

Yellowknife Raw Water Supply Upgrade

Y - Engagement Summary



CITY OF YELLOWKNIFE

Background

The City of Yellowknife is moving ahead with the Raw Water Supply Upgrade Project to ensure safe, reliable drinking water for decades to come. The project will modernize and expand the City's raw water system; it includes improvements to the City's existing pumphouses, new water intake pipes at Pumphouse No. 1, and updates to key components of the City's water system.

To complete the Project, the City must submit regulatory permits, including a Type A Water Licence Amendment and Type A Land Use Permit to the Mackenzie Land and Water Board (MLWB).

Engagement

The City Project Team hosted a Public Open House on April 16, 2026, in Yellowknife. The purpose of the Open House was for the public to learn about the Raw Water Supply Upgrade Project, ask the Project Team questions, and share feedback. This engagement aligned primarily with the "Inform" level of the IAP2 Spectrum, which focuses on providing information to help participants understand City initiatives and decisions.

The Open House was promoted in various ways, including the City web page, social media (Facebook and Instagram), as well as local Cabin Radio. Regulators and Indigenous governments were also notified by email and phone calls.

Engagement Summary

Approximately 50 participants attended the Open House. The **Question and Answer** section below summarizes topics raised by participants. Key themes heard included: the importance of clean drinking water, drawing water from both Yellowknife River and Bay, using Yellowknife Bay as a water source, funding for infrastructure planning, environmental protection, construction impacts, emergency preparedness, and the need for timely, transparent and ongoing engagement. See Frequently Asked Questions (FAQs) on the City of Yellowknife website www.yellowknife.ca/water for additional topics and responses.

What We Heard	Information Shared
Water Licence Amendment: Water Volume and Source	
Concern with City request to increase the annual water withdrawal from 4 million to 8 million cubic metres a year	The request reflects population growth, peak-demand conditions, and operational realities. In recent years, water use has approached or exceeded the current 4 million cubic metres a year. This was due to ageing infrastructure and unplanned demand spikes. The proposed licence would allow a combined maximum withdrawal of 8 million cubic metres per year from Yellowknife River and Yellowknife Bay combined.
Confirming the amount of water drawn from Yellowknife River versus Yellowknife Bay	A fixed ratio of Yellowknife River and Bay water use cannot be set ahead of time. Bay water use depends on real-world operating needs—such as emergencies, limits in the current system, short periods during construction, or brief spikes in demand.
Water Quality & Public Health	
Concerns about Yellowknife Bay's historic contamination, sedimentation, water taste, and long-term health risks	The City is fortunate to have two viable, high-quality sources of drinking water. The water in Yellowknife Bay is tested on a monthly basis and is safe to treat and drink. The City will be continuing water and sediment monitoring, using modern intake design (including fish-protection screens and appropriate intake placement), and ensuring all water—no matter the source—is fully treated at the water treatment plant before it reaches taps.
Regulatory Process and Approvals	
Water Licence Amendment application timelines	The City intends to submit the Water Licence amendment application to the Mackenzie Valley Land and Water Board in May 2026.
Confirming that timely Indigenous government and regulatory agency engagement has happened	Engagement with Indigenous governments, regulatory agencies, and key stakeholders has been ongoing since February 2026. Activities included a project Notification Letter to Affected Parties, follow-up phone calls, and an Information Session for Regulators and Indigenous government representatives.
Infrastructure: Pumphouses and Existing Pipeline	
Confirming if the existing submarine pipeline will be abandoned or removed Risk of sediment disturbance if pipeline is removed	The City has no plans to abandon or remove the existing submarine pipeline. The existing pipeline will remain in service for as long as it is safe and operational.

