



CITY OF YELLOWKNIFE

GOVERNANCE AND PRIORITIES COMMITTEE AGENDA

Monday, December 5, 2022 at 12:05 p.m.

Chair: Mayor R. Alty,
Councillor S. Arden-Smith
Councillor G. Cochrane,
Councillor R. Fequet,
Councillor B. Hendriksen,
Councillor C. McGurk,
Councillor T. McLennan,
Councillor S. Payne, and
Councillor R. Warburton.

<u>Item</u>	<u>Description</u>
1.	Opening Statement: The City of Yellowknife acknowledges that we are located in Chief Drygeese territory. From time immemorial, it has been the traditional land of the Yellowknives Dene First Nation. We respect the histories, languages, and cultures of all other Indigenous Peoples including the North Slave Métis, and all First Nations, Métis, and Inuit whose presence continues to enrich our vibrant community.
2.	Approval of the agenda.
3.	Disclosure of pecuniary interest and the general nature thereof.
ANNEX A	
4.	A presentation regarding Submarine Pipeline Replacement.
ANNEX B	
5.	A memorandum regarding whether to designate all Councillors as signing authorities for the disbursement of the municipal corporation's money.

City of Yellowknife

Submarine Pipeline Replacement

Open House

November 2, 2022

Delivering a better world

Agenda



Introducing the Project

- Project History
- Project Drivers
- Project Schedule



Project Elements

- Submarine Pipeline Replacement
- Pumphouse 1 + 2 Upgrades
- Intake Screen Design
- Land Use
- Regulatory + Engagement



