program is intended to remove historic hazardous waste and help communities safely manage hazardous waste that is received on an ongoing bases once the 'Clean Up' phase is complete. A number of respondents further stated the GNWT must take responsibility for the bulky and hazardous wastes it has sent to community landfills.

In the eyes of many respondents, sound management of hazardous waste at community landfills includes appropriate secondary containment (i.e., a designated area in an engineered cell), segregation and proper handling before this waste is ultimately forwarded to an appropriate receiver.

As discussed above, regional coordination could also bring efficiencies to the 'Clean Up' phase of removing hazardous wastes from communities. Furthermore, many asserted that the industrial sector should manage its own hazardous waste, and not create an unfair and unaffordable burden for communities.

Landfill Standards & Best Practices

The creation of landfill standards and implementation of best practices was seen as an important piece of the Strategy to many who provided feedback. This topic encompassed a wide variety of actions and objectives. Some identified the creation of enforceable landfill standards in the NWT as a welcome regulatory tool that could bring consistency to community water licences, could help create clear and consistent guidance for communities to incorporate into their management plans, and could facilitate water licence approval processes.

In addition to standards, some examples of best practices that were raised include, but are not limited to:

- adequate fencing to manage wildlife attraction and prevent litter from blowing onto the land;
- controlled access (e.g., through gates, locks, staff);
- segregation of recyclables (see Goal 2) and hazardous materials;
- secure storage of hazardous materials;

[2] Landfills built and/or operated by the GNWT are listed on GNWT's list of environmental liabilities and groundwater monitoring is being established. This applies to operating and closed sites.

[3] Clean Up, Clean Start is a program designed to help communities manage stockpiles of hazardous waste stored in municipal disposal facilities in the NWT and prevent future accumulation. It is a partnership between the NWTAC, MACA and ENR.

- signage and communications resources[4];
- depollution of vehicles and appliances by trained professionals;
- clear and workable Operations and Maintenance (O & M) plans;
- appropriate siting of new landfills;
- ground and surface water monitoring;
- compaction and regular cover;
- track disposal rates using weigh scales or other means;
- regulate required training for landfill operators;
- manage ICI waste separate from residential waste;
- proper management of sewage sludge when lagoons are full;
- support to communities from GNWT staff (inspectors, MACA staff, ENR); and
- sound operation and screening processes to prevent hazardous waste from contaminating other waste streams.

Ensuring adequate funding for operations and maintenance, as well as any necessary new infrastructure (bins, sorting/segregation areas or buildings, etc.), was also discussed under this topic.

Public engagement and education were seen as key activities to ensure the successful roll-out of any changes to landfill management practices such as launching new recycling programs, and segregating materials at landfills.

Vehicles, Appliances and Bulky Metal Waste

Vehicles, appliances and bulky metal wastes were identified as priority materials to address at most engagement sessions. See Goal 2 for a summary of feedback received on this topic.

Regulation and Enforcement

As mentioned in Goal 2, it was widely stated that enforcement was crucial to the success of any regulation or legislation.

