



Water Resources Division  
Resource Management Directorate  
Nunavut Regional Office  
918 Nunavut Drive  
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Your file - Votre référence  
3AM-IGL2131  
Our file - Notre référence  
GCDOCS# 139146112

July 17, 2025

Robert Hunter  
Licensing Administrator  
Nunavut Water Board  
P.O. Box 119  
Gjoa Haven, NU, X0B 1J0  
sent via e-mail: [licensing@nwb-oen.ca](mailto:licensing@nwb-oen.ca)

**Re: Crown-Indigenous Relations and Northern Affairs Canada's Review of the 2024 Annual Report for Water Licence 3AM-IGL2131 for the Municipality of Igloolik in the Qikiqtani Region of Nunavut**

Dear Mr. Hunter,

Thank you for the April 17, 2025 invitation to review the referenced licence 2024 Annual Report submitted by the Licensee, for Type A Water Licence No. 3AM-IGL2131.

Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC) examined the application pursuant to its mandated responsibilities under the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* and the *Department of Crown-Indigenous Relations and Northern Affairs Act*. **CIRNAC has 2 unresolved comments from the 2022 Annual Report, and 5 new comments from the 2024 Annual Report.** The 2023 Annual Report has not yet been submitted for review. The Municipality informed the Nunavut Water Board (NWB) that they will be submitting the 2023 Annual Report in May 2025. Please find CIRNAC's comments and recommendations in the attached Technical Memorandum.

If there are any questions or concerns, please contact me at [michelle.blade@rcaanc-cirnac.gc.ca](mailto:michelle.blade@rcaanc-cirnac.gc.ca) or Andrew Keim at 305-501-4047 or [andrew.keim@canada.ca](mailto:andrew.keim@canada.ca).

Sincerely,

Michelle Blade,  
Regulatory and Science Advisor



## **Technical Review Memorandum**

**Date:** July 17, 2025

**To:** Robert Hunter, Licensing Administrator, Nunavut Water Board

**From:** Michelle Blade, Regulatory and Science Advisor, CIRNAC

**Subject:** Crown-Indigenous Relations and Northern Affairs Canada's Review of the 2024 Annual Report for Water Licence 3AM-IGL2131 for the Municipality of Igloolik in the Qikiqtani Region of Nunavut

**Region:** ☐ Kitikmeot ☐ Kivalliq ☒ Qikiqtani

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### **A. BACKGROUND**

The Municipality of Igloolik is the second largest community in the Qikiqtani Region located in the Foxe Basin. It has a population of 2,049 (2021 Census). The Municipality's water source is extracted from South Lake, and stored in a reservoir with a capacity of 102,800 cubic metres (m<sup>3</sup>). A Type "A" Water Licence is required since the water storage capacity exceeds 60,000 m<sup>3</sup>.

In 2016, the Municipality submitted an amendment to their Type B water licence 3BM-IGL1520. The Municipality was then issued a Type A water licence (Water Licence No. 3AM-IGL2131) on January 12, 2021, for a 10-year period, expiring January 11, 2031. Additional terms and conditions have been added to transition the Municipality from the former Type "B" Licence to the new Type "A" Licence; the additional terms and conditions reflect the authorized increases in water use, the current state of the community infrastructure, and the Municipality's proposal to construct a new solid waste disposal facility during the term of the new Type "A" Licence. Specifically, Water Licence No. 3AM-IGL2131 authorizes the following activities, works, and undertakings by the Municipality:

- Withdrawal of water from South Lake to support community needs;
- Continued operation and maintenance of the following municipal facilities:
  - Water Treatment and Supply Facilities, including a water storage reservoir
  - Solid Waste Disposal Facility
  - Sewage Disposal Facility (with upgraded sewage lagoon)
- Roads management, watercourse crossings and culvert installations within municipal boundaries; and
- Proposed construction of a new engineered solid waste disposal facility in the near future.

Relevant infrastructure for the Water Use and Waste Disposal Facilities include a freshwater intake pump, reservoir, truck fill station, and a three cell sewage exfiltration lagoon system



with a wetland, an older fourth sewage cell constructed prior to the three cell lagoon systems, domestic landfill, and metallic waste landfill.

A CIRNAC inspection was conducted on June 28, 2024.

CIRNAC provides the following comments and recommendations pertaining to the 2024 Annual Report. A summary of the subjects of recommendations can be found in Table 1. Documents reviewed as part of this submission can be found in Table 2 of Section B. Detailed technical review comments can be found in Section C. CIRNAC's comments on the 2022 Annual Report can be found at <https://public.nwb-oen.ca/registry/3%20MUNICIPAL/3A/3AM%20-%20Municipality/3AM-IGL2131/3%20TECH/B%20GENERAL/2%20ANNUAL%20RPT/2022/>.