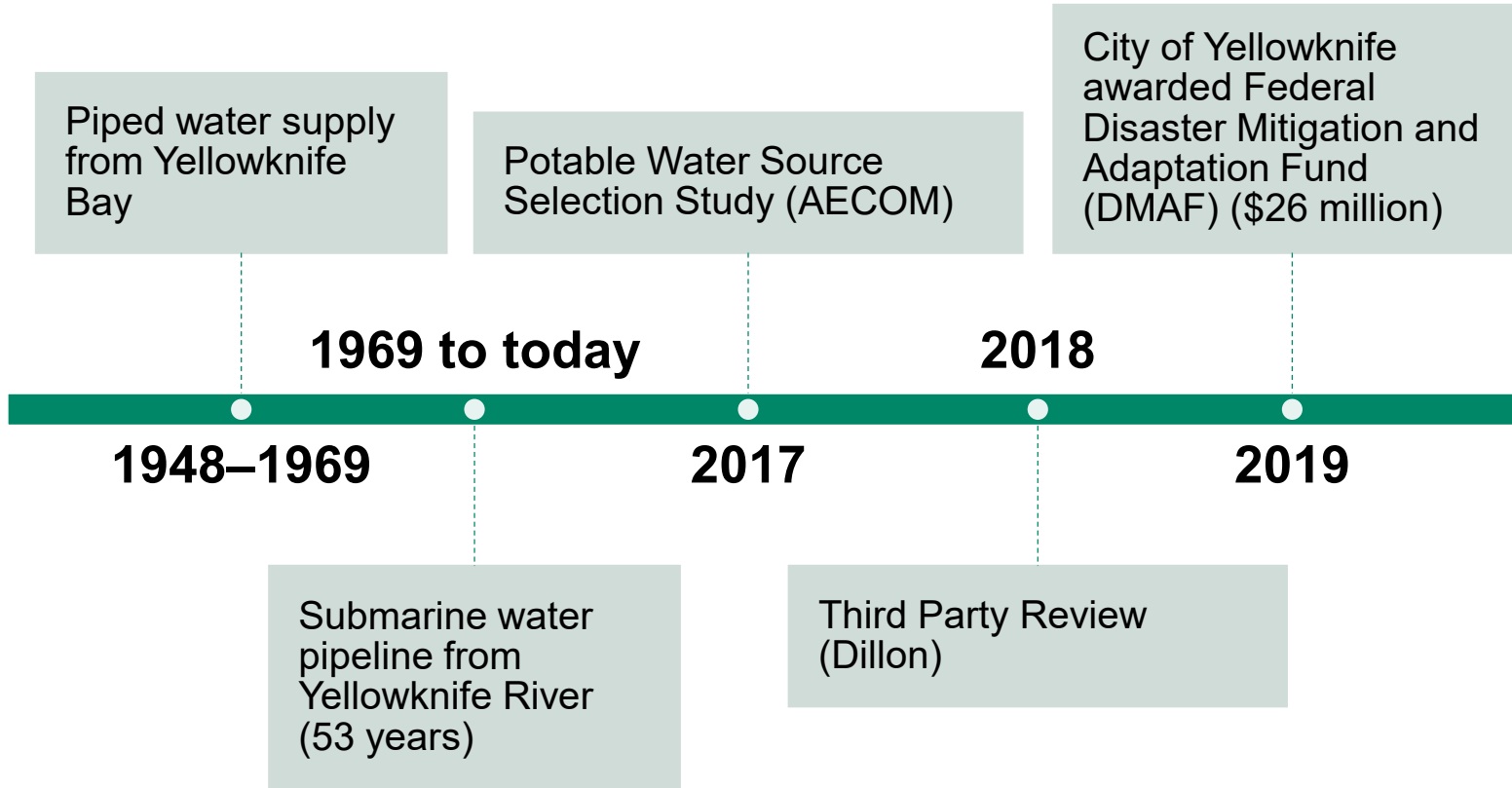
Key Considerations

- Water Quality + Monitoring
- Construction Sequencing
- Construction Timing

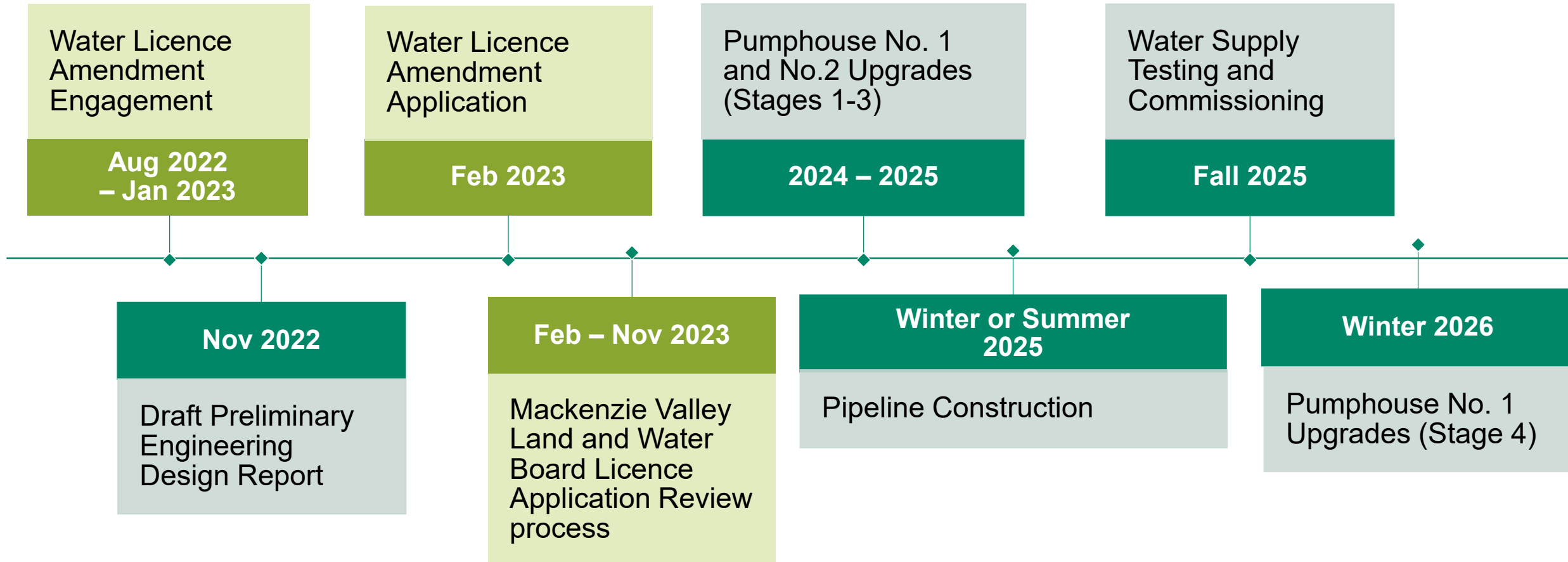
Introducing the Project

- Project History + Drivers
- Project Schedule

History + Drivers



Project Timeline



* Estimated schedule - to be revised as planning progresses