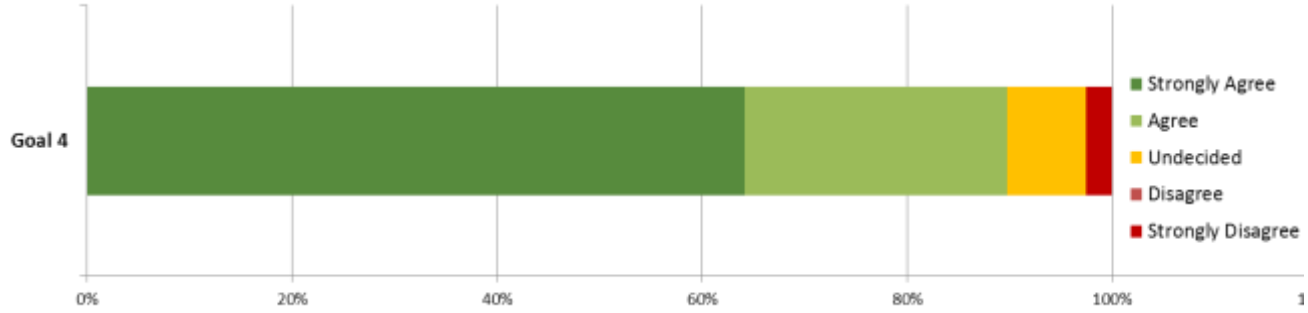
Some respondents, including regulators, voiced concerns that enforcement of cases of non-compliance with community water licences can be challenging. While charging communities in cases of non-compliance provides an incentive to address deficiencies, issuing orders or laying charges against communities that are not in compliance can mean communities have even less money to accomplish the necessary actions to be in compliance. Finding alternate means of providing incentives and penalties to encourage compliance with water licences was recommended, including redirecting monetary fines back to funds that could be used to help communities become compliant.

In addition to new or amended legislation or regulations, as mentioned in Goal 2, regarding the creation of EPR and/or Product Stewardship programs, some voiced support for adding regulatory tools to better address litter and illegal dumping.

[4] Signage and communications materials should take into account language barriers (e.g. by including multiple languages, pictorial representations, etc.)

Goal 4: Lead by Example—Greening the Government

Level of agreement with Goal 4 (on-line questionnaire responses)



Feedback was positive on including actions for greening the GNWT in the Strategy, and included a wide variety of suggestions. Some wanted to see green teams in all departments that could be resources to their peers. Others wanted to see a top-down approach to greening government where decisions on greening actions go beyond inviting employees to adopt green behaviours and concrete GNWT commitments. This approach would require dedicated staff to implement.

Actions proposed included:

- require new GNWT buildings to meet set efficiency standards;
- require composting and recycling in GNWT offices (where these services are available);
- address GWNT-generated waste in communities (e.g., disposal of mercury and used oil in municipal landfills);
- track and manage GNWT vehicle use to prevent unnecessary idling;
- create a paperless internal document approval processes to reduce paper use;
- consider environment in procurement processes;
- incent active transport among staff;
- require the use of reusable dishes at GNWT events and functions;
- eliminate use of single-serve coffee pods or bottled water; and
- reduce travel through inter-departmental coordination and organization.

One respondent suggested that greening the GNWT should be a promise, while another cautioned that fiscal responsibility be considered in greening government decisions. Yet another proposed that GNWT activities with high impacts (e.g., GNWT disposal of mercury, used oil) should be prioritized over actions with smaller impacts.

Looking Ahead

A Waste Resource Management Strategy for the NWT will set clear targets with measurable outcomes to address waste reduction, diversion and responsible disposal for the next ten years. The Strategy will be guided by the GNWT's commitment to environmental protection; economic development and reducing financial liabilities; environmental stewardship; and using collaborative approaches.

If you would like to be updated on future engagement opportunities, email wastestrategy@gov.nt.ca.

Glossary:

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 – A circular economy eliminates waste by cycling materials through interconnected industrial systems and biological cycles. In a circular economy, materials are used in a manner that keeps them at their highest utility and value at all times, there is a shift towards the use of renewable energy, eliminating toxic chemicals, and preventing waste through superior design.

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.

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.

ICI Waste (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.

Ozone-depleting substances (ODS) are gases that generally contain chlorine, fluorine, bromine, carbon and hydrogen that drift up into the stratosphere and break down into components known to destroy ozone. Common human-made sources of ODS include gases used in refrigerants, air conditioning, foam blowing, solvents and in fire extinguishers.

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.

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.

