



# **INUVIALUIT WATER BOARD 2024 MUNICIPAL WATER AND WASTE MANAGEMENT WORKSHOP**



INUVIK, NT  
February 14 and 15, 2024

# **IWB 2024 Municipal Water and Waste Management Workshop**

## **Inuvik, NT February 14 - 15, 2024**

### **Executive Summary**

### **Acknowledgements**

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## **Executive Summary**

The Inuvialuit Water Board (IWB) conducted a two-day workshop on February 14 and 15, 2024 in Inuvik, NWT. The focus of the workshop was on municipal water and waste management. The event was tailored for the five (5) Inuvialuit Settlement Region (ISR) communities with municipal water licences issued by the IWB - Aklavik, Paulatuk, Sachs Harbour, Tuktoyaktuk, and Ulukhaktok. The workshop was well attended by the Hamlet Mayors, Senior Administrative Officers (SAOs), Operations Staff and representatives from the GNWT Departments of Municipal and Community Affairs (MACA), and Environment and Climate Change (ECC) and the IWB Board members.

The objective of the workshop was to provide a platform for the communities and stakeholders including MACA and ECC to discuss and share their experiences, challenges, and best practices related to municipal water and waste management. Emphasis of the workshop was to discuss the challenges faced by the ISR communities in managing municipal water and waste, particularly in terms of hazardous waste management, funding and water and wastewater operator training.

The workshop included presentations on various topics, including an update on the Regional Solid Waste Site Improvement Project, Types of Fencing for Solid Waste Sites, School of Community Government Training programs and opportunities, GNWT Departments of Lands, and Environment and Natural Resources amalgamation to form Environment and Climate Change, Water Resource Officer Roles and Responsibilities including Inspections and Enforcement and updating the IWB 2023 Workshop Issues Table. Participants were able to ask questions throughout and engage in discussions with the presenters, enabling them to gain a better understanding of the issues at hand including potential solutions.

In conclusion, the municipal water and waste management workshop was a valuable platform for the ISR communities and stakeholders to share their experiences and challenges and to identify opportunities for knowledge sharing and collaboration. The workshop participants recognized the importance of effective water and waste management in ensuring community health and well-being and emphasized the need for continued support from GNWT MACA and ECC and other stakeholders to address the unique challenges faced by remote northern communities.

## **Acknowledgements**

The Municipal Water and Waste Management Workshop, held in Inuvik at the Midnight Sun Recreation Complex, on February 14 and 15, 2024 was highly successful. Attendees included Hamlet Mayors, Senior Administrative Officers (SAOs) and Operations Staff from Aklavik, Paulatuk, Sachs Harbour, Tuktoyaktuk, and Ulukhaktok. Representatives from the GNWT Departments of Municipal and Community Affairs (MACA) and Environment and Climate Change (ECC) were also in attendance. The contributions of Hamlet Mayors, SAOs, Operations Staff and IWB Board Members were acknowledged and appreciated, and the valuable insights provided by participants and representatives from MACA and ECC are duly recognized.

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## 1. Opening Prayer

Betty Haogak, Hamlet of Sachs Harbour Senior Administrative Officer, opened the workshop with a prayer.

## 2. Welcoming Comments from the IWB Chairperson

Richard Binder, IWB Chairperson, welcomed participants. The Chairperson emphasized that water and waste management are issues of concern that could impact the health and well-being of our communities. He also stressed the need for a collective effort from all stakeholders including GNWT ECC, MACA, Municipal Governments and the IWB to ensure that water and waste management practices are environmentally responsible.

The Chairperson encouraged all participants to take advantage of this workshop to learn from each other to encourage improving municipal water and waste management best practices in the ISR communities.

## 3. Agenda and Objective

Mardy Semmler, IWB Executive Director, presented the workshop overview and agenda (Appendix 1) and highlighted the objectives of the workshop. The overall objective of the workshop is to provide information to assist municipal governments in offering adequate, safe and reliable water and waste management services to their communities while ensuring that the provision of these services do not have a negative impact on the receiving environment.

The specific objectives of this workshop were to:

- understand the mandate and jurisdiction of the IWB.
- provide information regarding GNWT MACA Solid Waste Site (SWS) Clean-up and Improvement Projects.
- provide information regarding GNWT MACA – School of Community Government Training Calendar.
- provide information regarding the new GNWT Department of ECC.
- provide information regarding ECC Land and Water Division, and specifically the Water Resources Officer Roles and Responsibilities.
- identify courses of actions to address or mitigate ongoing issues and concerns.

These objectives were advanced through interactive presentations from IWB, MACA and ECC including:

- IWB mandate and jurisdictions within the framework of the *Waters Act*.
- MACA Presentation regarding the Solid Waste Site (SWS) Clean -up and Improvement Project
- MACA Presentation regarding various types of fencing for solid waste sites.
- MACA presentation regarding the School of Community Government Training Calendar.
- Discussions regarding the issues and concerns of managing water and waste disposal facilities and operator training opportunities.
- ECC presentation regarding the amalgamation of GNWT Department of Lands and Environment and Natural Resource to form the new Department Environment and Climate Change (ECC) and the GNWT ECC Water Resource Officer (WRO) Roles and Responsibilities.