Project Elements

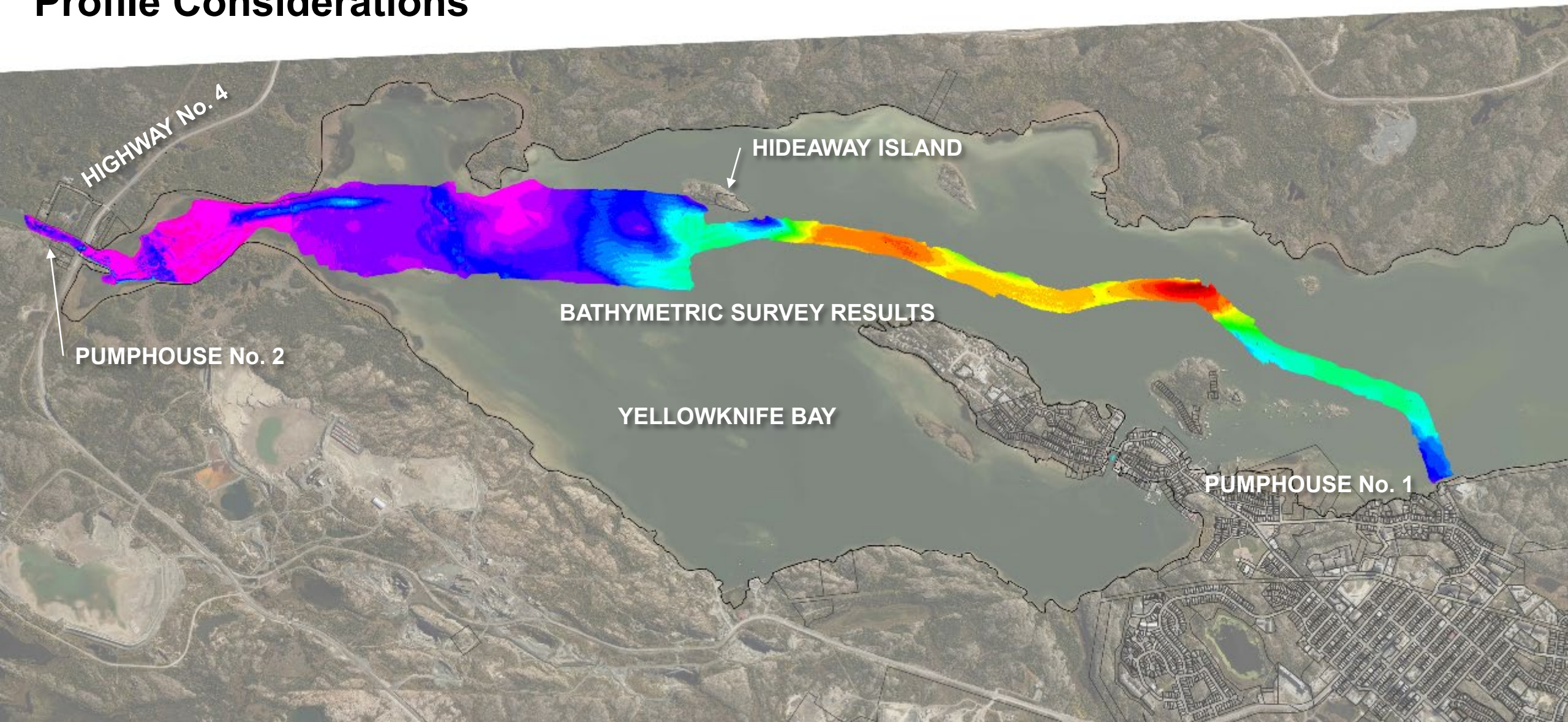
- Submarine Pipeline Design + Replacement
- Pumphouses
- Intake Screen Design
- Land Use
- Regulatory + Engagement

Submarine Pipeline Design + Replacement

- Profile Considerations
- Proposed Pipeline Routes
- Pipeline Material & Features