Appendix 1: Organizations that Contributed to the Engagement

Participating Organizations (At least 109 people participated in engagement sessions and a follow-up phone call with community representatives that were not able to attend any sessions, 39 survey responses, 17 written responses)

	Organization
1	Hamlet of Aklavik
2	Deline Got'ine Government
3	Yellowknives Dene First Nation
4	Hamlet of Enterprise
5	Hamlet of Fort Liard
6	Hamlet of Fort McPherson
7	Hamlet of Fort Providence
8	Hamlet of Fort Resolution
9	Village of Fort Simpson
10	Town of Fort Smith
11	Community Government of Gamètì
12	Town of Hay River
13	Town of Inuvik
14	TthedzehK'edeli First Nation (Jean Marie River)
15	Ka'a'gee Tu First Nation (Kakisa)
16	Town of Norman Wells
17	Hamlet of Paulatuk
18	Hamlet of Sachs Harbour
19	Sambaa K'e First Nation
20	Charter Community of Tsiigehtchic
21	Hamlet of Tuktoyaktuk
22	Hamlet of Ulukhaktok
23	Community Government of Whatì
24	Pehdzeh Ki First Nation (Wrigley)
25	City of Yellowknife
26	Lutsel K'e Dene First Nation/Denesoline Corporation
27	Rowe's Recycling / PR Contracting
28	Camco
29	Gwich'in Land and Water Board
30	Inuvik Drum
31	Imperial Oil
32	Whiponic Wellputer
33	Norman Wells Chamber of Commerce
34	Tlicho Government
35	Alternatives North
36	Ecology North

	Organization
37	Indigenous and Northern Affairs Canada (INAC)
38	Kavanaugh Bros
39	Fort Smith Sustainable Development Advisory Board
40	RTL Recycling
41	Super-A Foods
42	West Point First Nation
43	Northern Interiors
44	Stantec
45	Henry Design Build Live
46	NWT and Nunavut Construction Association
47	Inuvialuit Water Board
48	Inuvialuit Land Administration
49	Sahtu Land and Water Board
50	Wek'èezhìi Land and Water Board
51	Mackenzie Valley Land and Water Board
52	Canadian Northern Economic Development Agency
53	Air Tindi
54	Stantec
55	Northern Territories Water and Waste Association
56	Call2Recycle
57	Dominion Diamond Mines
58	Salvation Army
59	Council of Canadians NWT Chapter
60	Retail Council of Canada
61	City of Yellowknife
62	Indigenous and Northern Affairs Canada
63	Northland Utilities
64	Midnight Sun Energy Ltd.
65	Landmark Resources Management
66	Inuvik Community Greenhouse

Appendix 2: On-line Questionnaire

Goal 1 – Prevent and reduce waste generated at the source

1. How strongly do you agree with the following priority areas?

Priority Area (a): Providing tools and information necessary to reduce the amount of waste generated

- Strongly Agree
- Agree
- Undecided
- Disagree
- Strongly Disagree

Priority Area (b): Reducing food waste from residential and non-residential sectors

- Strongly Agree
- Agree
- Undecided
- Disagree
- Strongly Disagree

Priority Area (c): Keeping our communities clean and reducing litter

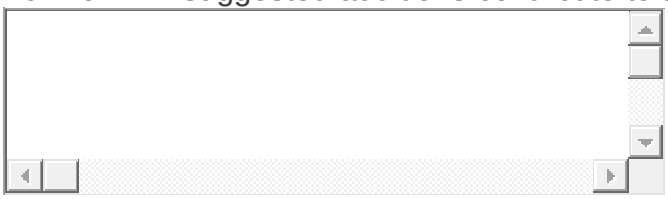
- Strongly Agree
- Agree
- Undecided
- Disagree
- Strongly Disagree

2. Are there other priority areas and potential actions that should be considered to minimize waste at the source?

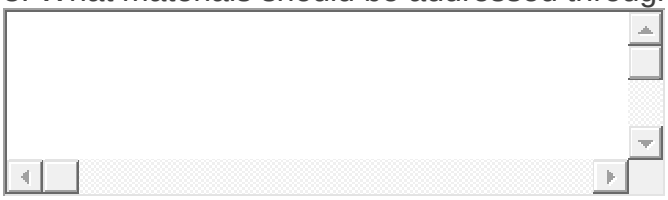
- Yes
- No

2a. What priority areas or potential actions would you add to minimize waste at the source?

