City of Iqaluit Water Licence Amendment and Renewal
Nunavut Water Board Public Hearing November 5-6, 2026

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Outline

Licence Scope (current licence, proposed amendments)
Remaining issues and the City's approach
Revised draft water licence framework

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Licence Scope

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Scope of the Current Licence 3AM-IQA1626

- Issued June 2016; expires Dec 13, 2026
  - Lake Geraldine Reservoir and water treatment plant
  - Wastewater treatment plant; upgraded in 2020
  - Sewage lagoon
  - West 40 landfill
- Amendments
  - Between 2018 and 2022, emergency amendments no. 1, 2, 3, 4, 6 and 7 were granted for supplemental water pumping
  - In 2021, Amendment No. 5 authorized the new North 40 landfill and waste transfer station (constructed, not yet operational)

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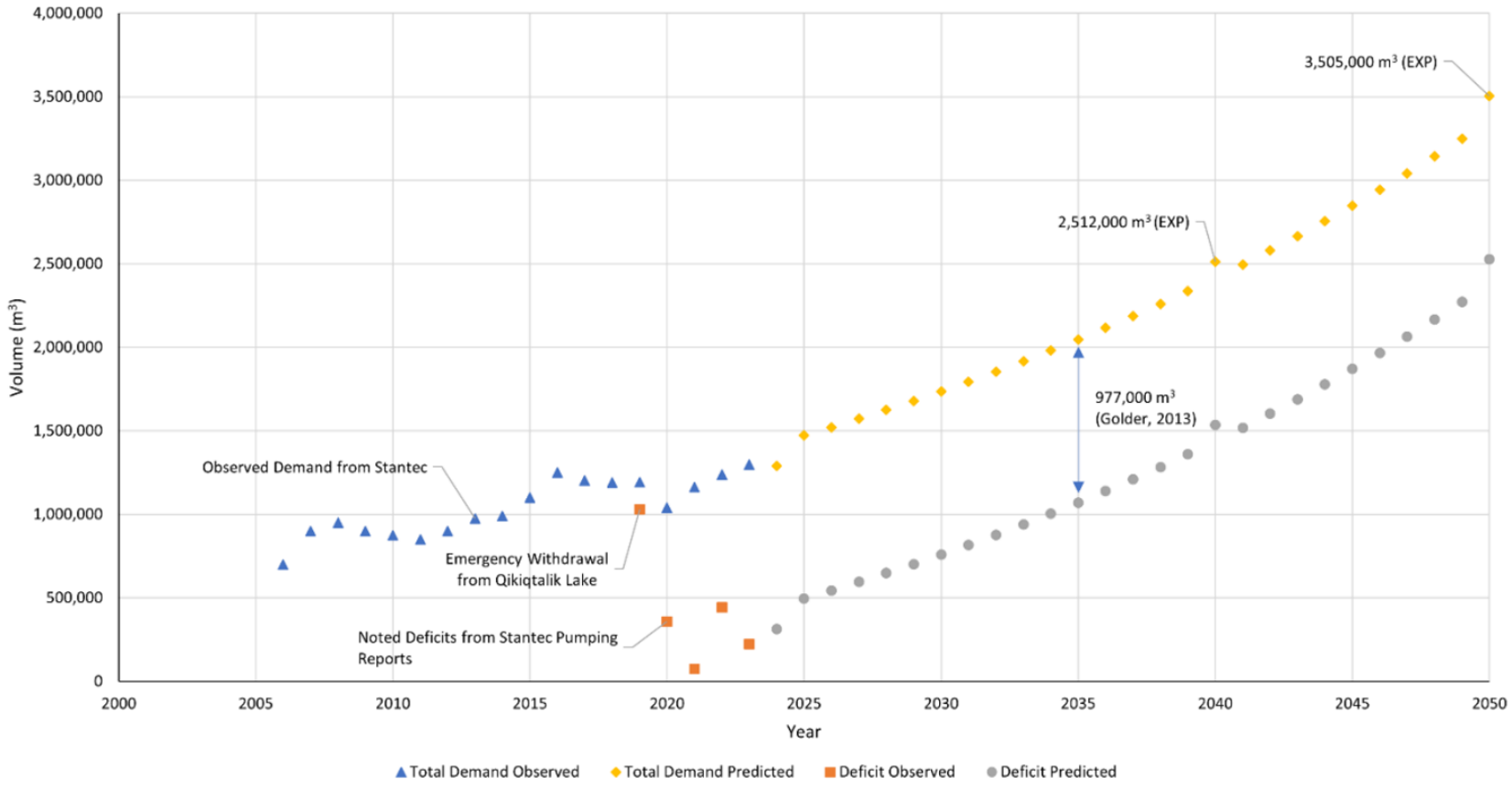
Proposed Licence Amendments

