



# 2020 MUNICIPAL WATER AND WASTE MANAGEMENT WORKSHOP REPORT

## INUVIALUIT WATER BOARD



INUVIK, NT  
February 12 and 13, 2020

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# IWB Municipal Water and Waste Management Workshop

Inuvik, NT February 12 – 13, 2020

Executive Summary

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## Executive Summary

The annual Inuvialuit Water Board (IWB) Municipal Water and Waste Management Workshop was held in Inuvik on February 12 and 13, 2020. The workshop was the sixth in a series of workshops hosted by the IWB beginning in 2015.

The workshop was attended by Mayors and Hamlet staff from the Inuvialuit Settlement Region (ISR) communities of Aklavik, Paulatuk, Sachs Harbour, Tuktoyaktuk and Ulukhaktok. Other participants included staff from the Government of the Northwest Territories (GNWT) - Environment and Natural Resources (ENR) and Health & Social Services (H&SS). Representatives from the Environmental Impact Screening Committee (EISC), Gwich'in Land and Water Board (GLWB), and Inuvialuit Communication Society (ICS) also participated.

The overall objective of this and previous workshops is to assist municipal governments in providing adequate, safe and reliable water and waste management services to their communities while ensuring the provision of these services does not have a negative impact on the receiving environment. Specific objectives of this workshop were to:

- Increase collective awareness of current issues and concerns.
- Provide an effective forum for sharing information.
- Promote and support community understanding and compliance with water licensing requirements.
- Identify actions to address or mitigate concerns.

These objectives were advanced through interactive presentations from ENR and IWB including:

- the impacts of climate change on water and waste infrastructure and possible measures to adapt to these changes,
- inspection and enforcement of water licences and the role of the Water Resources Officer,
- building demolition procedures and proper management of demolition waste; and
- upcoming initiatives to celebrate World Water Day, Canada's Waste Reduction Week, updates on the ISR Waste Management Documentary project and community water/waste management initiatives and experiences.

Each presentation was followed by floor discussions among workshop participants.

An evaluation form was distributed to participants following the workshop. The evaluation form was completed by 82% of the participants. At the conclusion of the workshop, all participants, including the Hamlets, ENR, H&SS, EISC, and GLWB expressed their satisfaction with the workshop content, materials and time provided for questions and discussions, and the objectives achieved. The workshop was rated "excellent" and "very good" by 50% and 45% of the respondents respectively with the rest rating the workshop as "good". There was also general agreement that participation by GNWT Municipal and Community Affairs would substantially increase the value of workshop discussions (this was the first year that MACA representatives did not attend the workshop).

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## Acknowledgements

This workshop would not have been successful without the active participation of all attendees and presenters. A sincere thank you to the Mayors and Hamlet staff from Aklavik, Paulatuk, Sachs Harbour, Tuktoyaktuk and Ulukhaktok and the representatives from the GNWT Departments of ENR and H&SS, the EISC, GLWB and ICS. The workshop was held in the Inuvik Community Corporation Hall and the workshop was supported by the IWB.

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## 1. Opening Prayer

Ulukhaktok Deputy Mayor Margaret Kanayok opened the workshop with a prayer.

## 2. Welcoming Comments from the IWB Chairperson

The IWB Chairperson, Roger Connelly, welcomed all participants highlighting the collective role of all attending parties in providing efficient and effective municipal water and waste management services in the ISR and in addressing the ongoing challenges related to health, safety and the environment. As confirmed at our 2019 workshop, all Hamlets must now complete the Inuvialuit Final Agreement Environmental Impact Screening Committee (EISC) screening process before the IWB can issue or renew municipal water licences. The specific roles of all parties holding responsibilities in municipal water and waste management has been clarified through these workshops and is available in detailed and summarized form to all municipalities and government departments. The Chairperson acknowledged ISR communities for their increasingly visible efforts towards the improvement of their municipal water and waste services. Finally, the Chairperson stressed the ongoing importance of the IWB and government departments working together with municipalities to achieve our common goals and maintaining the environment for today and future generations.

The Chairperson introduced facilitator Emery Paquin to begin the workshop.

## 3. Presentations

### a) Climate Change and Potential Impacts to Management of Municipal Services

**Beth Cowan, ENR Climate Change and Air Quality Unit - Adaptation Planning Specialist:** Highlighted the temperature increase trend with a graphical example recorded in Hay River and Inuvik and the overall impact on the municipal services, permafrost, precipitation, flooding and sea level. This presentation also included a synopsis of the 2030 Northwest Territories (NWT) Climate Change Strategic Framework.

The presentation included:

- The rise of mean annual temperatures recorded from 1958 to 2015 at Hay River and Inuvik were found to be 2.5° C and 5° C respectively;
- rising temperatures are having impacts on precipitation, permafrost, flooding, sea level, coastal erosion and changes to the timing of freezing and spring thaw;
- Permafrost thaw can result in unstable ground and potential damage to infrastructure from settling which results in costly repairs and maintenance;
- Decreasing sea ice extent and longer open water seasons are exposing coastlines to increased storm surges;
- The relative sea level is projected to rise in all NWT coastal communities;
- The 2030 NWT Climate Change Strategic Framework outlines how the NWT Government plans to respond to the challenges and opportunities associated with a changing climate. The Framework can be found on the ENR website:

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[https://www.enr.gov.nt.ca/sites/enr/files/resources/128-climate\\_change\\_strategic\\_framework\\_web.pdf](https://www.enr.gov.nt.ca/sites/enr/files/resources/128-climate_change_strategic_framework_web.pdf) ;

- The accompanying 2019 - 2023 Climate Change Action Plan describes the first of two 5-year action plans to implement the Framework and is available on the ENR website: [https://www.enr.gov.nt.ca/sites/enr/files/resources/128-climate\\_change\\_ap\\_proof.pdf](https://www.enr.gov.nt.ca/sites/enr/files/resources/128-climate_change_ap_proof.pdf) ;
- Ecology North has published brochures to provide information related to:
  - Preventing Permafrost Degradation
  - Managing Changing Snow Loads
  - Improving Community Drainage
  - Understanding Thermosyphon Foundation Systems.

For further information on ecology North's climate change initiatives contact Ecology North – Phone: (867) 873-6019  
website: [www.ecologynorth.ca](http://www.ecologynorth.ca).

## **b) Water Licence Inspection and Enforcement of Terms and Conditions**

**Lloyd Gruben, ENR - Water Resource Officer (WRO):** The presentation focused on the roles and responsibilities of the inspector while conducting inspections under the *Waters Act*, Waters Regulations and water licence terms and conditions. The presentation highlighted the municipal water licence inspection procedures and presented a sample of an inspection report describing sections where the inspector summarizes the inspection results and documents non-compliance issues.

Highlights of the presentation:

- The ENR WRO (i.e. inspector) is responsible for the inspection and enforcement of water licence terms and conditions;
- The inspector schedules, conducts and documents on-site inspections of industrial, municipal and other undertakings associated with water use and waste disposal pursuant to the *Waters Act* and Waters Regulations;
- If required, the inspector will coordinate the inspection with other GNWT departments and ENR divisions, federal government, private land owners and private citizens;
- An inspection is required to record compliance and non-compliance issues including the enforcement of non-compliance issues from previous inspections;
- An inspection report works as a communication tool for Hamlets, the IWB, other regulators and stakeholders;
- A water licence includes terms and conditions for various aspects of water use and waste disposal facilities which are required to be inspected; and
- The completed inspection report including a cover letter is provided to the licensee and a copy is provided to the IWB to be placed on the public register.

WRO Lloyd Gruben emphasized a need for timely submission of annual reports as required under Part B of each Municipal Water Licence and the Surveillance Network Program (SNP) sampling results.