2b. How will suggested additions contribute to this goal?



3. What materials should be addressed through source reduction?



Goal 2 – Divert waste disposed in landfills

4. How strongly do you agree with the following priority areas?

Priority (a): Establishing new waste diversion programs and initiatives

- Strongly Agree
- Agree
- Undecided
- Disagree
- Strongly Disagree

Priority (b): Improving existing waste diversion programs and initiatives

- Strongly Agree
- Agree
- Undecided
- Disagree
- Strongly Disagree

Priority (c): Diverting organic waste from residential and non-residential sectors

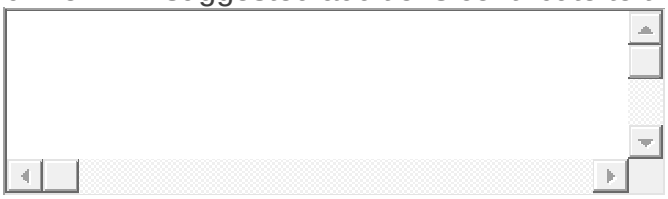
- Strongly Agree
- Agree
- Undecided
- Disagree
- Strongly Disagree

5. Are there other priority areas and potential actions that should be considered to reduce waste disposed of in landfills?

- Yes
- No

a. What priority areas or potential actions would you add to reduce waste disposed?

b. How will suggested additions contribute to this goal?



6. What materials should be addressed by waste diversion programs or activities?

- [ ] Used oil
- [ ] Tires
- [ ] Paint
- [ ] Organics
- [ ] Packaging and printed paper
- [ ] Other(s)

Goal 3 – Improve waste management facilities and practices

7. How strongly do you agree with the following priority areas?

Priority (a): Modernizing waste management facility operations

- Strongly Agree
- Agree
- Undecided
- Disagree
- Strongly Disagree

Priority (b): Collecting and managing hazardous waste

- Strongly Agree
- Agree

- Undecided
- Disagree
- Strongly Disagree

Priority (c): Developing policies and regulations to support GNWT strategies in the area of waste management

- Strongly Agree
- Agree
- Undecided
- Disagree
- Strongly Disagree

Priority (d): Gathering information to facilitate decision-making at waste management facilities

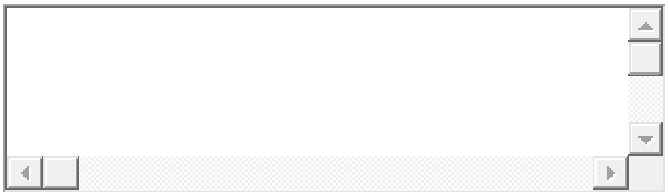
- Strongly Agree
- Agree
- Undecided
- Disagree
- Strongly Disagree

8. Are there other priority areas or potential actions that should be considered to improve waste management facilities?

- Yes
- No

8a. What additional priority areas or potential actions should be considered?

b. How will suggested additions contribute to this goal?



Goal 4 – Lead by example – Greening the Government of the NWT

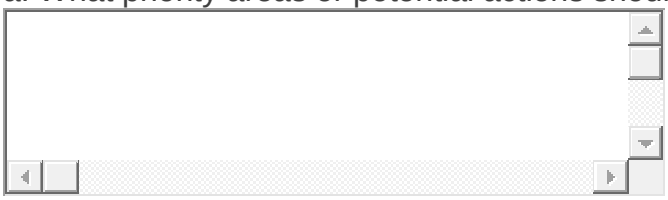
9. How strongly do you agree with greening the GNWT?