- Continue operating existing facilities:
  - Water treatment plant and Lake Geraldine reservoir
  - Wastewater treatment plant and sewage lagoon
  - West 40 landfill (to be closed in the next 2-3 years)
  - North 40 landfill and waste transfer station (to be commissioned at the same time)
- Amend to incorporate the City's Long Term Water Plan
  - New water reservoir
  - Pump stations at Lake Qikiqtalik and Niaqunngut (Apex) River
  - Pipelines

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Proposed Licence Amendments

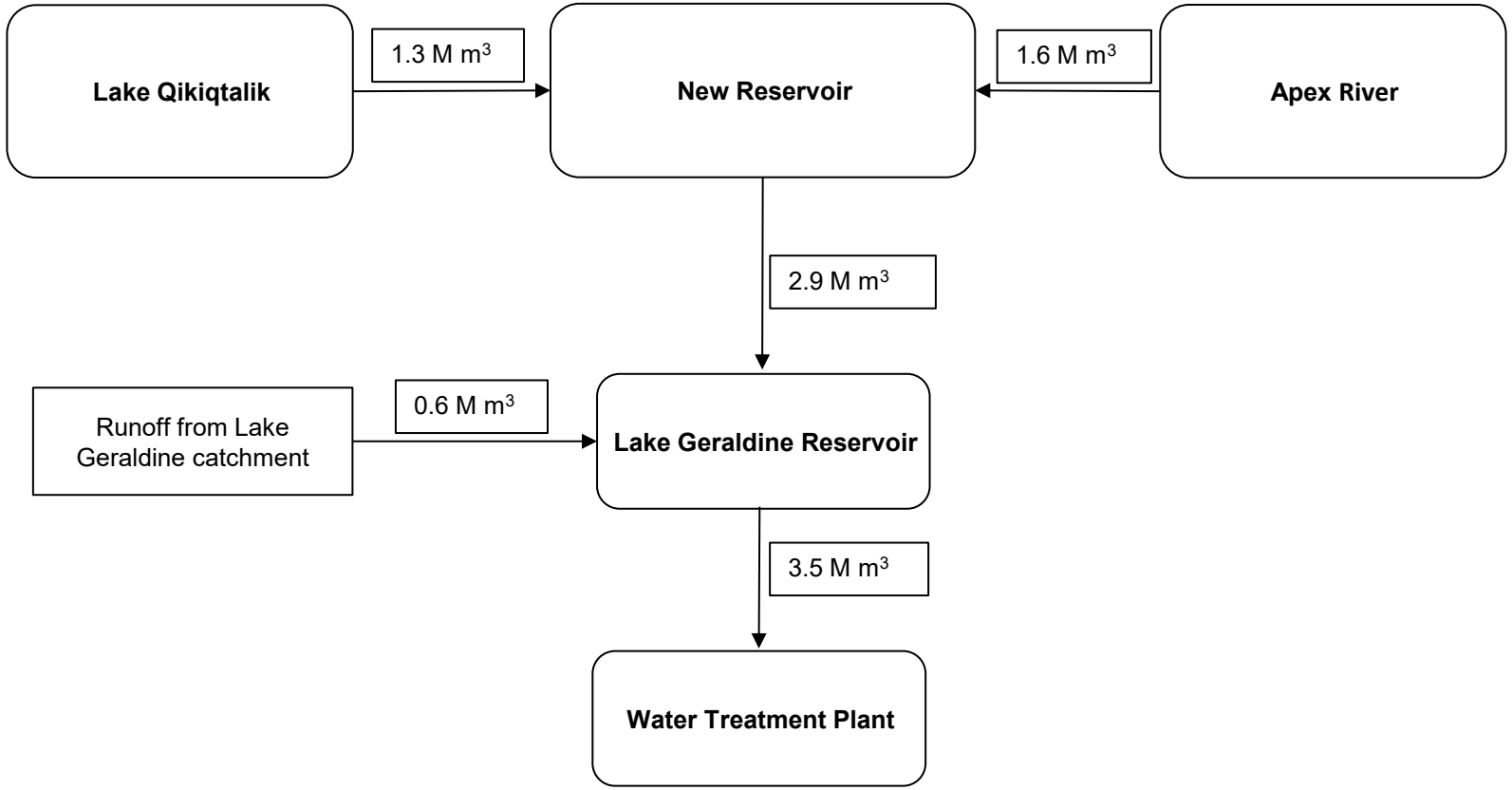
Long Term Water Plan



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Proposed Licence Amendments

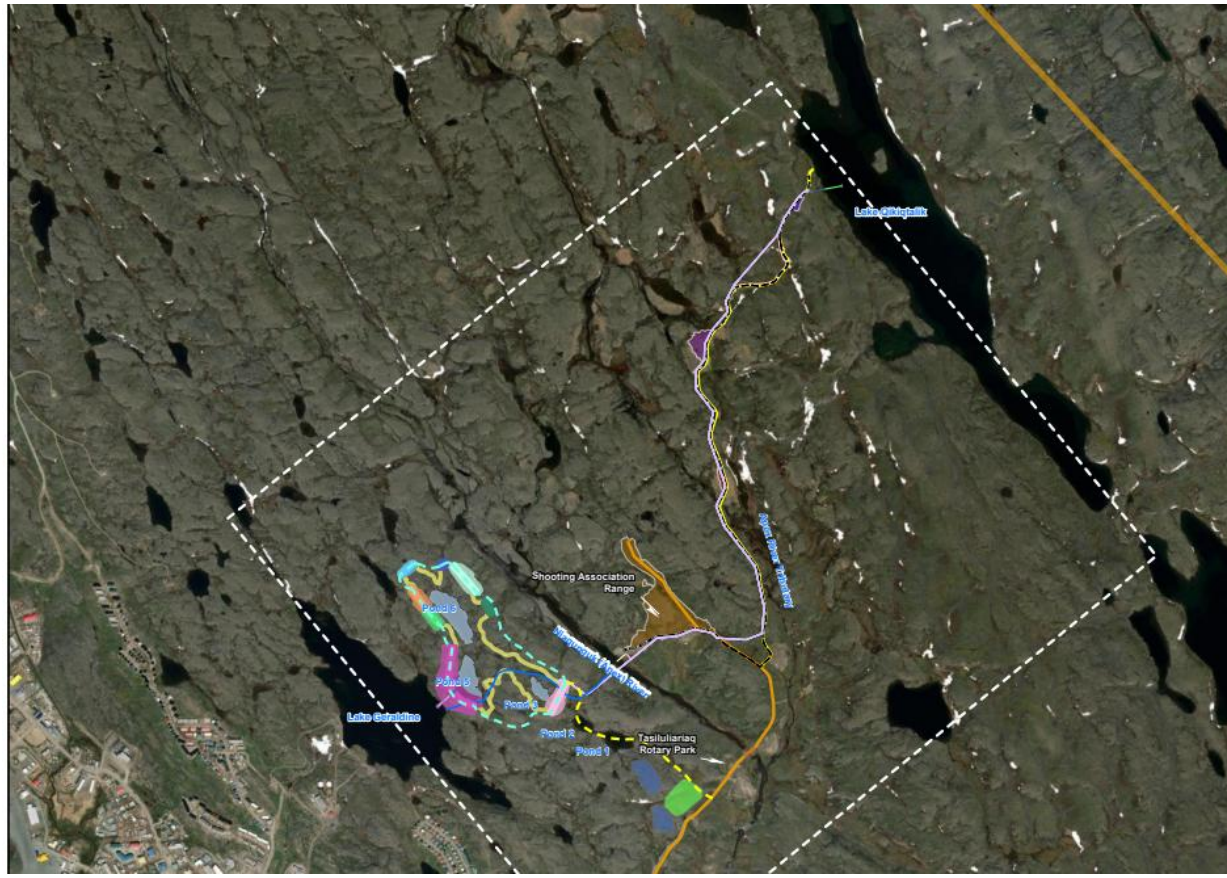
Long Term Water Plan



Proposed Licence Amendments

Long Term Water Plan

- New reservoir
- Service corridor to Lake Geraldine
- Intakes and pumphouses at two sources:
  - Apex River
  - Lake Qikiqtalik