## **c) Demolition of Private and Public Buildings**

**Alicia McRae, ENR - Regional Environment Assessment Coordinator:** introduced the *Environmental Protection Act* - available on the ENR website: <https://www.enr.gov.nt.ca/en/services/legislation-and->

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[regulations](#). She also introduced the associated regulations and guidelines; e.g. Guideline for Contaminated Site Remediation, Guideline for the Management of Waste Asbestos, Guideline for the Management of Waste Antifreeze, Guideline for the Management of Waste Solvents, Guideline for the Management of Waste Batteries, Spill Contingency Planning and Reporting Regulations and Used Oil and Waste Fuel Management Regulations which are available on the ENR website:

<https://www.enr.gov.nt.ca/en/services/guidelines>. The presentation highlighted the procedures for building demolition and proper burning protocols including the management of building demolition waste.

Highlights of the presentation:

- Demolition and burning of a building results in various hazardous and non-hazardous wastes and must be carried out in a manner that protects public safety and the environment;
- Hazardous materials must be removed from buildings prior to demolition and disposed of separately as hazardous waste. Non-hazardous solid waste can be disposed of in the community landfill only where prior permission is provided by the community government;
- Burning buildings can result in the discharge of contaminants into the air and surrounding environment if proper procedures are not followed; The burning of buildings solely for the purpose of demolition is not acceptable;
- Burning of a building (for fire suppression training) can be done under the following conditions:
  - Approval is first obtained from the local municipality and ENR Manager of Forests,
  - a supervisor must be on site at all times with appropriate suppression equipment and personnel to ensure the fire does not spread,
  - building fires must be attended until the fire has been completely extinguished,
  - no extra materials can be added to the structure and the fire cannot be used to dispose of garbage, and
  - the burn should occur during favorable weather conditions with the wind blowing away from populated areas and buildings;
- Hazardous materials require removal from the building before burning; such as synthetic carpets and linoleum flooring, piping and other plastics, insulation, siding, shingles and other materials, fluorescent fixtures including the ballast and fluorescent tubes, mercury thermostats, glycol from heating systems and refrigerant agents from refrigeration and air conditioning systems, fire extinguishers and smoke detectors, rubber, pesticides, paints, solvents and cleaning fluids, maintenance and other unused chemicals, treated wood;
- The management of waste resulting from the demolition is the responsibility of the building owner and demolition contractor; and
- The waste generator, carrier and receiver require proper registration and/or reporting to the ENR Environment Division.

**d) Guideline for the Design, Operation, Monitoring, Maintenance and Closure of Petroleum Hydrocarbon-Contaminated Soil Treatment Facilities (PHCSTF) in the Northwest Territories**

**Mardy Semmler, IWB Executive Director:** presented an overview of the recently approved Guidelines for the Design, Operation, Monitoring, Maintenance and Closure of Petroleum Hydrocarbon Contaminated Soil Treatment Facilities (PHCSTF). These guidelines result from the collaborative efforts of the Mackenzie Valley Land and Water Board (MVLWB), GNWT ENR and the IWB. The presentation

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focused on the purpose of the guideline along with siting and development, design and construction, operation and maintenance and facility closure requirements.

Highlights of the presentation:

- The guidelines provide information on facilities designed for the treatment of petroleum hydrocarbon contaminated soil including gasoline, diesel, heating oil and lubricating oils.
- To obtain the desired level of biodegradation of contaminated soil, it requires the maintenance of the optimum level of pH, aeration, moisture, carbon/nitrogen ratio, and temperature;
- Soil treatment rates are generally slower in northern climates;
- Guidelines have been developed for:
  - third party owner/operators of PHCSTFs that accept contaminated soils from others,
  - owners/operators of PHCSTFs at industrial project sites (mining, oil and gas operations, etc), and/or
  - owners/operators of PHCSTFs that operate for longer than 3 years;
- Owners/operators of PHCSTF may require a water licence and/or other permits if their activities trigger the requirements under the applicable legislation;
- Provides basic requirements and constraints for siting and developing a PHCSTF;
- Provides information regarding the design and construction of PHCSTF;
- Describes operation and maintenance procedures and includes contaminant types and concentration restrictions on incoming soils, operational period, soil manipulation, soil treatment monitoring, removal of treated soil, surface water monitoring and management, groundwater monitoring, system maintenance, and documentation; and
- Includes a closure and reclamation section with the requirements for an approved closure plan that includes procedures for the removal of liner and surface water, management structures, underlying soil testing, groundwater monitoring well decommissioning, and site reclamation.

These guidelines can be found on the MVLWB, ENR and the IWB websites.

## **e) World Water Day and Waste Reduction Week**

**Mardy Semmler, IWB Executive Director:** The presentation was a two part presentation: (1) World Water Day (WWD); and (2) Waste Reduction Week in Canada (WRW).

The first presentation focused on the importance of freshwater resources and the IWB's initiative of celebrating WWD with ISR community partners. The International WWD is celebrated annually on March 22, is designated by the United Nations General Assembly, and aims to highlight the importance of freshwater and the sustainable management of freshwater resources. Globally, the availability of freshwater resources has been greatly diminished by rapid urbanization, deforestation, a warming climate and man's other activities that impact the natural environment.

A successful and well attended WWD event was held in Tuktoyaktuk on March 22, 2019.

Highlights of the presentation:

- In the ISR, the 2020 WWD event will be held in Aklavik. Due to school closures for mid term breaks across the ISR, the event will be held on March 27, 2020;

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- This year's theme is 'Water and Climate Change' and how the two are linked. Each year a theme is selected based on water use and its impact on available freshwater resources. Although the theme is established by the United Nations, communities are not limited to that theme;
  - This initiative brings awareness to community members and students on issues related to climate change, water and waste management and how these are interconnected. It also encourages community members, youth, students, community organizations and governments to proactively address water quality and waste storage issues within the community; and
  - Participants in the 2020 WWD celebration include Hamlet of Aklavik, Moose Kerr School, Aklavik District Education Authority, Aklavik Community Corporation, Aklavik Hunters and Trappers Committee, ENR, Fisheries and Oceans, Parks Canada, and IWB.

Following the presentation, the IWB Chairperson asked if other communities would like to hold a World Water Day (WWD) event in their community. Following discussion on a process to determine what community would be given the next opportunity, it was agreed that this would be determined by water licence expiry date - the next being Paulatuk, water licence expiring in November 2020. The Hamlet of Paulatuk agreed to work with other parties in hosting a WWD celebration on March 22, 2021.

The second presentation focussed on "Waste Reduction Week" in Canada which will be celebrated October 19 – 25, 2020. Waste reduction and recycling weeks in Canada started in the mid-1980s. In 2001, the National Waste Reduction Week Program was formalized by the Recycling Council of Ontario and supported by environmental groups and governments from each of the thirteen provinces and territories. Globally, municipal waste management is a challenge faced by municipalities due to rapid urbanization, unavailability of landfill sites, environmental and financial pressure.

Highlights of the presentation:

- The main purpose of WRW is to celebrate our environmental efforts and achievements while encouraging new innovative ideas and solutions to motivate learning and behavioral change;
- WRW in Canada provides information and ideas on how to reduce waste in all facets of daily living, creating the solutions to the many environmental challenges we face including climate change, water pollution and preservation of natural resources;
- WRW in the NWT is administered by the GNWT - ENR in partnership with Ecology North;

#### **f) Community Initiatives/Workshop Agenda Topics**

IWB Chairperson Roger Connelly summarized the initiatives undertaken through previous water and waste management workshops to address issues and concerns regarding the provision of municipal water and waste services in the ISR communities. Discussion on these topics resulted in agreement on further actions and commitments that would be undertaken by one or more of the participating organizations. During this workshop community participants have continued to identify priority issues and concerns related to the provision of water and waste services. The concerns expressed by the communities relate in large part to waste management, summarized as:

- Cardboard is an increasing concern for community landfills (e.g. wind blown around the landfill, accumulating and shortening landfill life);
- Dumping of increasing volumes of mixed municipal solid waste;
- Source separation of the municipal solid waste is not in practice in some ISR communities; and

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- Plastic and packaging wastes are a major issue.