**Table 1: Summary of Recommendations**

Recommendation Number	Subject	Status
R-01	Sources of water and quantity used	2022 – Unresolved 2024 – Unresolved
R-02	Sewage discharge reporting requirements	2022 – Unresolved 2024 – Unresolved
R-03	Sludge removal reporting	2022 – Resolved 2024 – Resolved
R-04	Sewage Disposal Facility discharge	2022 – Resolved 2024 – Unresolved
R-05	Structural integrity of Sewage Disposal Facility lagoon A	2022 – Resolved 2024 – Unresolved
R-06	Summary of actions taken to address concerns or deficiencies listed in the inspection reports	2024 – Unresolved



## B. DOCUMENTS REVIEWED

The following table (Table 2) provides a summary of the documents reviewed under the submission.

**Table 2: Documents Reviewed**

Document Title	Author, File No., Rev., Date
Annual Report for the Municipality of Igloolik, 2024	Licensee, 31 March 2025
Annual Report for the Municipality of Igloolik, 2022	Licensee, 29 March 2023
TYPE “A” WATER LICENCE NO: 3AM-IGL2131	Nunavut Water Board, 12 January 2021
TYPE “A” WATER LICENCE NO: 3AM-IGL2131 Reasons for Decision	Nunavut Water Board, 26 February 2020
CIRNAC Review of the 2022 Annual Report for the Hamlet of Igloolik, Type A Water Licence No. 3AM-IGL2131	CIRNAC, 29 June 2023
3AM-IGL2131 – Municipality of Igloolik – Response to ECCC and CIRNAC Reviews of the 2022 Annual Report for Water Licence 3AM-IGL2131	Licensee, 3 November 2023
CIRNAC’s response to the Government of Nunavut’s response, on behalf of the Municipality of Igloolik, to CIRNAC’s comments on the 2022 Annual Report for Water Licence 3AM-IGL2131 for the Municipality of Igloolik in the Qikiqtani Region of Nunavut	CIRNAC, 22 November 2023
Water Licence Inspection Form	CIRNAC, 28 June 2024
Water Licence Inspection Form	CIRNAC, 26 October 2021
FINAL Spill Contingency Plan, Municipality of Igloolik, Nunavut	EXP, February 2021
Operations and Maintenance Manual, Wastewater Treatment Facility (Sewage Lagoon System), Municipality of Igloolik, Nunavut (EXP, 2021)	EXP, February 2021
Operations and Maintenance Manual, Water Reservoir, Municipality of Igloolik, Nunavut (EXP, 2020)	EXP, September 2020
2020 Quality Assurance / Quality Control (QA/QC) Program, Wastewater Treatment Facility (Sewage	EXP, September 2020



Document Title	Author, File No., Rev., Date
Lagoon System), Water Treatment Plant / Truck Fill Station, Solid Waste Facility, Municipality of Igloolik, Nunavut (EXP, 2020)	
Igloolik Wastewater Treatment Facility Sewage Lagoon Berm 2022 Dam Safety Inspection	WSP, 18 October 2022

## C. RESULTS OF REVIEW

### 1. Sources of water and quantity used

#### **Comment:**

Water licence 3AM-IGL2131 allows for withdrawal of 102,800 m<sup>3</sup> of water per annum, at a maximum rate of 299 m<sup>3</sup> per day, from South Lake (Monitoring Station No: IGL-1) and/or Fish Lake (Monitoring Station No: IGL-1a) for all purposes. As per Part I, Item 2 of Water licence 3AM-IGL2131, the *“Licensee shall measure and record, in cubic metres, the daily, monthly and annual quantities of water pumped at Monitoring Program Stations IGL-1 and IGL-1a, for all purposes.”* Schedule B of the Water Licence requires the Municipality to report monthly and annual quantities in m<sup>3</sup> of fresh water withdrawn from South Lake at Monitoring Station No: IGL-1. The 2024 Annual Water Licence Report provides that *“66,240 cubic metres was pumped from South Lake at IGL-1 to the water reservoir over 23 days.”* This corresponds to daily average rate of 2,880 m<sup>3</sup> per day which is in excess of the maximum rate of 299 m<sup>3</sup> per day. It is unknown which days in 2024 had pumping rates in excess of the maximum rate.

#### **Recommendation:**

(R-01) CIRNAC recommends the Municipality of Igloolik provide the following in the 2024 Annual Monitoring Report:

- Daily, monthly, and annual quantity of freshwater withdrawn from South Lake at Monitoring Station No: IGL-1, and specify which days exceeded the maximum rate of 299 m<sup>3</sup>; and
- Evidence of the documentation of the daily withdrawn quantities.