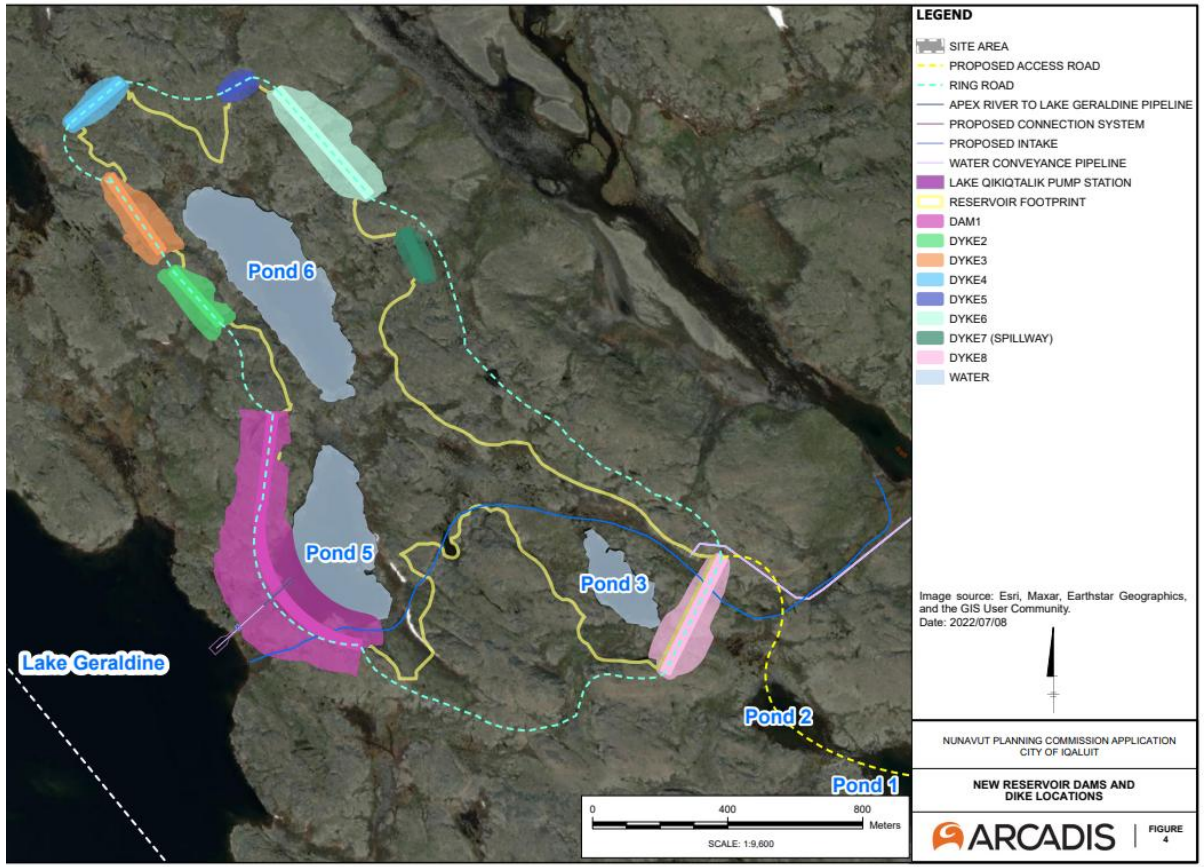


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Proposed Licence Amendments

Long Term Water Plan - Construction

- New reservoir and service corridor
  - One main dam and seven dykes
  - Service corridor: two 750 mm HDPE pipes encased in backfilled trench
  - Existing ponds dewatered and discharged to existing flow channels to Apex River