All the participants actively discussed the identified issues. The discussions resulted in the following:

- Controlled burning of cardboard can be considered one of the solutions to address issues related to the accumulation of cardboard. Each municipal water licence has a condition for allowing the burning of paper, cardboard and untreated wood. Authorized burning must be in accordance with the guideline “Municipal Solid Wastes Suitable for Open Burning” developed by GNWT ENR. This guideline can be found on the ENR website: [https://www.enr.gov.nt.ca/sites/enr/files/guidelines/solid\\_wastes\\_suitable\\_open\\_burning.pdf](https://www.enr.gov.nt.ca/sites/enr/files/guidelines/solid_wastes_suitable_open_burning.pdf);
- All participants agreed that dumping of mixed municipal solid waste decreases landfill life and emphasized source separation and implementation of the concept - reduce, reuse and recycle;
- Canada will ban single-use plastics (e.g. plastic bags, straws, cutlery, plates, and stir sticks) as early as 2021. Banning of single use plastics and promoting the use of biodegradable bags may resolve the issue to some extent;
- All the participants underscored the need for education and awareness for reduction, reuse and recycling of municipal solid waste; and
- Energy recovery from cardboard could be one of the solutions to divert waste from the landfill. In this context, Patrick Gall, a researcher from the Inuvik Aurora Research Institute (ARI) presented a preliminary overview of research being undertaken by ARI to convert cardboard into fuel for burning.

#### **Preliminary Results – The Manufacture and Use of Waste Cardboard Fuel Pellets in Inuvik, NT**

**Patrick Gall, Aurora Research Institute – Inuvik, Engineering & Technology:** A project is being conducted by the Inuvik ARI converting cardboard to fuel pellets. Northern communities currently rely almost exclusively on fossil fuels to be transported to meet the requirement of energy.

Highlights of the presentation:

- The objective of the research is to investigate the use of locally sourced waste cardboard to produce fuel pellets through technical analysis, economic analysis and environmental analysis;
- Using cardboard pellets would reduce the demand for imported fossil fuel, produce less greenhouse gas (GHG) emissions compared to fossil fuel; and divert waste from landfill thereby increasing landfill life.

Patrick Gall agreed to present details of the research outcome during the next IWB Water and Waste Management Workshop.

#### **g) Documentary Project Update - Documentary on Municipal Waste Management in the Inuvialuit Settlement Region**

**Holly Jones, IWB Project Support; Dez Loreen and David Stewart, ICS:** The presentation provided an update on the documentary project initiated by the IWB. The planning and design of the documentary is being done with the Inuvialuit Communications Society (ICS). The objective is to provide a collective picture of the issues faced by ISR communities in the management of municipal wastes and how these issues are being addressed.

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Highlights of the presentation:

- Project was initiated in 2019 to be completed in 2021;
- Documentary aims to explore municipal waste management featuring perspectives from community residents and organizations;
- Expected audience and users include residents, students, elders, community members, municipal and Inuvialuit/Community organizations, waste management workers/technicians;
- Ongoing tasks include community outreach and networking, question design, travel planning, interview facilitation, project reporting, interview shooting, drone photography, editing, and production;
- Community visits and initial interviews will be conducted in April/May, 2020 and final interviews in July/August 2020;
- Interviews, video recording, drone photography, editing and final production of documentary will be accomplished by the ICS; and
- Final edits of the documentary will be completed in time for screening to take place at the next IWB Water and Waste Management Workshop.

## Specific Discussions and Responses

**Question (Communities):** Does climate change impact on the freezing duration of a water body?

**Response (ENR):** Yes. Increasing average temperatures shorten the freezing season and prolong the open water season.

**Question (Communities):** If there is a high intensity rainfall due to climate change, can we introduce a culvert to remove water from a municipal waste disposal facility?

**Response (ENR):** It depends on the type and design of the facility, engineering study and environmental consideration.

**Question (Communities):** Is there an impact from climate change to houses near the coast?

**Response (ENR):** Yes. Permafrost thaw, sea level rise, longer open water season may impact coastal communities. Houses near the coast are vulnerable to erosion, tidal surge, and inundation in the context of climate change.

**Question (IWB):** Will the rise in sea level impact Inuvik which is situated about 200 km away from the coast?

**Response (ENR):** Sea level rise may create an influx upstream of the river mouth discharging into the sea, consequently submerging more land adjacent to the Mackenzie River. Rising sea level may also impact the east branch of Mackenzie River near Inuvik.

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**Question (Communities):** Is there a risk to Tsunamis in the Beaufort Sea, and is anyone studying tsunami occurrence in the Beaufort Sea?

**Response (ENR):** Tsunamis occur due to earthquakes, volcanic eruptions and other underwater explosions that create a series of waves in a water body and displacements of large volumes of water, generally in an ocean or a large lake. Sea level rise due to climate change may amplify the waves created in a water body and consequently impact the larger coastal area. There have not been any known occurrences of tsunamis in the Beaufort Sea and understand that NRCan are beginning to study historical occurrences of tsunamis in the Beaufort Sea.

**Question (IWB):** Where can we find CSA guidelines: (1) Planning, Design, Operation, and Maintenance of Municipal Wastewater Treatment in Northern Communities using Lagoon and Wetland Systems, and (2) Infrastructure in Permafrost:

**Response (ENR):** These guidelines are available on the NWT Association of Communities website:

<https://climatechange.toolkitnwtac.com/wp-content/uploads/sites/21/2019/08/Planning-Wastewater-CSA.pdf>

<https://climatechange.toolkitnwtac.com/wp-content/uploads/sites/21/2019/08/Technical-Guide-Infrastructure-CSA.pdf>

**Question (Communities):** If there is an erosion problem with the road to the waste disposal facilities is funding available for erosion control?

**Response (ENR):** Yes, funding may be available from ENR. For further information contact: Beth Cowan, Climate Change Adaptation Planning Specialist - Yellowknife, ENR  
Phone: 867-767-9236 ext 53204, Email: [Beth\\_cowan@gov.nt.ca](mailto:Beth_cowan@gov.nt.ca).

**Question (IWB):** Have the communities experienced impacts from climate change?

**Response (Communities):** Yes. Communities are observing longer open water season, soft snow over the lakes and ocean and lake ice is not as thick as previously recorded. Erosion at the coast can also be observed.

**Question (IWB):** Who is the contact regarding funding to address issues related to climate change?

**Response (ENR):** Communities can contact ENR about funding related to climate change issues. The contact is: Beth Cowan, Climate Change Adaptation Planning Specialist - Yellowknife, ENR, Phone: 867-767-9236 ext 53204, Email: [Beth\\_cowan@gov.nt.ca](mailto:Beth_cowan@gov.nt.ca).

**Question (Communities):** Who has the authority for inspection and enforcement of municipal water and waste facilities related to water licenses?

**Response (ENR):** The GNWT - ENR Water Resource Officer (WRO) is designated as an inspector under the *Waters Act* by the ENR Minister and has authority to inspect municipal water and waste facilities and enforce terms and conditions related to a water license.

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**Question (IWB):** Who is responsible for collection of batteries, waste oil, and paint from community households?

**Response (ENR):** The local community government. Residents should bring lead-acid batteries, waste oil and paints to the community garage and the municipality store these products at the temporary containment area.

**Question (IWB):** Is community awareness growing for the proper handling and management of household hazardous waste?

**Response (ENR):** Yes. The communities are increasingly aware of the proper handling and management of household hazardous waste.

**Question (Communities):** Can people access water from lakes identified in the water license as being the community drinking water source?

**Response (ENR):** No. Human activities that may contaminate the source of drinking water are not permitted both in winter and summer.