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- Update the IWB 2023 Municipal Water and Waste Management Workshop Issues / Action Item table.

Each presentation was followed by floor discussions among the workshop participants.

## **4. Presentations**

### **4.1 Inuvialuit Water Board (IWB) Presentation**

**Topic: IWB Mandate and Jurisdiction**

**Presenter: Mardy Semmler - IWB Executive Director**

#### **Introduction**

The IWB's mandate is described in the *Waters Act*. The objects of the Board are to provide for the conservation, development and utilization of waters in a manner that will provide the optimum benefit for all Canadians in general and, in particular, for the residents of the portion of the Inuvialuit Settlement Region located in the Northwest Territories for which the Board is authorized to issue licences. The IWB is a Quasi-Judicial authority under the *Waters Act* s.13(1). The IWB consists of a five-member "Board," including the Chairperson and Administrative "Staff" headed by the Executive Director. Two of the members of the Board are nominated by the Inuvialuit Regional Corporation (IRC) and one is nominated by the federal government. All appointments to the Board are made by the GNWT Minister of ECC. The Chairperson of the Board serves as IWB's Chief Executive Officer. The IWB's jurisdiction is limited to the use of freshwater and the disposal of waste that may come into contact with water. The IWB's jurisdiction includes some nearshore (ocean) waters but does not include offshore (ocean) waters.

The presenter further mentioned that, as per the *Waters Act*, water licence inspection and enforcement are not the responsibility of the IWB; these responsibilities are held by the GNWT ECC - Land and Water Division.

#### **Key Takeaways**

- The specific roles of the IWB Board include making decisions on water licence applications; setting terms and conditions for licences including security deposits; issue or renew water licences; and maintaining the water licence public register.
- The Board consists of five members. Board members are appointed by the GNWT Minister of ECC. The Minister appoints two members on the nomination of the IRC and one member on the nomination of the Federal Crown and Indigenous Relations and Northern Affairs Canada (CIRNAC). The Chairperson is appointed by the GNWT Minister of ECC on the nomination of the majority of the members.
- Water licence inspection and enforcement activities are not the responsibility of IWB. These responsibilities are held by the GNWT ECC.
- The jurisdiction of the IWB is to issue water licences for inland waters within the NWT portion of the ISR.

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## **4.2 Municipal and Community Affairs (MACA) Presentation**

### **Topic 1: Update on Regional Solid Waste Site Improvement Project**

**Presenter: Gerald Enns - Senior Technical Officer - Waste Management, MACA Yellowknife**

#### **Introduction**

The presenter provided a brief introduction to the 'Investing in Canada Infrastructure Program (ICIP) Inuvik Regional Solid Waste Site Improvement Project,' undertaken by GNWT MACA. ICIP is a federal program designed to support infrastructure projects across Canada. The 'Inuvik Regional Solid Waste Site Improvement Project' is one of the projects funded through this program. The project aims to enhance waste management systems in the Inuvik Region and create space for solid waste sites by eliminating stockpiles from existing landfills. This project is a collaborative effort involving the federal and territorial governments, as well as local communities.

The presentation focused on the waste management hierarchy, with the first option being 'Source Reduction,' the second option 'Waste Diversion,' and the last option 'Residual Waste Management.' The presenter emphasized source reduction and waste diversion, which reduce the cost of landfill operations and maintenance (O&M) and increase the lifespan of the landfill. A tabular summary of the hazardous waste stockpile removal status in the five (5) ISR community landfills: Aklavik, Paulatuk, Sachs Harbour, Tuktoyaktuk, and Ulukhaktuk was presented. Visual illustrations (i.e., pictures) of the status of community landfills were presented describing solid waste disposal areas; the possibility of increasing the landfill life; the importance of compaction; removal of hazardous waste and scrap metals from the landfill; berm construction; fencing of disposal cells; segregation of construction and demolition debris from domestic garbage; and keeping solid waste contained to as small a space as possible.

At the end of the presentation, the presenter provided information regarding sources of funding for solid waste management activities. Funding can be obtained from GNWT ECC, Federal Government - Environment and Climate Change Canada (ECCC), Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC) and the Federation of Canadian Municipalities (FCM) for Waste Reduction and Recycling Initiative, Food Waste Reduction, Climate Change Preparedness in the North, and Composting (leading to greenhouse gas reduction), respectively.

#### **Discussion**

During the presentation, there was discussion on the importance of removing hazardous waste and other bulky waste from the ISR landfills. The project undertaken by MACA was seen as a positive step toward improving the situation and ensuring available landfill space by transporting stockpiles from existing landfills, consequently increasing landfill life. Pros and cons of various waste management options were discussed, such as incineration, gasification, and melting plastic waste to turn it into a solid form for final disposal. Participants discussed the financial, technical and environmental aspects of these waste management options. Questions were raised regarding funding for the project and whether it would be sufficient to remove all stockpiles from landfills. The presenter clarified that the funding was allocated based on a detailed assessment of the project's requirements.