### 2. Sewage discharge reporting requirements

#### **Comment:**

Water licence 3AM-IGL2131 requires reporting of the monthly and annual quantities in m<sup>3</sup> of any discharges to the Sewage Disposal Facility at Monitoring Station IGL-3. The 2024 Annual Water Licence Report states that *“the water consumption volume (withdrawal*



*volumes from the water reservoir) is considered equal to the sewage discharge volume because there is no meter at the end of the discharge pipe.” CIRNAC considers the withdrawal volumes from the water reservoir an indirect and inadequate measure of sewage production. Water withdrawal volumes from the water reservoir do not account for releases to the environment and/or water use not associated with sewage production. As per Part D, Section 3 of Water licence 3AM-IGL2131, the “Licensee shall install, operate, and maintain the meters, devices or other appropriate methods for measuring the volumes of Water used and Waste discharged or deposited to the satisfaction of an Inspector.”*

**Recommendation:**

(R-02) CIRNAC recommends that the Municipality devise a reporting system for measuring the direct quantity of any discharges to the Sewage Disposal Facility at Monitoring Station IGL-3.

### **3. Sludge removal reporting**

**2022 Comment:**

Water licence 3AM-IGL2131 requires reporting of the monthly and annual quantities in cubic metres of sludge removed from the Wastewater Treatment Plant. CIRNAC was unable to locate the sludge removal values in the 2022 Annual Report.

**Recommendation:**

(R-03) CIRNAC recommends the Municipality specify where the 2022 sludge removal measurements are reported.

**2022 Municipality response:**

Sludge was not removed. Statement that no sludge removal to report will be added to future Annual Reports.

**2024 Comment:**

CIRNAC located the sludge removal values in the 2024 Annual Report. CIRNAC considers comment R-03 resolved for both 2022 and 2024 Annual Reports.

### **4. Sewage Disposal Facility discharge**

**Comment:**

Water licence 3AM-IGL2131 requires the Monitoring Program to be conducted in accordance with Schedule I of the Water Licence. All effluent discharged from the Sewage Disposal Facility at Monitoring Program Stations IGL-4 and IGL-5 shall not exceed the effluent quality standards in Part E, Item 3, of the Water Licence. The 2024 Annual Water



Licence Report states that there were *“no modifications to the monitoring program; however, no sampling was done in 2024.”*

**Recommendation:**

(R-04) CIRNAC requests the Municipality:

- a) provide an explanation as to why no sampling was done in 2024; and
- b) confirm if water quality monitoring is being conducted in accordance with Schedule I of the Water Licence in 2025.

## **5. Structural integrity of Sewage Disposal Facility lagoon A**

**Comment:**

CIRNAC's Review of the 2022 Annual Water Licence Report included a review of the Igloolik Wastewater Treatment Facility – Sewage Lagoon Berm 2022 Dam Safety Inspection. It was noted that Section 4 of the Inspection identified items in the Operations and Maintenance manual (EXP, 2021) requiring updating. In addition, Table 7-1 lists recommendations from the 2022 inspection including keeping the water level in Cell A below the triggering level of seepage. The 2024 Annual Water Licence Report indicated that no changes were made to the approved Operation and Maintenance Plans in 2024.

**Recommendation:**

(R-05) CIRNAC recommends the Operations and Maintenance manual (EXP, 2021) be updated with the items and recommendations from the Igloolik Wastewater Treatment Facility – Sewage Lagoon Berm 2022 Dam Safety Inspection, and the updated plan be submitted to the NWB for review.

## **6. Summary of actions taken to address concerns or deficiencies listed in the inspection reports**

**Comment:**

The 2024 Annual Water Licence Report lists the following actions to be taken to ensure compliance with the Water Licence:

- *“Monitoring station signs will be posted at the designated sites.*
- *Wastes that have escaped the Solid Waste Facility will be picked up and placed back into the Facility.*
- *The 2023 Annual Report will be submitted by May 2025.*



- *Fencing will be repaired as part of the upgrades in the solid waste upgrade project, which the report will be completed in 2025, and the upgrades should take place in 2026.”*

**Recommendation:**

(R-06) CIRNAC requests that the Municipality:

- a) Provide a timeline for the posting of the monitoring station signs and for retrieving wastes that have escaped the Solid Waste Facility.
- b) Submit their 2023 Annual Water Licence Report to the NWB with their response to their 2024 Annual Report comments.
- c) Provide mitigation measures to prevent escaping wastes pending the fence repair work as part of the upgrades in the solid waste upgrade project.