**Question (IWB):** Can the community landfill accept asbestos?

**Response (ENR):** Yes. If a community wants to accept asbestos at the community landfill, the landfill must first be registered with ENR and the specific disposal location tracked by GPS. For further information contact: Lee Ross, Hazardous Waste Management Specialist – GNWT ENR, Yellowknife, Ph: 867-767-9236 Ext 53187, Email: [Lee\\_ross@gov.nt.ca](mailto:Lee_ross@gov.nt.ca) or Lloyd Gruben, Water Resource Officer, Inuvik Regional Office, Environment and Natural Resources, Inuvik, Ph: 867-678-6676, Email: [Lloyd\\_Gruben@gov.nt.ca](mailto:Lloyd_Gruben@gov.nt.ca).

**Question (H&SS):** How often are water license inspections conducted in each community?

**Response (ENR):** Inspections are conducted by ENR every two years.

**Question (Facilitator):** Before arriving in a community for an inspection, do you inform the community?

**Response (ENR):** Yes. Community is informed in advance.

**Question (Facilitator):** Do you need firefighter training for the burning of buildings for demolition purposes?

**Response (ENR):** Yes. If there is a need to burn a building for demolition or training purposes firefighting training is required.

**Question (IWB):** What is the process for building demolition training and certification?

**Response (ENR):** ENR does not provide training and certification for building demolition. However, proper procedures should be followed. It is recommended that before beginning any demolition works contact ENR, MACA, the municipality and other related organizations.

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**Question (Communities):** Can the community accept building demolition waste?

**Response (ENR, IWB):** The Hamlet Council has authority to accept or reject non-hazardous building demolition waste in their landfill. Hazardous materials from building demolition should not be accepted. Hamlets should request the person undertaking the demolition to provide a list of waste categories before they accept the waste into their solid waste facility. Each Hamlet has full control of their solid waste facility.

**Question (Communities):** If the Hamlet rejects the dumping of non-hazardous demolition waste in the community landfill then where does it go?

**Response (IWB, ENR):** It is the responsibility of the person undertaking the demolition to transport hazardous and non-hazardous waste to an approved waste facility for disposal. The person must be aware of this before signing contract documents.

**Question (Communities):** Is the Guideline for the Design, Operation, Monitoring, Maintenance and Closure of Petroleum Hydrocarbon-Contaminated Soil Treatment PHCSTF (PHCSTF) developed for the Northwest Territories (NWT)?

**Response (IWB):** Yes. This guideline is developed for the NWT.

**Question (Communities):** Does the PHCSTF guideline consider setback distances from the natural water body and does it consider ground water quality?

**Response (IWB, Facilitator):** Yes. This guideline considers the setback distance from natural water bodies while siting the facility and there is a requirement for analysis of baseline ground water quality that enables comparison during the closure of the facility.

**Question (Communities):** Is PHCSTF guidelines applicable for the drinking water treatment facility?

**Response (IWB):** This guideline is applicable only for the construction, operation, maintenance and closure of petroleum hydrocarbon contaminated soil treatment facilities and not applicable for drinking water treatment facilities.

**Question (Communities):** Who should conduct the laboratory analysis of the contaminated soil before transporting to the soil treatment facility?

**Response (IWB):** The person who brings contaminated soil to a treatment facility is responsible for having a qualified laboratory complete analysis of the contaminated soil before transporting it to the treatment facility. The laboratory results should be provided to the owner of the contaminated soil treatment facility.

**Question (Communities):** Does the community need to follow PHCSTF guideline?

**Response (IWB):** Communities are expected to follow the PHCSTF guideline where the facility is expected to be operated for more than 3 years.

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**Question (Communities):** Is the PHCSTF guideline a binding document?

**Response (IWB, ENR):** This guideline is not a binding document. It provides information about siting, design, operation and maintenance and closure of the soil treatment facility and is designed to assist any person who wants to develop and operate a commercial or long-term facility.

**Question (Communities):** Are there any commercial contaminated soil treatment facilities in NWT?

**Response (ENR):** Yes. Commercial soil treatment facilities are in operation in Hay River, Yellowknife and several mining companies have their own on-site treatment facilities.

**Question (Communities):** Is the PHC contaminated soil considered hazardous substance?

**Response (ENR, IWB):** Yes. It is a hazardous substance and can't be accepted at the community landfill unless an approved treatment facility is being operated.

**Question (Communities):** Where to dispose petroleum hydrocarbon contaminated snow?

**Response (ENR):** Petroleum hydrocarbon contaminated snow is considered a hazardous substance It should be transported to an approved hazardous waste facility for disposal.

**Question (IWB):** How does the community manage petroleum hydrocarbon contaminated snow?

**Response (Communities):** The contaminated snow is contained in a container and stored at the temporary hazardous waste storage area.

**Question (Communities):** Is there any guideline for management of contaminated snow and ice?

**Response (ENR):** Yes, there is a guideline for management of contaminated snow and ice. ENR will send this guideline via email to each ISR community. For further information contact: Lee Ross Hazardous Waste Management Specialist, Environment and Natural Resources, Yellowknife, Ph: 867-767-9236 Ext 53187, Email: [Lee\\_ross@gov.nt.ca](mailto:Lee_ross@gov.nt.ca) or Satish Garikaparathi, Water Management Advisor, Water Management and Monitoring Division, Environment and Natural Resources, Yellowknife, Ph: 867-767-9234 ext. 53139, Email: [satish\\_garikaparathi@gov.nt.ca](mailto:satish_garikaparathi@gov.nt.ca).

**Question (Communities):** If contaminated soil is noticed within the municipality then where to report?

**Response (ENR):** It should be reported to ENR and ENR can assist in the process. The Contact information: Lee Ross, Hazardous Waste Management Specialist – GNWT ENR, Yellowknife, Ph: 867-767-9236 Ext 53187 Email: [Lee\\_ross@gov.nt.ca](mailto:Lee_ross@gov.nt.ca).

**Question (Communities):** Can World Water Day celebration and ISR waste management documentary interviews be organized during the same day?

**Response (IWB):** No, the World Water Day and ISR waste management documentary have different objectives therefore it can't be organized for the same day.

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**Question (Communities):** How long will it take to produce a final version of the documentary?

**Response (IWB):** A draft of the documentary will be produced in the Fall of 2020 and feedback requested from the communities at the 2021 MWWMW. The final version will be completed in 2021. The total length of the documentary is expected to be approximately 30 minutes.

**Question (Communities):** How many persons will be selected for interview for the waste management documentary?

**Response (IWB):** Around 30 – 35 persons in each community will be interviewed from various groups e.g. school children, HTC, Elders Committee, Hamlet Council etc. The questions and target group information will be shared with the community in advance.

**Question (Facilitator):** Is there any assistance required from the Hamlet Council?

**Response (IWB):** No. People to be interviewed will be approached by the ISC in April and May and will include Hamlet representatives. Interviews will take place in each community during the summer of 2020.

**Question (Communities):** Which grade of school children will be included for interviews?

**Response (IWB):** This will be decided after consultation with DEA, teachers and parents.

**Question (Communities):** Will subsistence hunters be included for interviews?

**Response (IWB):** The HTC will decide who to include for the interviews.

**Question (Facilitator):** Once video is developed, do the communities get a copy?

**Response (IWB):** Yes. The final version of the video will be provided to each community and uploaded on the IWB website.

**Question (Communities):** Are the World Water Day and Oceans Day the same event?

**Response (IWB):** No. World Water Day and Oceans Day are separate events. The United Nations has declared World Water Day to be March 22 each year worldwide. World Oceans Day is celebrated annually with the coastal communities on June 8.