- Strongly Agree
- Agree
- Undecided
- Disagree
- Strongly Disagree

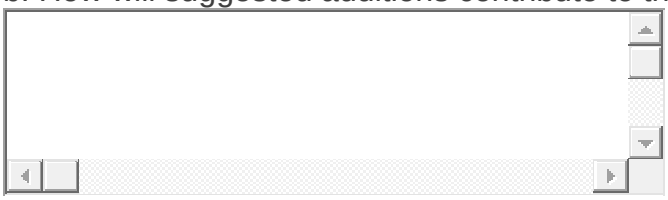
10. Are there other priority areas and potential actions that should be considered to green the GNWT?

- Yes
- No

a. What priority areas or potential actions should be considered?

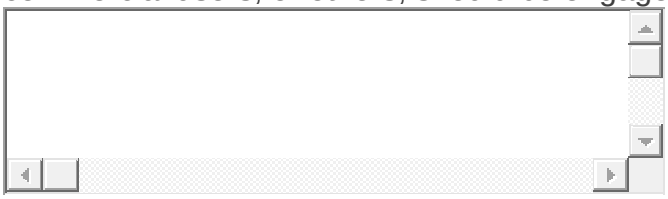


b. How will suggested additions contribute to this goal?



11. Please provide any general comments about waste management in the NWT that you would like to see addressed as the Strategy is developed.

12. What specific groups, businesses, non-government organizations, industrial and commercial users, or others, should be engaged as the Strategy is developed?



Appendix 3: Support for Priority Areas (Questionnaire Responses – 39 Responses Received)

	Strongly Agree # responses (%)	Agree # responses (%)	Un-Decided # responses (%)	Disagree # responses (%)	Strongly Disagree # responses (%)	No response # responses (%)
Goal 1: Prevent and Reduce Waste Generated at the Source						
Priority Area A: Provide Tools and Information Necessary to Reduce the Amount of Waste Generated	28 (72%)	6 (15%)	2 (5%)	1 (3%)	1 (3%)	1 (3%)
Priority Area B: Reduce Food Waste from Residential and Non-Residential Sources	23 (59%)	8 (21%)	5 (13%)	2 (5%)	0	1 (3%)
Priority Area C: Keep Our Communities Clean and Reduce Litter	22 (56%)	13 (33%)	3 (8%)	0	0	1 (3%)
Average for Goal 1	**62%**	**23%**	**9%**	**3%**	**1%**	**3%**
Goal 2: Divert Waste Disposed in Landfills						
Priority Area A: Establish New Waste Diversion Programs and Initiatives	25 (64%)	9 (23%)	3 (8%)	1 (3%)	0	1 (3%)
Priority Area B: Improve Existing Waste Diversion Programs and Initiatives	24 (64%)	10 (26%)	4 (10%)	0	0	1 (3%)
Priority Area C: Divert Organic Waste from Residential and Non-Residential Sectors	25 (64%)	9 (23%)	4 (10%)	0	0	1 (3%)
Average for Goal 2	**63%**	**24%**	**9%**	**1%**	**0%**	**3%**
Goal 3: Improve Waste Management Facilities and Practices						
Priority Area A: Modernize Waste Management Facility Operations	22 (56%)	16 (41%)	1 (3%)	0	0	0
Priority Area B: Collect and Manage Hazardous Waste	27 (69%)	11 (28%)	1 (3%)	0	0	0
Priority Area C: Develop Policies and Regulations to Support GNWT Strategies in the Areas of Waste Management	21 (54%)	10 (26%)	6 (15%)	2 (5%)	0	0
Priority Area D: Gather Information to Facilitate Decision-making at Waste Management Facilities	22 (56%)	12 (31%)	4 (10%)	1 (3%)	0	0
Average for Goal 3	**59%**	**31%**	**8%**	**2%**	**0%**	**0%**
Goal 4: Lead by Example – Greening the Government						
Priority Area A: Lead by Example through Greening Government	25 (64%)	10 (26%)	3 (8%)	0	1 (3%)	0