#### **Key Takeaways**

- The ICIP is a federal program that supports infrastructure projects across Canada, including the Inuvik Regional Solid Waste Site Improvement Project and in the ISR (Aklavik, Sachs Harbour, Ulukhaktuk, Paulatuk, and Tuktoyaktuk).
- The focus of the project is to remove historical hazardous waste stockpiles from the landfills.

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- MACA received quotes for disposing of scrap metal with hazardous waste that were 2 – 3 times higher than the available budget. MACA focused on the hazardous waste and needs to find funding and / or innovative solutions for scrap metal removal.
  - The period of ICIP applications has closed. MACA assisted communities with applications for direct funding while it was open.
  - Communities can contact ECC and apply for Waste Reduction and Recycling Initiative Funding at the following website [www.ecc.gov.nt.ca/WRR](http://www.ecc.gov.nt.ca/WRR)
  - It is important to close the gate at the landfill during off-hour operation to avoid illegal dumping of waste.
  - The construction of a new landfill site is costly; therefore, it is important to increase the lifespan of existing landfills by removing stockpiles, and ensuring proper maintenance such as compaction, berm construction, waste reduction, reuse and recycling.
  - It is important to properly label drums stockpiled at the community garage; otherwise, they cannot be removed from site.
  - It is important to stockpile empty drums horizontally not vertically as water can penetrate through the bungs and increase potential for spillage.
  - MACA provides solid waste O&M training materials.
  - Best practices include segregating and collecting recyclable materials (e.g. cans, cardboard, etc.) and deposit them at the recycling depot.
  - By compacting waste stock piles either weekly or monthly increases the lifespan of the landfill.
  - MACA keeps lines of communication open with the Mayor and SAO regarding the regional project.
  - Work for the regional project is contracted through a Request for Proposal (RFP) and any local company can submit the proposal.
  - For information regarding funding organizations and the application process  
**Contact:** Gerald Enns, Senior Technical Officer, Waste Management, Municipal and Community Affaires (MACA), Email: [Gerald\\_enns@gov.nt.ca](mailto:Gerald_enns@gov.nt.ca).

## **Topic 2: Solid Waste Site (SWS) Fencing – Various Types and Uses**

**Presenter: Donald Robert - Waste Management Advisor, MACA Yellowknife**

### **Introduction**

The presenter introduced the various types of solid waste site fencing. It was explained that solid waste site fencing refers to the installation of barriers or enclosures around areas designated for the disposal of solid waste. The primary purpose of SWS fencing is to control access to prevent unauthorized disposal, contain windblown debris and promote safety. These fences serve as a crucial element in waste management practices, helping to mitigate potential environmental and health hazards associated with solid waste disposal.

The presenter described the various types of solid waste site fencing, each serving different purposes such as perimeter; electric; litter; and windbreak fencing. Perimeter fencing controls site access (including public, wildlife, and vehicle stoppage) by surrounding the entire site and includes a gate. This may also be electrified or non-electrified. Electric fencing can either run along the site perimeter or enclose specific areas like food waste, with both permanent and temporary options available. It effectively repels wildlife but requires regular maintenance. Litter fencing is designed to catch and contain litter and windblown debris, with fixed and mobile options. It should be placed close to the active face, and waste gathered on the fence must be removed to maintain its effectiveness. Windbreak



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fences aim to reduce windspeed with 50% porosity effectiveness. For every meter of height, it is effective at slowing the wind up to fifteen meters away, resulting in lower windspeeds and reduced windblown debris. The fence needs to be sturdy enough to withstand strong winds.

### **Discussion**

There were discussions regarding different types of fencing and their uses. Participants also discussed safety concerns of electric fences and the usefulness of various fencing types for small ISR communities.

### **Key Takeaways**

- Electric fencing is designed solely for animal deterrent purposes, with little or no safety issues for humans. If an animal is found trapped, ECC must be informed.
- It is difficult to redirect snow through fencing because snow moves in different directions.
- Fencing plays an important role in controlling access to the site for preventing unauthorized disposal, containing windblown debris and promoting safety.
- The litter fencing should be placed close to the active face, and accumulated waste needs to be removed regularly to keep the fence effective.

### **Topic 3: MACA School of Community Government Training Programs**

**Presenter: Crystal Lennie - Training and Development Advisor, MACA Inuvik**

#### **Introduction**

The presenter introduced the MACA School of Community Government (SCG) Training Program. The presenter explained that the SCG is dedicated to assisting community government personnel in enhancing their skills for optimal service to their communities. By providing a range of learning opportunities, the school focuses on various aspects of the daily operations of municipal governments to access essential training and skill development. The main purpose of the SCG is to enhance the capacity and competencies of municipal government staff by providing training and development opportunities.