**Question (Facilitator):** Are funds available from ENR for celebration of waste reduction week?

**Response (ENR):** Funding is available for “waste reduction initiatives” and may be available to the community for celebration of a waste reduction week. For more information contact: Lee Ross, Hazardous Waste Management Specialist – GNWT ENR, Yellowknife, Ph: 867-767-9236 Ext 53187 Email: [Lee\\_ross@gov.nt.ca](mailto:Lee_ross@gov.nt.ca).

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## 4. IWB February 2019 Workshop - Follow-up Action Items

Each year, during the IWB workshop, community and other participants raise issues and concerns regarding the provision of municipal water and waste management services. The parties present agree on actions to address the concerns raised. Follow-up discussion on the action items during the 2020 workshop resulted in the identified actions as attached in Annex 2.

## 5. Conclusion

At the conclusion of the workshop, all participants, including the Hamlets, ENR, H&SS, EISC, and GLWB expressed their satisfaction with the workshop contents, materials and time provided for questions and discussions, and the objectives achieved. The workshop was rated “excellent”, and “very good” by 50% and 45% of the respondents respectively with the rest rating the workshop as “good”. There was also general agreement that participation by GNWT Municipal and Community Affairs would substantially increase the value of workshop discussions. All the participants expressed their enthusiasm for continuing to work as a “team” for the safe, efficient and effective management of community water and waste services.

The IWB thanked all presenters and expressed appreciation for the high level of interaction by all participants throughout the workshop. The IWB Chairperson also acknowledged the broad range of initiatives undertaken by all communities over recent years to improve water and waste services within their community and expressed his hope that the workshops will continue to help improve municipal waste management systems in the ISR.

Interactions and discussions throughout the workshop resulted in suggested topics to be presented during the next IWB workshop:

- Procedure and guidelines for the incineration of municipal solid waste;
- Responsibility for the demolition of abandoned buildings on private lands within the municipal boundary; and
- Research findings of the cardboard fuel pellet for energy recovery project.

## 6. Closing Prayer

Paulatuk Mayor Ray Ruben closed the workshop with a prayer.

## **Annex 1: Invitation Letter and Workshop Agenda**

January 15, 2020

Distribution List  
Workshop Participants

### **Re: Municipal Water and Waste Management Workshop Inuvik, February 12 – 13, 2020**

The Inuvialuit Water Board (IWB) is pleased to attach the final agenda for the Municipal Water and Waste Management Workshop to be held in Inuvik on February 12 and 13, 2020 in the Inuvik Community Corporation boardroom (opposite the Inuvialuit Corporate Centre). Detailed information on each agenda item will be provided either before or at the workshop. The agenda includes all items suggested by communities and participating government departments and will focus on the following topics:

#### **1. Petroleum Hydrocarbon-Contaminated Soil Treatment Facilities Guidelines**

In the absence of any NWT specific guidelines for owners and operators of Petroleum Hydrocarbon-Contaminated Soil Treatment Facilities (PHCSTFs), this shortcoming has been addressed through the collaborative efforts of the Mackenzie Valley Land and Water Board (MVLWB), GNWT Environment and Natural Resources (ENR) and the IWB. The guidelines recommend best practices for the siting, design, construction, operation and maintenance, and closure of these facilities. They will be of assistance to Hamlets in the event they need a PHCSTF within their community and/or solid waste management area.

#### **2. Climate Change and Impacts to the Management of Municipal Water and Waste Services**

The impacts of climate change are becoming increasingly noticeable in many areas of our lives. Municipal water and waste services are not exempt from these impacts. This presentation will assist in identifying the major areas where these impacts will occur and the actions required to manage them.

#### **3. ISR Waste Management Documentary**

Further to our presentation at last year's workshop, the IWB is working with the Inuvialuit Communications Society (ICS) in the planning and design of an Inuvialuit Settlement Region Waste Management Documentary. The documentary will provide a collective picture of the issues faced by our communities in the management of municipal wastes and how these issues are being managed. The project will involve interviews with community residents, leadership and community organizations. The presentation and discussions at the workshop will outline the next steps in the project, the timing for community visits, and request further guidance from workshop participants.

#### **4. Community Initiatives / Workshop Agenda Topics**

This will be a round table opportunity for municipalities to comment on water and waste management initiatives they are planning in their communities and invite feedback from communities on the ongoing topics and value of the annual water and waste management workshops.

## **5. Water Licence Inspection and Enforcement of Terms and Conditions**

Municipal Water Licences are subject to mandatory inspections conducted by the Environment and Natural Resources (ENR) Water Resources Officer. The inspection reports address compliance with the terms and conditions of water licences, including the submission of up to date management plans and requirements for water sampling. These detailed inspection reports are provided to the Hamlet for their information and copies are provided to the IWB for the public register.

## **6. Waste Management – Demolition of Private and Public Housing**

The proper disposal of demolition waste from the private and public housing sector is an ongoing concern. The presentation will clarify responsibilities for the management of this waste including disposal of hazardous materials.

## **7. World Water Day (Aklavik, March 27, 2020)**

March 22 was recognized as World Water Day (WWD) by the United Nations in 1993. It recognizes the importance of maintaining the world's freshwater resources and the increasing challenges faced throughout the world in providing adequate freshwater to meet a growing human population. WWD events are held throughout the world every year. In the ISR the 2020 WWD event will be held in Aklavik. Due to school closures for mid term breaks across the ISR, the event will be held on March 27, 2020. A successful and well attended WWD event was held in Tuktoyaktuk in 2019. The IWB invites the remaining ISR communities of Ulukhaktok, Sachs Harbour or Paulatuk to consider a WWD event for March 2021.

## **8. Follow-up action items from the February 2019 workshop.**

During the 2019 workshop an update on the issues and concerns from prior workshops regarding the provision of municipal water and waste services was provided to community and government participants. Discussion on these topics resulted in agreement on further action items and commitments that would be undertaken by one or more of the participating organizations. Following some additional interaction after the workshop, this list was finalized and provided to all participants. The IWB looks forward to discussing the progress that has been made to address the collective list of action items and how this progress will improve the provision of municipal water and waste services in our communities.

Thank you, in advance, for your participation at this upcoming workshop. The IWB looks forward to our collective discussions and deliberations on these issues of significant importance to the wellbeing of our communities and surrounding environment.

Sincerely,

Roger Connelly  
Chairperson

Attachments

## Distribution List

### Participants – Community Representatives

#### Hamlet of Paulatuk

Mayor Ray Ruben  
SAO John Holland  
Municipal Operations

#### Hamlet of Ulukhaktok

Mayor Laverna Klengenber  
SAO Peter Enitinilo  
Municipal Operations

#### Hamlet of Tuktoyaktuk

Mayor Irwin Elias  
a/SAO Katrina Cockney  
Municipal Operations

#### Hamlet of Sachs Harbour

Mayor Norman Anikina  
a/SAO Adella Carpenter  
Municipal Operations

#### Hamlet of Aklavik

Mayor Andrew Charlie  
SAO Fred Behrens  
Municipal Operations

### Participants – GNWT/Others

ENR – Lila Voudrach, Manager – Wildlife and Environment – Inuvik Region  
ENR – Lloyd Gruben, Water Resources Officer – Inuvik Region  
ENR – Alicia McRae, Regional Environment Assessment Coordinator – Inuvik Region  
ENR – Jeanne Arsenault, Pollution Control Specialist – Yellowknife  
ENR – Jennifer Hickman, Climate Change Adaptation Planning Specialist - Yellowknife  
ENR – Bruce Stuart, Manager – Taiga Environmental Laboratory – Yellowknife  
ENR – Lee Ross – Hazardous Waste Management Specialist - Yellowknife  
MACA – Olivia Lee, Manager of Infrastructure and Project Management - Yellowknife  
MACA – Chris Hewitt, Manager – Community Planning – Yellowknife  
MACA – Kelly McLeod, Community Works Advisor – Inuvik Region  
MACA – Crystal Lennie, Water and Waste Management Training Coordinator – Inuvik  
H & SS – Vanessa Agira, Environmental Health Officer – Inuvik Region  
GLWB – Leonard DeBastien, Executive Director  
GLWB – AlecSandra MacDonald, Regulatory Specialist  
NWTAC – Sara Brown – Chief Executive Officer – Yellowknife  
EISC – Michel Lindsay – Coordinator  
ICS - Dez Loreen – Manager – Inuvik  
ICS – David Stewart – Senior Producer - Inuvik  
Facilitator – Emery Paquin