  - Blasting within the reservoir footprint will generate construction rock for dyke construction
  - Runoff to be captured inside reservoir footprint
  - Runoff must meet water licence discharge criteria for pH, total suspended solids, and ammonia

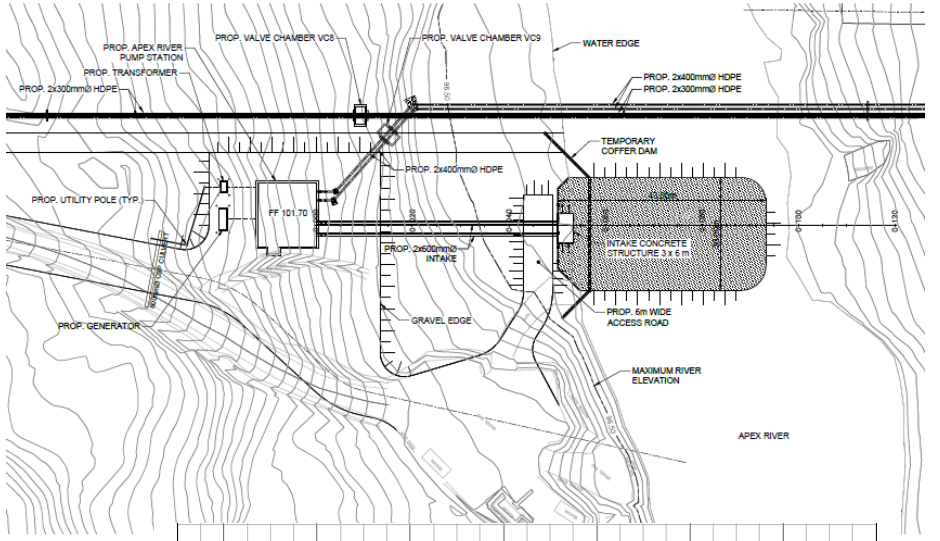


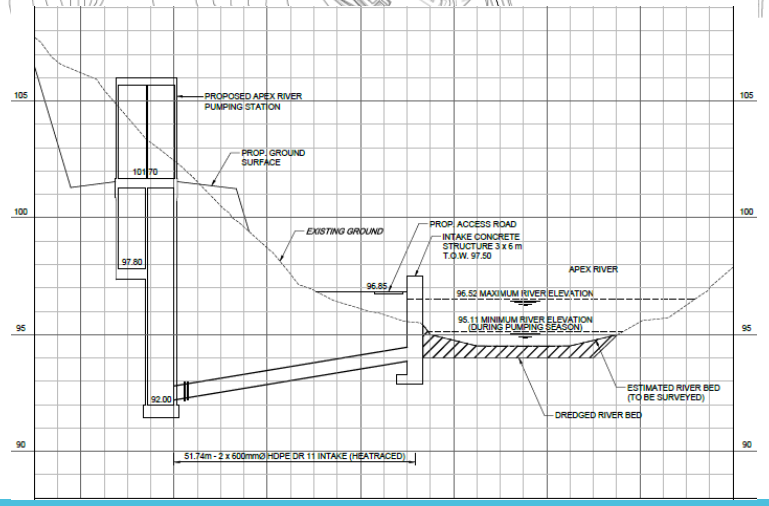
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Proposed Licence Amendments