The presenter described the available training courses and encouraged early enrollment, advising participants to plan their travel bookings in advance. The presenter recommended registering for courses at least two weeks prior to the start date. Additionally, the presenter introduced a 2-year training calendar to help municipal government staff prepare for upcoming courses. The presenter also discussed the bi-annual conference to be held in different areas, such as the Public Works Conference scheduled for January 2025. The presentation included a sample training flow chart for a standard Class II Water Treatment Operator and encouraged Water Treatment Plant Operators to take the skills based Certified ScrumMaster (CSM) Learn course. The presenter also recommended using Khan Academy, a free learning platform.

Furthermore, the presenter introduced online learning options, including Northern Alberta Institute of Technology's (NAIT's) Water and Wastewater Technician Program and highlighted MACA's Operations Division Circuit Rider Program which assists Community Government Water Treatment Plant Operators with day-to-day operations, monitoring, and training. The presenter mentioned WaterTrax, a software for Water and Wastewater Data and Compliance Management for monitoring and compliance. The Presenter also discussed the Drinking Water Operators Corner Certification; Continuing Education Unit (CEU) Booklet, and the transition of certification to the Department of Health – Environmental Health. It was mentioned that the certification transition to the Department of Health – Environmental Health is expected to take two years. The presenter added that MACA Training & Development Advisors will assist

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Community Government Operators in submitting their paperwork to the Department of Health, which serves as the Regulatory Authority. Additionally, Training & Development Advisors will verify CEUs for Community Government staff before submission to Environmental Health.

## Discussion

There were discussions regarding the availability of different training courses, timing, training venues, and online and in-person training courses. An interactive discussion took place concerning Class I and Class II Water Treatment Operator Training and certification.

The Class I Water Treatment Operator Training Course is designed to assist Water Plant Operators with the operation and maintenance of Class I water treatment systems. It may also be helpful in preparing for the Class I Water Treatment Systems Certification Examination. This is a level I course intended for operators employed in municipalities with a Class I Water Plant. Similarly, the Class II Water Treatment Operator Training course is designed to assist Water Plant Operators with the operation and maintenance of Class II Water Treatment Systems. It may also be beneficial for preparing for the Class II Water Systems Certification Examination. This is a level II course intended for operators employed in municipalities with a Class II Water Plant. The highlights of these courses include basic knowledge of water distribution practices; the role of the operator; safety; hydraulics; a focus on the practical aspects of system construction; operation and maintenance of distribution systems; a review of water quality; disinfection and treatment applications; as well as coverage of pumps and controls.

## Key Takeaways

- Training courses can be found on MACA website: <https://www.macalearn.ca/>
- The 2-year School of Community Government Training Calendar can be found on the GNWT MACA website which will help community governments prepare for upcoming courses: [https://www.maca.gov.nt.ca/sites/maca/files/resources/scg\\_maca\\_2\\_year\\_calendar\\_print.pdf](https://www.maca.gov.nt.ca/sites/maca/files/resources/scg_maca_2_year_calendar_print.pdf)
- Information about the Certified ScrumMaster (CSM) Learn course is available on the website: <https://www.smilabs.org/products/csmcourse>
- Information about the Khan Academy, which is free learning, is available on the website: <https://www.khanacademy.org/>
- The information about the Drinking Water Operators Corner is available on the website: <https://www.maca.gov.nt.ca/en/services/drinking-water-operators-corner>
- Early sign-up for the training courses, early travel planning and hotel bookings is recommended.
- MACA designs course content in consultation with various stakeholders, such as the Workers' Safety and Compensation Commission (WSCC), GNWT Health & Social Services (H&SS), Environment and Climate Change (ECC), and Community Governments to address the community needs.
- Generally, training for a large number of participants is organized in Yellowknife. Additionally, MACA provides one-on-one training for Small and Class I Water Treatment System operators in small communities in the ISR.
- The training courses are designed as a combination of online, in-person, and water plant operation experiences based on the level of the water treatment system, leading to operator certification.
- MACA develops the Water Treatment System Operator Training Program based on community needs; also focusing on the requirement for Canadian Standard Water Operator Certification, which necessitates knowledge of Class I, Class II and Class III Water Treatment Systems.
- In the ISR, Aklavik's water treatment system is classified as Class II (Conventional - Coagulation, Flocculation, Sedimentation and Filtration, Chlorination, and Storage). Tuktoyaktuk's water

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treatment system is classified as Class I (Pressure Filtration, UV, Chlorination, Storage). All other water treatment systems in the ISR, including Paulatuk, Sachs Harbour, and Ulukhaktok, are classified as Small Systems.