Concern about repairing Pumphouse No. 1 versus replacing the pipeline	Pumphouse No. 1 is the most critical component of the raw water system. If it fails, water cannot reach the treatment plant regardless of pipeline condition. Even with full funding, replacement of Pumphouse No. 1 would be the first priority.
Interest in how past submarine pipeline condition assessments were conducted	Previous assessments involved external visual inspections by underwater divers. The planned 2026 assessment will use internal "inside the pipe" inspection technology to measure pipeline wall thickness, identify defects, and better estimate remaining service life; these methods were not used before.
Making results of the pipeline assessment public	The pipeline condition assessment results will be shared publicly on the City of Yellowknife website once completed and reviewed.
Concern that issues identified by the pipeline assessment may delay or cancel Pumphouse upgrades	Pipeline assessment and Pumphouse No. 1 upgrades will proceed at the same time. Pumphouse No. 1 and No. 2 upgrades will move forward regardless of pipeline assessment findings; this is because of Pumphouse No. 1's critical role maintaining water service and fire protection to the City.
Environmental Protection and Intake Design	
Fish and fish habitat protection	All intake systems will be designed to meet Department of Fisheries and Oceans (DFO) requirements, including fish-friendly intake screens, controlled intake velocities, and appropriate screen sizing to prevent harm to aquatic species.
Proposed intake pipeline at Pumphouse No. 1 seems too close to the lakebed floor; it seems an estimated 1.5 metres from the lakebed surface	The exact intake location and depth will be finalized during detailed design. The designers will consider ice thickness, lake levels, sediment conditions, and safety of operations. The pipeline water intake will be placed above the lakebed to reduce interaction with sediments.
Construction and Community Impacts	
Concerns with construction involve blasting, noise, and air-quality impacts	Construction activities may include blasting and other disruptive work. The City will mitigate disturbances, such as controlled blasting, air-quality monitoring, vibration monitoring, restricted work hours, and communicating with nearby residents before work is done.
Desire for property condition assessments conducted at homes and businesses near the construction site	Pre-construction inspections and monitoring will be undertaken for nearby properties where required, in accordance with best practices and regulatory requirements.

Emergency Planning and System Reliability	
Concern about Pumphouse No. 1 failing before upgrades are complete	Emergency measures would involve temporary pumping from the Bay to maintain minimum water supply and fire protection. A simple physical pump on the side of the lake or on the edge of ice hole would be used to extract water and to move it to a wet well. These measures would be short-term and used only in extreme circumstances.
The need for public notification when the City switches to Bay water	Notifications are currently provided to regulators and recorded in public reporting. Public requests for more immediate notification were noted, and the City acknowledged this feedback for future consideration.
Funding and Intergovernmental Coordination	
Support for City to seek additional federal or defence funding; increased water use is also driven by multiple external factors	The City is actively pursuing multiple federal funding programs, including defence-related and infrastructure funding streams. We will continue to advocate for additional investment. If new funding streams are secured, the City will share that information with the residents.
Clarifying whether work can be delayed until full funding for pipeline replacement is in place	Pumphouse No. 1 is nearing the end of its service life and presents an immediate risk. Delaying necessary upgrades could jeopardize water supply, fire protection, and public safety.
Communication and Information Sharing	
Ongoing project communication and transparency is critical; engagement should not be a one-time event	Additional public engagement will occur as part of the Land and Water Board's formal review process after the application is submitted. Further meetings may also be held by the City upon request.
The City should share details about Yellowknife Bay water use in a timely and public manner	Water withdrawal volumes are reported quarterly and annually to the Land and Water Board and are publicly available through the Water Registry.
Interest among residents to stay engaged, ask questions, and provide input?	Individuals are encouraged to contact the project team at waterlicence@yellowknife.ca. Residents can also submit written comments to the City, request meetings with City staff or Council, or participate in upcoming regulatory hearings.
Desire for Open House meeting materials be publicly shared	Yes. The meeting summary will be posted publicly through City website for this project, as well as updated FAQs. See Raw Water Supply Upgrade Project - City of Yellowknife

How To Stay Involved

- Take part in Public Engagement
- Contact the City at waterlicence@yellowknife.ca
- Review project updates and **Frequently Asked Questions** at [Raw Water Supply Upgrade Project - City of Yellowknife](#)

FEB - JUNE 2026

Mackenzie Valley Land & Water Board (MVLWB) Water Licence Amendment Application and Land Use Permit

- Ongoing Affected Party and public engagement.
- City meetings with Affected Parties, on request.

SUMMER 2026

Internal and External Submarine Pipeline Condition Assessment

- Updates to City website:
 - Submarine pipeline assessment summary
 - Current status of MVLWB applications
 - When raw water source change occur between River and Bay

MAY 2026 - MARCH 2027

Mackenzie Valley Land and Water Board (MVLWB) Water Licence and Land Use Permit Application Review Process

- MVLWB Application status will be available on the City website and the MVLWB Registry website.

SUMMER 2027 - WINTER 2029

Construction of Pumphouse No. 1 & No. 2 Upgrades

- Continued public engagement about project progress and construction phases
- Updates to City website on project progress and construction phases.
- Updates to when raw water source changes occur between River and Bay

Public Engagement Opportunities