Profile Considerations

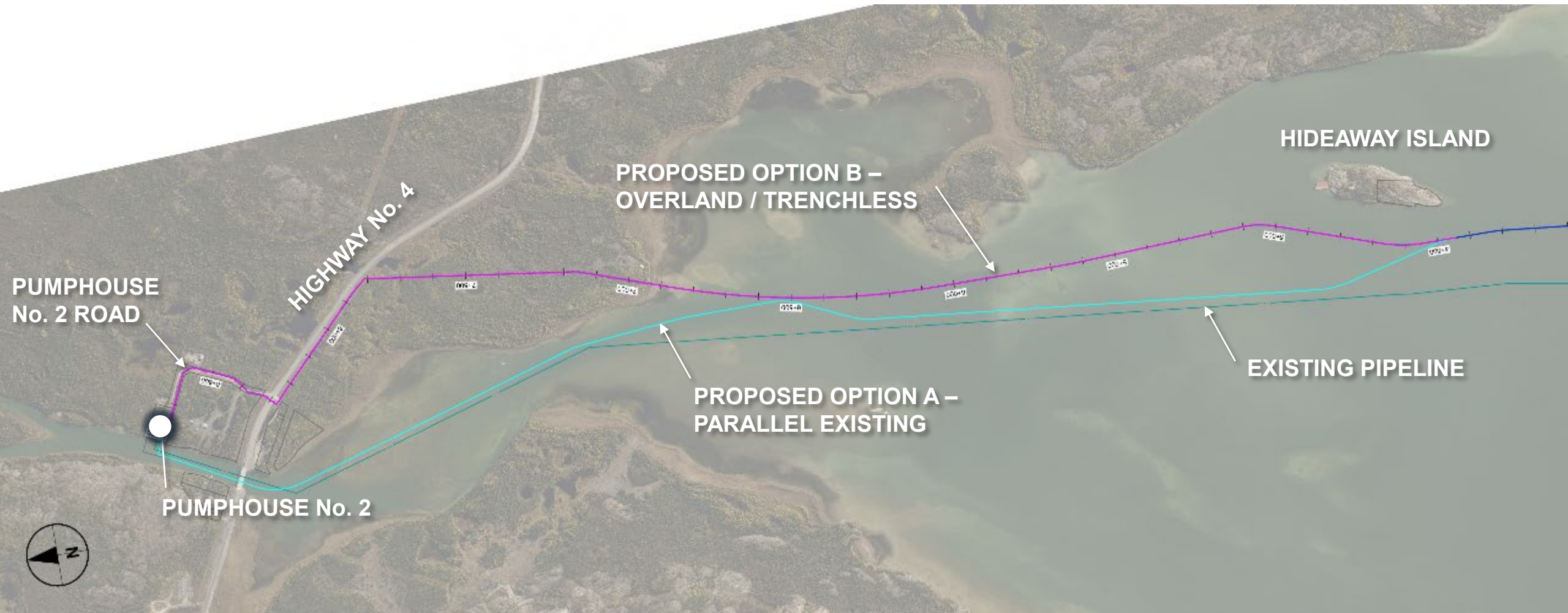


Proposed Alignment – Overall



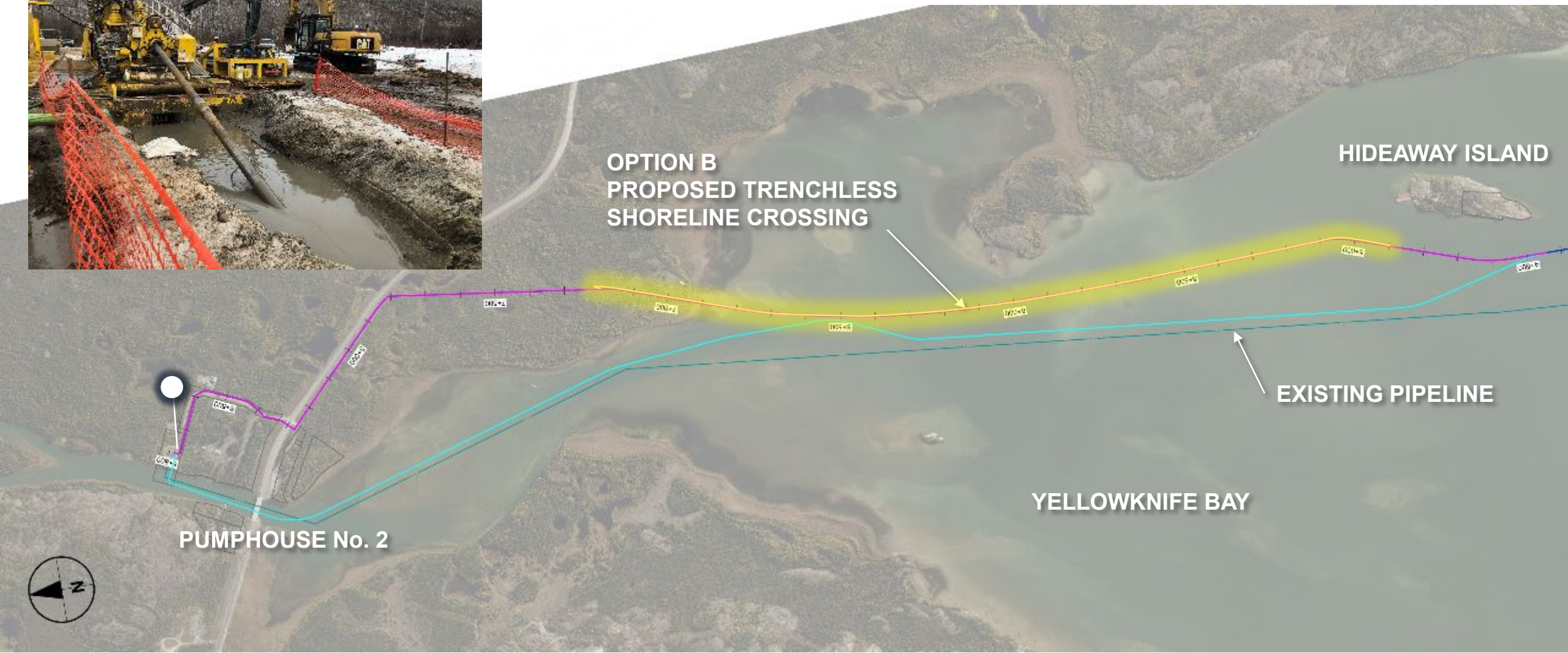


Proposed Pipeline – Option A & B Alignments



Recommended - Pipeline Option B

Horizontal Directional Drilling





**OPTION B
PROPOSED TRENCHLESS
SHORELINE CROSSING**

HIDEAWAY ISLAND

HIGHWAY No. 4

PUMPHOUSE No.2 ROAD

WELEDEH GATHERING AREA

**YELLOWKNIFE RIVER
TERRITORIAL DAY
USE PARK**

Pipeline Material + Features

High Density Polyethylene (HDPE)

- Proven submarine pipeline construction
- Does not corrode
- Relatively light material
- Concrete weights required for submersion