- The GNWT H&SS Chief Environmental Health Officer (EHO) oversees all water quality data. MACA sends all water analysis data to the EHO, who serves as the regulatory authority. MACA provides water operator training while H&SS Environmental Health regulates water quality standards.
- MACA provides training program information to the communities through pamphlets and posters one month before the planned training program.
- MACA provides block funding for water treatment, allowing communities to develop their capital funding plans based on their needs and how they intend to expend the block funding.
- **Contact for Asset Management:** Jaime Goddard, Team Lead, Asset Management, MACA. Phone: 867-767 9164 Ext 21079; Email: [Jaime\\_Goddard@gov.nt.ca](mailto:Jaime_Goddard@gov.nt.ca).
- The Circuit Rider program offered by MACA delivers on-site training for operators; provides technical support to communities dealing with water and waste issues; and conducts regular system reviews to guarantee the optimal functionality of infrastructure.
- For information about SCG training  
**Contact:** Crystal Lennie, Training and Development Advisor, MACA, Inuvik Regional Office  
Phone: 867-678-8045 Ext 21665, email: [crystal\\_lennie@gov.nt.ca](mailto:crystal_lennie@gov.nt.ca)

### 4.3 Environment and Climate Change (ECC) Presentation

**Topic: GNWT Department of Environment and Climate Change (ECC), Roles and Responsibility of Water Resource Officer (WRO)**

**Presenter: Lloyd Gruben - Water Resource Officer, Beaufort Delta Region - ECC Inuvik**

#### Introduction

The presenter provided a brief introduction regarding the newly formed GNWT Department of Environment and Climate Change (ECC). The Department of Lands (DoLs) and the Department of Environment and Natural Resources (ENR) were amalgamated and the new Department of ECC was formed effective April 1, 2023. The goal of amalgamating Lands and ENR is to improve work balance, maintain business continuity, and streamline and improve service delivery to the communities of the NWT. The new department brings together all functions related to environment and climate change, including land, air, water, wildlife, and forest management under one roof, along with the combined skills and expertise of staff from both departments.

The WRO is also designated as an Inspector, under the GNWT ECC Land and Water Division, in the Beaufort Delta Region Inuvik Office, and is responsible for inspecting and ensuring compliance with water licence terms and conditions; water-related regulations; policies; and laws in the Beaufort Delta Region, including Municipal Water Licence Terms and Conditions for the five (5) ISR communities of Aklavik, Paulatuk, Sachs Harbour, Tuktoyaktuk, and Ulukhaktuk. The WRO (Inspector) coordinates activities with officials of ECC Land and Water Division. The WRO prepares inspection reports detailing observations on how each requirement of the licence has been met. These reports are forwarded to the licensee with a covering letter indicating any necessary actions, and a copy is provided to the appropriate Water Board, ECC Yellowknife and ECC Regional Superintendent - Land and Water Division – Beaufort Delta Region.

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## Discussion

During the presentation, there was discussion on the inspection and enforcement of water licence terms and conditions. There was an interactive discussion regarding hazardous waste disposal and enforcement, as well as source protection for drinking water, including restrictions on fishing activities and snowmobile use near the vicinity of or on the drinking water source.

During the discussion, the WRO informed the workshop participants that inspections of water licences are scheduled alternately between the Gwich'in Settlement Area (GSA) and ISR. Water Licence inspections in 2024 will be conducted in the GSA and in the ISR during 2025.

## Key Takeaways

- The WRO is also designated as an Inspector and is responsible for inspecting and enforcing water licence terms and conditions. Additionally, they are tasked with interpreting and enforcing relevant Acts and Regulations.
- Before conducting a municipal water licence inspection, the WRO informs the licensee of the scheduled inspection date. The WRO also requests the SAO and / or Foreman to accompany the Inspector during the inspection of the waste disposal facilities and the water supply facility.
- Municipal Water Licence inspections are conducted in alternate years between GSA and ISR communities.
- It is the responsibility of the licensee to address any non-compliance reported in the inspection report provided by the WRO (i.e. inspector).
- Industrial / Commercial / Institutional (ICI) hazardous waste can not be accepted at the community solid waste disposal facility .
- According to the "GNWT Guideline for Hazardous Waste Management, October 2017, Page 7" - ICI sectors are categorized as:
  - Industrial: Resource development activities, construction, fabrication, light and heavy manufacturing
  - Commercial: Retail stores, mechanical shops, property managers, service and repair businesses, etc.
  - Institutional: Federal, Territorial, Municipal government departments and agencies, non-profit agencies
- Source protection of the drinking water source is essential; therefore, no activities (e.g. hunting, fishing, snowmobiling, etc.) are permitted near or on the drinking water source.
- Accepting sewage and non-hazardous waste into the community waste disposal facilities from outside municipal sources (e.g. camp waste) depends on the treatment and accommodation capacity of the community waste disposal systems and the decision of the licensee. According to water licence conditions, waste disposal facilities should be operated and maintained to the satisfaction of the inspector.
- Discharge of Sewage by Cruise Ships in Canadian Waters is regulated by the *Canada Shipping Act, 2001* (Last amended - June 22, 2023: sections 10.1(1), 35(1)(e), 35.1(1), 136(1)(f), 190(1), Part 8, Part 9); and the *Fisheries Act, R.S.C., 1985, c. F-14*, (Last amended - August 28, 2019: section 34).
- For information regarding Water Licence Inspection and Enforcement  
**Contact:** Lloyd Gruben - WRO, GNWT ECC Land and Water Division, Beaufort Delta Region, Inuvik - Phone: 867 678 8090 Ext 24659 - Cell: 867 678 0623 - Email: [Lloyd\\_gruben@gov.nt.ca](mailto:Lloyd_gruben@gov.nt.ca)