**Inuvialuit Water Board**  
**Water and Waste Management Workshop - Inuvik, NT**  
**February 12 - 13, 2020**

**Day 1 – February 12, 2020**

8:30 – 9:00 am *Arrival, Registration and Coffee*

9:00 – 9:30 am Welcome and Introductions – Chairperson Roger Connelly /  
Facilitator Emery Paquin

- Opening Prayer
- Round Table Introductions
- Welcoming Remarks
- Objectives of Workshop and Agenda Review

9:30 – 10:30 am Hydrocarbon Contaminated Soil Treatment Facilities Guidelines -  
Discussion and Questions – Mardy Semmler

10:30 – 10:45 am *Refreshments*

10:45 – 12:00 pm ENR -Climate Change and Impacts to the Management of Municipal  
Water and Waste Services - Discussion and Questions – Beth Cowen

11:45 – 1:15 pm *Lunch – on own*

1:15 – 2:00 pm Municipal Waste Management Documentary – Introduction and Proposed  
Process and Timeline – Holly Jones

2:00 – 2:45 pm Community Initiatives/Workshop Agenda Topics – Roger Connelly

2:45 – 3:00 pm *Refreshments*

3:00 – 3:45 pm ENR – Water Licence Inspections and Enforcement of Terms and  
Conditions – Lloyd Gruben

3:45 – 4:45 pm ENR - Waste Management – Demolition of Private and Public Building –  
Alicia McRae

**Day 2 – February 13, 2020**

8:30 – 9:00 am *Arrival and Coffee*

9:00 – 10:00 am World Water Day, March 22 Annually – Mardy Semmler  
Waste Reduction Week, Oct 19 – 25, 2020

10:00 – 10:10 am *Refreshments*

10:10 – 11:00 am 2019 IWB Workshop Issues Table – Action Items Update - all

11:00 – 12:00 pm *Closing Remarks and Closing Prayer*

## Annex 2: IWB Municipal Water and Waste Management Workshop Issues - Update (2020)

	Issue	Options and/or Standards
1	Facility security – dumping outside designated areas/after hours	<ul style="list-style-type: none"> <li>Local Council/Staff reluctant to restrict ‘after hours’ access;</li> <li>Condition of all MWL – Part B, Item 9;</li> <li>Need for ongoing Public Awareness/Education;</li> <li>Need to shut down SWDF, especially during bear season;</li> <li>Bear Aware education – promote “no bear watching” at the dump.</li> <li>Dumpster located outside facility for after hours dumping.</li> </ul>
2	Windblown debris	<ul style="list-style-type: none"> <li>Banning of single use bags; Buy in from businesses (no plastic bags)</li> <li>Proper fencing requirements;</li> <li>Promote reusable bags for shopping; and</li> <li>Reduce cardboard brought to landfills (people using at stores)</li> </ul>
3	Burning of garbage	<ul style="list-style-type: none"> <li>Water license conditions allow for burning of cardboard, untreated wood and paper only;</li> <li>MACA has approved Guidelines for open burning;</li> <li>Burn within a pit and/or burn box; and</li> <li>Environmental Protection Act developing updated Air Quality Regulations – in progress.</li> </ul>
4	Unauthorized and inappropriate dumping within the Solid Waste Disposal Facility (SWDF) by outside contractors doing work and/or construction projects in the community	<ul style="list-style-type: none"> <li>Suggested resolution provided to MACA in 2016;</li> <li>Discussed at Interdepartmental Technical Committee (ITC);</li> <li>Ongoing discussions between MACA and INF – need for work with NWTAC;</li> <li>Contractor – want to include hold back funds in agreement and given to Hamlet if contractor dumps illegally in landfill – for waste mgmt;</li> <li>NWTAC passed Resolution by Motion in 2018; and</li> <li>Municipalities need to draft Tipping By-Laws and Fees – Aklavik has approved by-laws.</li> </ul>
5	Ongoing Municipal Operations Training Requirements	<ul style="list-style-type: none"> <li>MACA develops an annual School of Community Government (SCG) training calendar and distributes to Hamlets;</li> <li>Hands on training to be incorporated into all training programs; and</li> <li>Wherever possible, training should be provided on a regional basis.</li> </ul>
6	Time sensitive sample management	<ul style="list-style-type: none"> <li>E. Coli alert testing in each community;</li> <li>Sampling training provided through SCG;</li> <li>Need for increased communications between TAIGA and Communities.</li> <li>Communities need to contact TAIGA when samples are shipped for sampling so they are completed in a timely manner;</li> <li>Take photos of shipping docs and send to TAIGA; and</li> <li>H &amp; SS also sends samples to TAIGA annually (potable water only)</li> </ul>
7	Clearly identified contacts at Board and GNWT departments	<ul style="list-style-type: none"> <li>Contact lists updated annually and included in the annual workshop report (appendix).</li> </ul>
8	Age of facilities makes compliance with new standards difficult	<ul style="list-style-type: none"> <li>All Operation and Maintenance Plans; Spill Contingency Plans; Hazardous Waste Management Plans must be updated annually and provided with the Annual Report to the Board.</li> </ul>

9	Difficulty in meeting changing licence terms and conditions	<ul style="list-style-type: none"> <li>• IWB has Standard Municipal Water Licence Terms and Conditions;</li> <li>• IWB revised the Standard T &amp; C's from technical terminology to clear language terms;</li> <li>• National Wastewater Systems Effluent Regulations (NWSER) – Update – not much have been completed on these regulations; but</li> <li>• CSA is currently managing the development and review of “Standards for Planning, Design, Operation and Maintenance of Wastewater Treatment in Northern Communities using Lagoon and Wetland Systems” (MACA and ENR part of working group)</li> <li>• Copy of Standards document provided on memory sticks.</li> </ul>
10	Competing priorities for community personnel by Government and/or their contractors	<ul style="list-style-type: none"> <li>• Better coordination between Inspectors and Municipal Staff prior to visiting the community;</li> <li>• Groundwater Monitoring Wells (GMW) installed in each ISR community between 2016 and 2018 through a MACA contract;</li> <li>• GMW to monitor environmental liabilities associated with solid waste sites; and</li> <li>• MACA has hired a contractor (Dillon Consulting) to sample the wells on an annual basis for the next five years and includes training opportunities for members of the communities.</li> </ul>
11	Regional coordination of waste removal from communities	<ul style="list-style-type: none"> <li>• All communities actively involved in removing hazardous waste;</li> </ul>
12	Identify new sources of funding when they become available	<ul style="list-style-type: none"> <li>• New funding – Federal initiative – MACA is NWT Contact;</li> <li>• “Investing in Canada Infrastructure Program” funding available for three categories: Solid Waste Sites, Road Upgrade and Energy Efficiencies;</li> <li>• March 1 deadline - MACA Inuvik main contact;</li> <li>• Next round of applications will be March 1, 2020; and</li> <li>• ENR – Waste Reduction Initiative Funding. – get a hold of Lee Ross.</li> </ul>
13	EISC	<ul style="list-style-type: none"> <li>• Hamlets must complete EISC process prior to IWB issuing water licence renewal.</li> <li>• Aklavik completed the process – EISC application and WL Application submitted – decision document received by IWB;</li> <li>• On line Pre screening process – 7 day screening – questionnaire (26 questions completed)</li> </ul>