Long Term Water Plan - Construction

- Construction of Apex River and Lake Qikiqtalik intakes and pump stations
  - Wet wells excavated below pump house
  - Excavation of concrete intake structures within the river/lake
  - Lake Qikiqtalik pipeline crossing of Apex River
- Key mitigation measures
  - DFO's Nunavut timing windows
  - Temporary cofferdams
  - Blasting mitigation to meet DFO's recommended 50 kPa overpressure limit
  - Construction monitoring



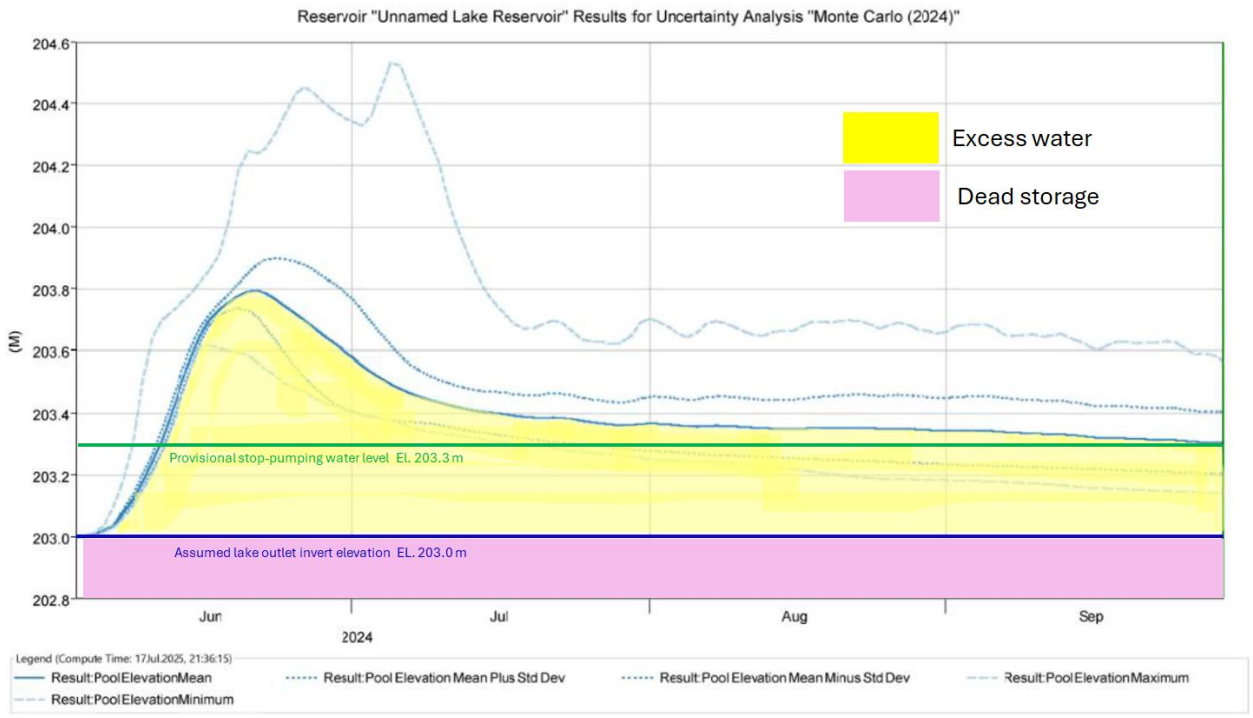


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Proposed Licence Amendments

Long Term Water Plan – Lake Qikiqtalik Water Withdrawal Operation

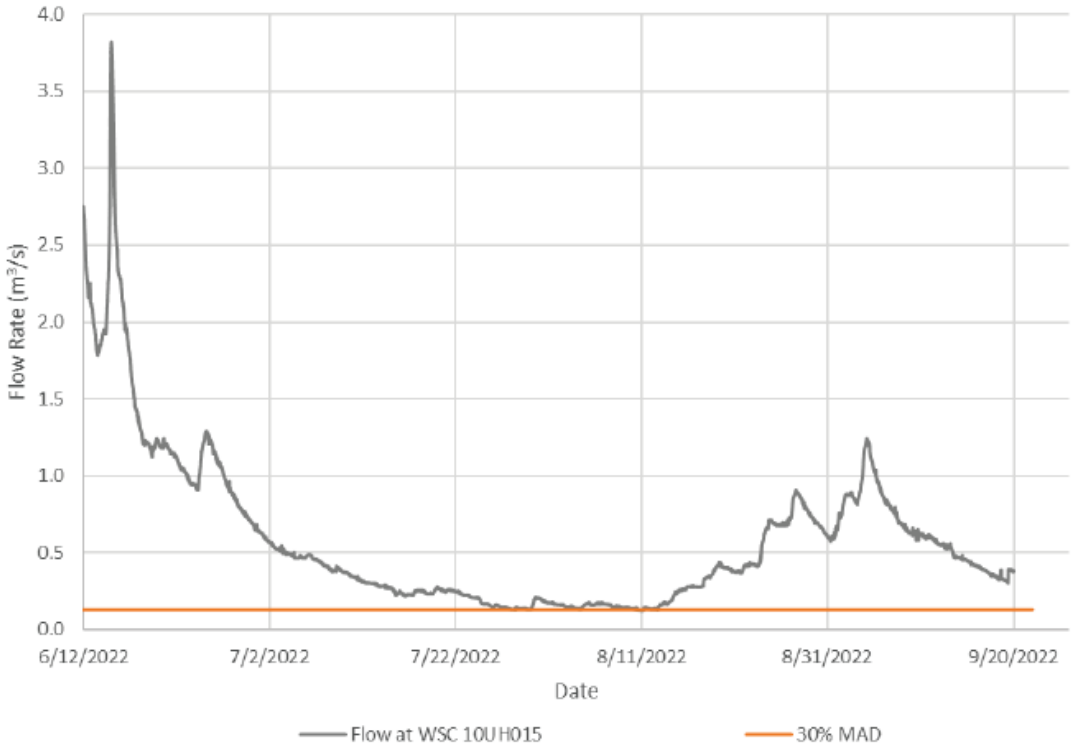
- Proposed water withdrawal rules
  - Only during freshet
  - Pumping stops at El. 203.3 m



Proposed Licence Amendments

Long Term Water Plan – Apex River Water Withdrawal Operation

- Proposed water withdrawal rules
  - Only when flows >30% of mean annual discharge (MAD)
  - Pumping rate of 10% of instantaneous discharge when flow of the Apex River is between 0.143 m^3/s and 0.156 m^3/s
  - Pumping rate of 20% of instantaneous discharge when flow of the Apex River is >0.156 m^3/s (33% of MAD)
  - September 2022 emergency withdrawals ranged from 18% to 42% (average of 31%), and fish habitat monitoring detected 10% change in key fish habitat parameters



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Remaining Issues and the City's Approach

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Remaining Issues and the City's Approach

Blasting near water

Intervenor Position	City's proposed path
DFO: Demonstrate with modelling that DFO's 50 kPa at overpressure guideline will be met at the nearest waterbodies	A **blasting analysis** (charge sizes and distances from waterbodies) will be conducted to confirm that the 50 kPa overpressure threshold will be met at both pumphouses. This will be provided to DFO as part of DFO's Request for Review process.