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## **5. IWB Workshop Issues Table - Follow-up Action Items**

Each year, issues and concerns are raised by participants regarding the provision of municipal water and waste management services. The workshop participants agree on various actions to address the concerns raised. Follow-up discussions on the action items during the 2024 workshop are provided in the updated Issues Table attached in Appendix 2.

## **6. Workshop Evaluation**

An evaluation form was distributed to participants following the workshop. The evaluation form was completed by 85% of the total participants. At the conclusion of the workshop, participants, including the Hamlets, ECC and MACA 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 55% and 18% of the total respondents respectively (Appendix 3).

## **7. Conclusion**

The IWB 2024 Municipal Water and Waste Management Workshop brought together the Hamlet Mayors, SAOs, and Operations Staff of the ISR municipal governments. Also in attendance were representatives from GNWT MACA, and ECC (Appendix 4) and the IWB Board Members. Participants are brought together to discuss and share their experiences, challenges, and best practices related to municipal water and waste management including training opportunities for municipal staff responsible for water and waste management operations.

During the workshop, the participants engaged in productive presentations focused on MACA’s Hazardous Waste Removal Project, Types of Fencing for Solid Waste Sites, MACA School of Community Government Training Courses, and GNWT ECC Water Resource Officer Roles and Responsibilities including interactive discussions and knowledge sharing. These discussions highlighted the importance of effective municipal water and waste management systems to ensure public health, environmental protection and community well-being, including operator training programs.

Overall, the workshop was a valuable platform for the ISR communities and stakeholders to share their experiences, challenges and best practices related to municipal water and waste management. The discussions and knowledge sharing that took place during this workshop will lead to enhanced collaboration and cooperation among the communities and stakeholders in addressing their common challenges and ensuring safe and sustainable municipal water and waste management practices in the ISR communities.

## **8. Closing Remarks**

IWB Chairperson Richard Binder thanked all participants for their contributions to this workshop. He acknowledged the dedication of the Hamlet Mayors, SAOs and Operations staff in ensuring effective provision of municipal water and waste management services in their respective communities. The Chairperson also thanked the representatives from GNWT MACA and ECC for their valuable

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presentations, participation and support for this workshop. Finally, the Chairperson declared the end of the 2024 IWB Water and Waste Management Workshop.

## Appendix 1: Workshop Agenda

**Inuvialuit Water Board  
Water and Waste Management Workshop  
Midnight Sun Recreation Complex – Sundog Room - Inuvik, NT  
February 14 – 15, 2024**

### Day 1 – February 14, 2024

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

9:00 – 9:30 am Welcome and Introductions – Chairperson Richard Binder

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

9:30 – 10:30 am **GNWT Municipal and Community Affairs – Gerald Enns – Senior Technical Officer – Waste Management**

1. Inuvialuit Settlement Region – ICIP Infrastructure Project Update
2. What has been completed?
3. How was it completed?
4. What other community is the project scheduled to be completed in?
5. Funding availability for other municipal clean-up projects (landfill / sewage lagoon, etc)
6. Other MACA ISR projects

10:30 – 10:45 am ***Refreshments***

10:45 – 11:30 am GNWT Municipal and Community Affairs – Gerald Enns – continuation

11:30 – 11:45 am Ulukhaktok – Water Intake Diver Inspection Contract

12:00– 1:15 pm ***Lunch – provided***

1:15 – 2:45 pm **GNWT Environment and Climate Change – Lloyd Gruben – Water Resources Officer**

1. Introduction to the new GNWT Environment and Climate Change (ECC) Department
2. Water Resources Officer - Roles and Responsibilities
3. Inspection and Enforcement - Legislative Framework
4. Legislative procedures – Inspection Report Reviews (Minister’s powers to review inspection report if Licencee is not satisfied with directives from Inspectors)
5. Inuvialuit Settlement Region Municipal Water Licence Inspection Schedule
6. Water Licence Inspection and Enforcement Division – ECC Inuvik Regional Office
7. Water Resources Officer Contact Information - Inuvik

2:45 – 3:00 pm ***Refreshments***

3:00 – 4:45 pm GNWT Environment and Climate Change – Lloyd Gruben – Water Resources Officer - continuation

**Inuvialuit Water Board  
Water and Waste Management Workshop  
Midnight Sun Recreation Complex – Sundog Room - Inuvik, NT  
February 14 – 15, 2024**