## Annex 3: Workshop Participants

Municipalities	Community	Phone	Email
Andrew Charlie, Mayor	Aklavik	867-678-0361	Andrew34charlie@hotmail.com
Fred Behrens, SAO	Aklavik	867-978-2351	saoaklavik@permafrost.com
Brandon McLeod, Hamlet Staff	Aklavik	867-670-0812	Mcleod_08@hotmail.com
Ray Ruben, Mayor	Paulatuk	867-788-0002	Ray.francis.07@live.ca
John Holland, SAO	Paulatuk	867-580-3531	sao@paulatuk.ca
Norman Anikina, Mayor	Sachs Harbour	867-786-0137	Norm.anikina@gmail.com
Mariah Lucas, Councillor	Sachs Harbour	867-786-0136	choochylucas@gmail.com
John Elanik, Hamlet Staff	Sachs Harbour	867-786-0133	
Margaret Kanayok, Deputy Mayor	Uluksatuk	867-787-0067	
Doug Goose, Hamlet Staff	Uluksatuk	867-787-0217	Foreman_ulu@northwestel.net
Billy Joss, Hamlet Staff	Uluksatuk	867-787-0055	Billy.joss.34@gmail.com
Dennis Raddi, Councillor	Tuktoyaktuk	867-977-2285	Dennisraddi2011@hotmail.com
Shawn Stuckey, SAO	Tuktoyaktuk	867-977-2286	sao@tuktoyaktuk.ca
Davy Krengnektak, Hamlet Staff	Tuktoyaktuk	867-977-2286	tukforeman@northwestel.net
Government of the NWT	Department		
Lloyd Gruben, Water Resources Officer – Inuvik Region	ENR	867-678-6676	lloyd_gruben@gov.nt.ca
Alicia McRae, Regional Environmental Assessment Coordinator	ENR	867-678-6653	alicia_mcrac@gov.nt.ca
Beth Cowan, Climate Change Adaptation Planning Specialist - Yellowknife	ENR	867-767-9236 ext 53204	Beth_cowan@gov.nt.ca
Satish Garikaparathi, Water Management Advisor – Yellowknife	ENR	867-767-9234 Ext 53139	Satish_Garikaparathi@gov.nt.ca
Lee Ross, Hazardous Waste Management Specialist - Yellowknife	ENR	867-767-9236 Ext 53187	Lee_ross@gov.nt.ca
Vanessa Agira, Environmental Health Officer – Inuvik Region	H&SS	867-777-4841	Vanessa_Agira@gov.nt.ca
Environmental Impact Screening Committee			
Michel Lindsey, Coordinator	EISC	867-777-2828	eisc@jointsec.nt.ca
Gwich'in Land and Water Board			
AlecSandra MacDonald, Regulatory Specialist	GLWB	867-777-4954	amacdonald@glwb.com
Inuvialuit Communication Society			
Dez Loreen, Manager	ICS	867-620-0120	ics@northwestel.net
David Stewart	ICS	604-355-8005	icsdavio@northwestel.net
Inuvialuit Water Board			
Roger Connelly, Chairperson	IWB	867-620-0751	rconnelly@northwestel.net
Richard Binder, Member	IWB	867-678-5128	richardbindersr@gmail.com
Mardy Semmler, Executive Director	IWB	867-678-8609	semmlerm@inuvwb.ca
Bijaya Adhikari, Science and Regulatory Coordinator	IWB	867-678-8610	adhikarib@inuvwb.ca
Holly Jones	IWB	-	Holly.jones@gallworks.ca
Facilitator			
Emery Paquin	Facilitator	867-873-4314	emerypaquin@outlook.com

## Annex 4: Municipal Water and Waste Management Roles and Responsibilities Contact List – Municipal and GNWT Departments

Municipal	
<p><b>Hamlet of Paulatuk</b>            Mayor Ray Ruben            P.O. Box 98            Paulatuk, NT X0E 1N0            SAO: John Holland            Ph: 867-580-3531            Email: <a href="mailto:sao@paulatuk.ca">sao@paulatuk.ca</a></p>	<p><b>Hamlet of Aklavik</b>            Mayor Andrew Charlie            P.O. Box 88            Aklavik, NT X0E 0A0            SAO: Fred Behrens            Ph: 867-978-2351            Email: <a href="mailto:saoaklavik@permafrost.com">saoaklavik@permafrost.com</a></p>
<p><b>Hamlet of Ulukhaktok</b>            Mayor Laverna Klengenber            P.O. Box 157            Ulukhaktok, NT X0E 0S0            SAO: Peter Enitilo            Ph: 867-396-8000            Email: <a href="mailto:sao_ulu@northwestel.net">sao_ulu@northwestel.net</a></p>	<p><b>Hamlet of Tuktoyaktuk</b>            Mayor Erwin Elias            P.O. Box 120            Tuktoyaktuk, NT X0E 1C0            SAO: Shawn Stuckey            Ph: 867-977-2286            Email: <a href="mailto:sao@tuktoyaktuk.ca">sao@tuktoyaktuk.ca</a></p>
<p><b>Hamlet of Sachs Harbour</b>            Mayor Norman Anikina            P.O. Box 90            Sachs Harbour, NT X0E 0Z0            A/SAO: Adella Carpenter            Ph: 867-690-4351            Email: <a href="mailto:hamlet_finance@northwestel.net">hamlet_finance@northwestel.net</a></p>	
GNWT - Department of Health and Social Services	
<p><b>Vanessa Agira</b>            Environmental Health Officer            Department of Health and Social Services            P.O. Box 1980            Inuvik, NT X0E 0T0            Ph: 867-777-4841            Email: <a href="mailto:vanessa_Agira@gov.nt.ca">vanessa_Agira@gov.nt.ca</a></p>	
GNWT - Environment and Natural Resources	
<p><b>Lila Voudrach</b>            Manager Wildlife and Environment            Inuvik Regional Office            Environment and Natural Resources            Government of the NWT            P.O. Box 2749            Inuvik, NT X0E 0T0            Ph: 867-678-6680            Email: <a href="mailto:Lila_voudrach@gov.nt.ca">Lila_voudrach@gov.nt.ca</a></p>	<p><b>Alicia McRae</b>            Regional Environmental Assessment Coordinator            Inuvik Regional Office            Environment and Natural Resources            Government of the NWT            P.O. Box 2749            Inuvik, NT X0E 0T0            Ph: 867-678-6653            Email: <a href="mailto:alicia_mcrae@gov.nt.ca">alicia_mcrae@gov.nt.ca</a></p>
<p><b>Lloyd Gruben</b>            Water Resources Officer            Inuvik Regional Office            Environment and Natural Resources            Government of the NWT            P.O. Box 2749            Inuvik, NT X0E 0T0            Ph: 867-678-6676            Email: <a href="mailto:Lloyd_Gruben@gov.nt.ca">Lloyd_Gruben@gov.nt.ca</a></p>	<p><b>Bruce Stuart</b>            Laboratory Manager            Taiga Environmental Laboratory            Environment and Natural Resources            Government of the NWT            P.O. Box 1320            Yellowknife, NT X1A 2L9            Ph: 867-767-9235 Ext: 53150            Email: <a href="mailto:Bruce_Stuart@gov.nt.ca">Bruce_Stuart@gov.nt.ca</a></p>