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Remaining Issues and the City's Approach

Lake Qikiqtalik Water Withdrawals

Intervenor Position	City's proposed path
CIRNAC/DFO: Operating rules are required for water withdrawals to protect fish and fish habitat	The City has proposed the following **operating rule**: - Water withdrawals will occur only during freshet, to a minimum water level of El. 203.3 m
DFO recommended a fish habitat monitoring program including contingency measures	A **Lake Qikiqtalik Monitoring Plan** will be developed in consultation with DFO that includes the following elements: - Establish a multi-year baseline of lake levels - Map habitat potentially sensitive to drawdown - Monitor lake and representative downstream habitat - Define cessation provisions and contingencies

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Remaining Issues and the City's Approach

Apex River Water Withdrawals

Intervenor Position	City's proposed path
DFO recommended a monitoring program that includes monitoring downstream fish habitat during withdrawals and hydraulic modelling	An **Apex River Monitoring Plan** in consultation with DFO that resembles the 2022 Supplemental Pumping Program monitoring program. Cessation provisions and contingencies will be described. The City has argued that hydraulic monitoring is not needed since in-stream monitoring of fish and fish habitat will be conducted.

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Remaining Issues and the City's Approach

Source water quality and quantity

Intervenor Position	City's proposed path
CIRNAC seeks seasonal baseline information for Lake Qikiqtalik	The City considers seasonal characterization and source-water sampling unnecessary, and questions what decisions would be made if this was collected. The City needs to focus on meeting public-health requirements, regulated outside of the water licensing process.
CIRNAC recommends that the Lake Geraldine water balance model be expanded to incorporate the new reservoir, and that it be updated annually	The City argues that its operational spreadsheet for determining supplemental pumping (shared in response to technical comments in July) is the correct tool to manage the City's water supply. The GoldSim water balance model used for planning is not needed for operations and will not be a good use of City resources.

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Remaining Issues and the City's Approach

Dam safety

Intervenor Position	City's proposed path
CIRNAC requested specific analyses be completed as part of the dam breach analysis for the new water reservoir.	The dam breach analyses will be completed in accordance with Canadian Dam Association requirements.
CIRNAC requested the Operation, Maintenance and Surveillance (OMS) manual include specific information.	The OMS manual will be prepared in accordance with Canadian Dam Association requirements.
CIRNAC recommended an enforceable licence condition requiring the Annual Report to identify the status of all dam safety recommendations.	This reporting is required under the current licence: - Part c of Schedule B requires reporting on dam safety aspects - Part m of Schedule B requires reporting on compliance

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Remaining Issues and the City's Approach

Wastewater treatment planning

Intervenor Position	City's proposed path
The wastewater treatment plant will require expansion or replacement in the next 10-15 years to meet the City's growing population. CIRNAC proposes explicit wastewater-capacity planning written into the new licence.	The City's capital planning is an ongoing and iterative process. The existing licence conditions provide an appropriate mechanism for addressing future expansions or facility replacements.

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Remaining Issues and the City's Approach

Water crossings

Intervenor Position	City's proposed path
Government of Nunavut: water crossings are subject to the Nunavut Waters Regulations and are not within the scope of the current water licence.	Include water crossings in the scope of the licence, distinguish between culvert replacements as a maintenance activity (no approval required if like-for-like replacements with no channel alterations) and crossing upgrades or new crossings (subject to conditions in Part F: Conditions Applying to Construction).
GN requests a licence-specific inventory and map identifying crossings, authorization status and mitigation requirements.	The City's Master Drainage Plan identifies most crossings within the City, and a separate inventory is unnecessary. Blanket licence coverage for routine culvert replacements is proposed, with site-specific submissions for larger works filed for Board approval under *Part F: Conditions Applying to Construction*.

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Remaining Issues and the City's Approach

Licence term

Intervenor Position	City's proposed path
CIRNAC recommended a 10-year water licence	The City seeks 20 years. The existing approval and amendment mechanisms can accommodate changes over time.

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Proposed Licence Changes

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Proposed Licence Changes

Revised draft water licence framework

- The City presented a draft water licence framework following the technical meeting and pre-hearing conference
- A revised draft water licence framework was submitted on October 22, 2026 for the Board's consideration

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