**Day 2 – February 15, 2024**

8:30 – 9:00 am	<i>Arrival and Coffee</i>
9:00 – 10:00 am	<b>MACA – School of Community Government – Training Calendar Crystal Lennie – Training and Development Advisor</b>
10:00 – 10:15 am	<i>Refreshments</i>
10:15 – 10:45 am	<b>2023 IWB Workshop Issues Table – Action Items Update – Open Discussion- all</b>
10:45 – 11:00 pm	<i>Closing Remarks and Closing Prayer</i>



## Appendix 2: IWB Municipal Water and Waste Management Workshop Issues Update (2024)

	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 – gate control</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 SWDF</li> <li>Dumpsters located outside facility for “after hours dumping” recommended</li> <li>Have multiple “labeled” dumpsters for different sources to allow others to reuse / scavenge (cardboard, lumber, domestic)</li> <li>“Allowed / Not Allowed” Hand Outs for contractors</li> </ul>
2	Windblown debris	<ul style="list-style-type: none"> <li>Banning of single use plastic bags</li> <li>Buy-in from businesses (no single use plastic bags)</li> <li>Proper fencing requirements</li> <li>Promote reusable bags for shopping</li> <li>Use cardboard boxes, reduces cardboard to SWDF</li> <li>Aurora College project “Cardboard” turned into logs for burning / reuse (need update)</li> <li>Composting, etc.</li> <li>Further education and public awareness.</li> </ul>
3	Open Burning of garbage	<ul style="list-style-type: none"> <li>Conditions allow for burning of cardboard, untreated wood and paper only</li> <li>MACA?ECC? has approved “Guidelines for Open Burning”</li> <li>Burn within a pit and / or burn box</li> <li>Environmental Protection Act (EPA) updated Air Quality Regulations – in progress (status?).</li> <li>Incinerators are options, but costly</li> <li>Scheduled burn times and notifications to local Hamlet Fire Chief</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 (approved tipping fees) provided to MACA in 2016</li> <li>Discussed at Interdepartmental Technical Committee (ITC) – 2024 Committee dormant – Gerald to follow up</li> <li>Ongoing discussions between MACA and INF – need for work with NWTHC</li> <li>Contract – need to include “hold back” funds in</li> </ul>

		<p>agreements and provided to Hamlet if contractor dumps illegally – should be used for waste management / clean up</p> <ul style="list-style-type: none"> <li>• NWTAC passed Resolution by Motion in 2018</li> <li>• Municipalities need to draft Tipping By-Laws and Fees – Aklavik has approved by-laws.</li> <li>• Elgan – developed a template and guidelines which can be provided to communities (follow up with Gerald)</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</li> <li>• Wherever possible, training should be provided on a regional basis</li> <li>• MACA Training Coordinator update provided - new opportunities for training through SCG (online training)</li> <li>• MACA Learn on GNWT website brings you to SCG</li> </ul>
6	Time sensitive sample management	<ul style="list-style-type: none"> <li>• E. Coli alert testing being completed in each community</li> <li>• Sampling Protocol 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 testing so the sample analysis is completed in a timely manner</li> <li>• Take photos of shipping documents and send to TAIGA</li> <li>• H &amp; SS EHO 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 – especially outdated contact information – which is usually only part that needs updating due to staff turnover, etc.</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> </ul>

		<ul style="list-style-type: none"> <li>• IWB revised the Standard T &amp; C's from technical terminology to layman terms</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 ECC part of working group – Gerald to follow up and provide update)</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 – flags identify where the GMW is located</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 and metal solid waste through the MACA ICIP Project</li> </ul>
12	Identify new sources of funding when they become available	<ul style="list-style-type: none"> <li>• MACA ICIP Funds - completed</li> <li>• ECC – Waste Reduction Initiative Funding – Spring 2024</li> </ul>
13	EISC	<ul style="list-style-type: none"> <li>• Hamlets will have to complete EISC process prior to IWB issuing water licence renewal</li> <li>• On-line Pre-screening process – 7-day screening – questionnaire (26 questions)</li> </ul>
14	Polar Code	<ul style="list-style-type: none"> <li>• Cruise Ships / Tourism increasing and travelling through the NW Passage – waste and wastewater disposal issues (volumes)</li> <li>• IWB Staff to provide update</li> </ul>
15	MACA – Asset Management	<ul style="list-style-type: none"> <li>• Jaime Goddard – working with Hamlets to complete Asset Management database? – Team Lead</li> </ul>

## Appendix 3: February 2024 Workshop - Evaluation Summary

An evaluation form was distributed to participants during the workshop.

Eighty-five percent (85%) of the total participants completed the evaluation form. Overall, respondents expressed satisfaction with the materials; the time provided for questions and discussions; and the objectives. The workshop received ratings of 'excellent' and 'very good' from 55% and 18% of respondents, respectively. Comments and suggestions from participants are summarized below.