<p><b>Beth Cowan</b> Climate Change Adaptation Planning Specialist - Environment and Natural Resources Government of the NWT P.O. Box 1320 Yellowknife, NT X1A 2L9 Ph: 867-767-9236 ext 53204 Email: <a href="mailto:Beth_cowan@gov.nt.ca">Beth_cowan@gov.nt.ca</a></p>	<p><b>Jeanne Arsenault</b> Pollution Control Specialist Water Resources Division Environment and Natural Resources Government of the NWT P.O. Box 1320 Yellowknife, NT X1A 2L9 Ph: 867-767-9234 Ext: 53116 Email: <a href="mailto:Jeanne_Arsenault@gov.nt.ca">Jeanne_Arsenault@gov.nt.ca</a></p>
<p><b>Lee Ross</b> Hazardous Waste Management Specialist Environment and Natural Resources Government of the NWT P.O. Box 1320 Yellowknife, NT X1A 2L9 Ph: 867-767-9236 Ext 53187 Email: <a href="mailto:Lee_ross@gov.nt.ca">Lee_ross@gov.nt.ca</a></p>	<p><b>Satish Garikaparathi</b> Water Management Advisor Water Management and Monitoring Division Environment and Natural Resources Government of Northwest Territories Box 1320, Yellowknife, NT Canada X1A 2L9 Ph:867-767-9234 ext. 53139 Email: <a href="mailto:satish_garikaparathi@gov.nt.ca">satish_garikaparathi@gov.nt.ca</a></p>
<b>GNWT - Municipal and Community Affairs</b>	
<p><b>Olivia Lee</b> Manager of Infrastructure and Project Management Municipal and Community Affairs Government of the NWT P.O. Box 1320 Yellowknife, NT X1A 2L9 Ph: 867-767-9164 Ext: 21074 Email: <a href="mailto:Olivia_Lee@gov.nt.ca">Olivia_Lee@gov.nt.ca</a></p>	<p><b>Gerald Enns</b> Senior Technical Officer – Water &amp; Sanitation Municipal and Community Affairs Government of the NWT P.O. Box 1320 Yellowknife, NT X1A 2L9 Ph: 867-767-9164 Ext: 21080 Email: <a href="mailto:Gerald_Enns@gov.nt.ca">Gerald_Enns@gov.nt.ca</a></p>
<p><b>Justin Hazenberg</b> Engineering Team Lead – Water and Sanitation Municipal and Community Affairs Government of the NWT P.O. Box 1320 Yellowknife, NT X1A 2L9 Ph: 867-767-9164 Ext: 21078 Email: <a href="mailto:Justin_Hazenberg@gov.nt.ca">Justin_Hazenberg@gov.nt.ca</a></p>	<p><b>Jaime Goddard</b> Senior Technical Officer – Water and Sanitation Municipal and Community Affairs Government of the NWT P.O. Box 1320 Yellowknife, NT X1A 2L9 Ph: 867-767-9164 Ext: 21079 Email: <a href="mailto:Jaime_Goddard@gov.nt.ca">Jaime_Goddard@gov.nt.ca</a></p>
<p><b>Crystal Lennie</b> Training and Development Coordinator Municipal and Community Affairs – Inuvik Region Government of the NWT P.O. Box 1740 Inuvik, NT X0E 0T0 Ph: 867-777-7415 Email: <a href="mailto:Crystal_Lennie@gov.nt.ca">Crystal_Lennie@gov.nt.ca</a></p>	

## Annex 5: February 2020 Workshop - Evaluation Summary

An evaluation form was distributed to participants during the workshop.

The evaluation form was completed by the 82% of the total participants. In overall, respondents expressed their satisfaction with the materials, time provided for questions and discussions, and objective achieved. The workshop was rated “excellent” and “very good” by 50 and 45% respondents respectively and rest 5% rated as “good”. Comments and suggestions provided by the respondents can be summarized as:

- Overall, all the topics were interesting and useful;
- Suggested to include presentation regarding the demolition of abandoned buildings at the private land and management of resulted waste; and
- Representation of MACA may add further value to the workshop

**Table 1: Summary of responses provided by the participants on evaluation questionnaire**

SN	Evaluation Questionnaire	Responses		
		Yes (% of respondents)	No (% of respondents)	Comments (% of respondents)
1	Were the materials provided adequate to prepare you for the discussions?	90%	0%	Indicated “NA” (5%)
				Commented as “More information for issues related to landfills to address issues like hazardous waste” (5%)
2	Within the time available, was the meeting run effectively?	100%	0%	It would have been nice if we could extend meeting for other half day, but given time availability and topics covered was good (5%)
				Meeting was rush on last day (5%)
				Need time for some out of town shoppers (5%)
3	Could the agenda have been improved? If so, how?	0%	67%	Breakout groups and more discussion on specific topics (22%)
				Not responded on this question (12%)
4	Were the presentations/discussions relative and useful to your responsibilities?	100%	0%	The presentations/ discussions related and useful to enhance my knowledge with current trends and needs for the communities and working relations of GNWT and Board (5%).
5	Was there adequate time provided for participants’ questions and responses?	78%	0%	Time was not sufficient for every community member and other participants to respond and express their concern (22%)
6	Were questions from the floor answered satisfactorily?	89%	0%	Some questions were not answered sufficiently, and chance was not given some participants for response of questions (11%).
				Representation of MACA may add further value to the workshop (5%)
7	What topics or aspects of the	-	-	All topics (30%)

	workshop did you find most interesting or useful?			ENR Climate Change (22%) Round table discussions related to waste management including demolition of abandoned buildings (33%) Contaminated soil treatment (5%) ENR inspection presentation (5%) Community initiatives discussion (5%)
8	Were the objectives of the workshop achieved?	100%	0%	-
9	Were you clear on future actions and commitments from the workshop?	95%	-	Partially (5%)
10	Any suggestions on how the workshop might have been improved?	-	-	No suggestions and it was good (59%) More information to be provided regarding 3R (Reduce, Reuse, Recycle) projects (5%) Commented as "As we talk about waste reduction, consider using mugs/plates/recyclable dishware for the workshop, not Styrofoam. Also promote recycling in terms of having recycling bins at the workshop to be used" (5%). Someone to talk and discuss about the demolition of abandoned buildings (11%). Attendance of more staffs from community could be beneficial for the community (5%). More time required for question/answer and discussions (5%). Limit discussion during presentation, frequently side discussions during presentation (5%)
11	Were the physical arrangements of the workshop adequate (meeting facility, sound system, transportation, accommodation, support, etc.)?	95%	0%	Needs a day to visit friends (5%)
12	Would you attend another Inuvialuit Water Board workshop on community water and waste management?	100%	0%	-
<b>Overall rating</b>				
13	On a scale of 1 to 10, how would you rate this workshop (1 being poor and 10 being excellent)	<b>% of total respondents</b>		
	1-2 (Poor)	0%		
	3-6 (Good)	5%		
	7-8 (Very Good)	45%		
	9-10 (Excellent)	50%		

## Annex 6: Evaluation Form

**EVALUATION FORM  
MUNICIPAL WATER AND WASTE MANAGEMENT WORKSHOP  
FEBRUARY 12 AND 13, 2020  
INUVIK, NWT**

Please take a few minutes to fill out and return this form **by February 25, 2020**.

1. Were the materials provided adequate to prepare you for the discussions?
2. Within the time available, was the meeting run effectively?
3. Could the agenda have been improved? If so, how?
4. Were the presentations/discussions relative and useful to your responsibilities?
5. Was there adequate time provided for participants' questions and responses?
6. Were questions from the floor answered satisfactorily?
7. What topics or aspects of the workshop did you find most interesting or useful?
8. Were the objectives of the workshop achieved?
9. Were you clear on future actions and commitments from the workshop?
10. Any suggestions on how the workshop might have been improved?
11. Were the physical arrangements of the workshop adequate (meeting facility, sound system, transportation, accommodation, support, etc.)?
12. Would you attend another Inuvialuit Water Board workshop on community water and waste management?
13. On a scale of 1 to 10, how would you rate this workshop (1 being poor and 10 being excellent)?

Thank you.

Completed evaluation forms may be returned to:

Mardy Semmler  
Executive Director, Inuvialuit Water Board  
Email: [semmlerm@inuvwb.ca](mailto:semmlerm@inuvwb.ca)  
Fax: (867) 678-2943