### Comments:

- Overall, all the topics were interesting and useful.
- Distribution of workshop agenda and presentations in advance could be helpful to understand the subject matter.
- More time to exchange views about communities' specific water systems could be useful.
- Actual on-site visuals of the fencing of the solid waste site would make it easier to understand the different types of snow management and fencing.
- The venue for MACA operator training in Inuvik or an in-person visit by the instructor to the community could make it easier for ISR community participation.

### Suggestions for future IWB Water and Waste Management Workshop:

- Suggested to invite GNWT H&SS Environmental Health Officer (EHO) to attend the workshop so that he / she can answer about the drinking water quality monitoring and other related issues.
- Internet access at the workshop venue would be useful.
- Suggested to prepare PowerPoint slides clear and easy to visualize and read.
- Suggested to organize future workshop at the hotel where the participants stay in.

**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?	82%	9%	No response (9%)
				9% of the total respondents commented that access to the internet at the workshop hall would be helpful.
2	Within the time available, was the meeting run effectively?	64%	9%	No response (9%) 18% of the total respondents recommended more speakers would be more interesting.
3	Could the agenda have been improved? If so, how?	9%	55%	No response (9%)  9% of the respondents suggested invite to H&SS Environmental Health Officer (EHO).  9% of the respondents suggested to provide workshop agenda earlier.  9% of the respondents suggested to provide more discussion time comparison to exchange

				the views about communities' specific water systems.
4	Were the presentations/discussions relative and useful to your responsibilities?	82%	18%	Some respondents commented "Very Useful".
5	Was there adequate time provided for participants' questions and responses?	100%	0%	Some respondents commented "Excellent".
6	Were questions from the floor answered satisfactorily?	91%	0%	No response (9%)
7	What topics or aspects of the workshop did you find most interesting or useful?	-	-	All topics (18%)
				Landfill presentations, fencing & discussions (55%)
				Discussions about cruise ship and ICI waste (9%)
8	Were the objectives of the workshop achieved?	73%	0%	Not known (9%) 9% commented "on going" No response (9%)
9	Were you clear on future actions and commitments from the workshop?	55%	-	No response (27%)  18% of the total respondents commented "need more training for the communities".
10	Any suggestions on how the workshop might have been improved?	-	-	No suggestions and it was good (36%)
				No response (28%)
				36% of the total respondents provided the following comments: <ul style="list-style-type: none"> <li>• One of the presentations difficult to see and read.</li> <li>• Actual on-site visuals for snow management (snow walls) and fencing of solid waste site would be easy to understand about snow management and fencing types.</li> <li>• Training in Inuvik or in person visits of the instructor in the community was suggested.</li> </ul>
11	Were the physical arrangements of the workshop adequate (meeting facility, sound system, transportation, accommodation, support, etc.)?	64%	9%	9% respondents suggested that it would be better if a shuttle bus service was offered from the hotel to the workshop.  9% respondents suggested to organize workshop at the hotel where the participants stay in.  9% respondents suggested to provide internet access at the workshop venue.
12	Would you attend another	100%	0%	-

	Inuvialuit Water Board workshop on community water and waste management?			
<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)	9%		
	7-8 (Very Good)	18%		
	9-10 (Excellent)	55%		
	No Response	18%		

## Appendix 4: Workshop Participants

Municipalities	Community	Phone	Email
Brandon McLeod	Aklavik	-	Mcleod-08@hotmail.com
Tom Ng	Aklavik	867-978-2351	saoaklavik@permafrost.com
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Raymond Ruben	Paulatuk	867-788-0002	Mayor@Paulatuk.ca
Bill S. Ruben	Paulatuk	867-580-3209	Bill_stephen_99@hotmail.com
Kyle Wolki	Sachs Harbour	867-688-0207	Kwolki18@gmail.com
Betty Haogak	Sachs Harbour	867-690-4351	hamletsao@sachsharbour.ca
Doug Goose	Ulukhaktok	867-787-0030	-
Davy Krengnektak	Tuktoyaktuk	867-678-0396	foreman@tuktoyaktuk.ca
Government of the NWT	Department		
Lloyd Gruben, Water Resource Officer – ECC Beaufort Delta Region, Inuvik	ECC	867-678-8090 ext. 24659	lloyd_gruben@gov.nt.ca
Gerald Enns, Senior Technical Officer - Yellowknife	MACA	867-686-9666	Gerald_enns@gov.nt.ca
Donald Roberts, Waste Management Advisor – Yellowknife	MACA	204-590-8454	donald_roberts@gov.nt.ca
Crystal Lennie, Training and Development Advisor - Inuvik	MACA	867-678-8045 Ext 21665	Crystal_Lennie@gov.nt.ca
Inuvialuit Water Board			
Richard Binder, Chairperson	IWB	867-678-5128	richardbindersr@gmail.com
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Delores Harley, Office Administrator	IWB	867-678-2942	admin@inuvwb.ca