Steel

- Existing pipeline material
- Susceptible to corrosion

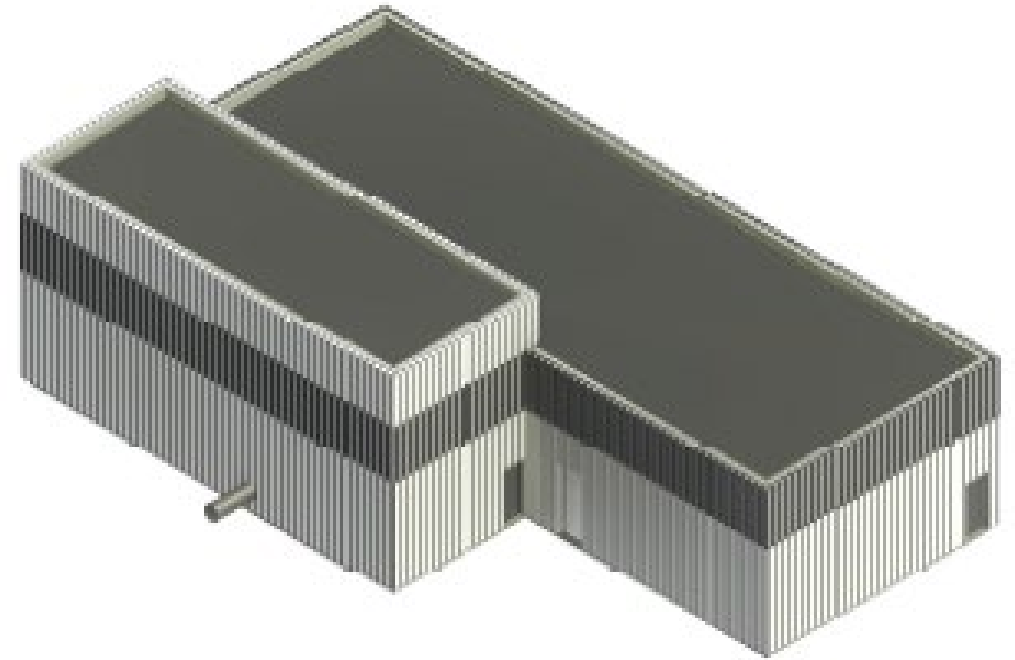


Pumphouses



Pumphouse No. 2

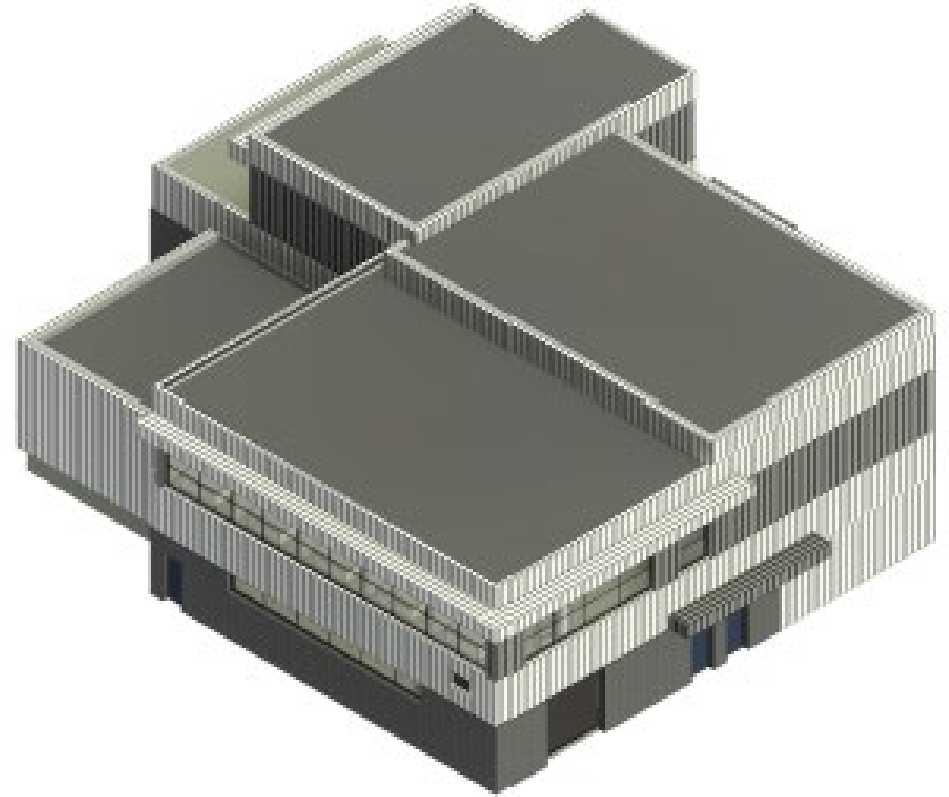
- 75 year design life for structure
- Replace pumps and piping
- New ventilation, cooling
- New generator
- Air compressor for intake screens
- Electrical and heating upgrades
- Building and road expansion



Conceptual Rendering – Pumphouse No. 2

Pumphouse No. 1

- 75 year design life for new structure
- Replace oldest part of structure
- Piping
- Heat, ventilation, cooling
- Generator
- New office space on second floor
- Site grading, parking, water/wastewater






Conceptual Rendering – Pumphouse No. 1

Intake Design

A close-up photograph of a fish, possibly a small bass, caught in a circular intake screen. The screen is made of a fine, dark mesh and is illuminated by a bright light source, creating a strong glare. A red, brush-like seal is visible along the top edge of the screen, and a dark, metallic frame is visible at the top of the image.

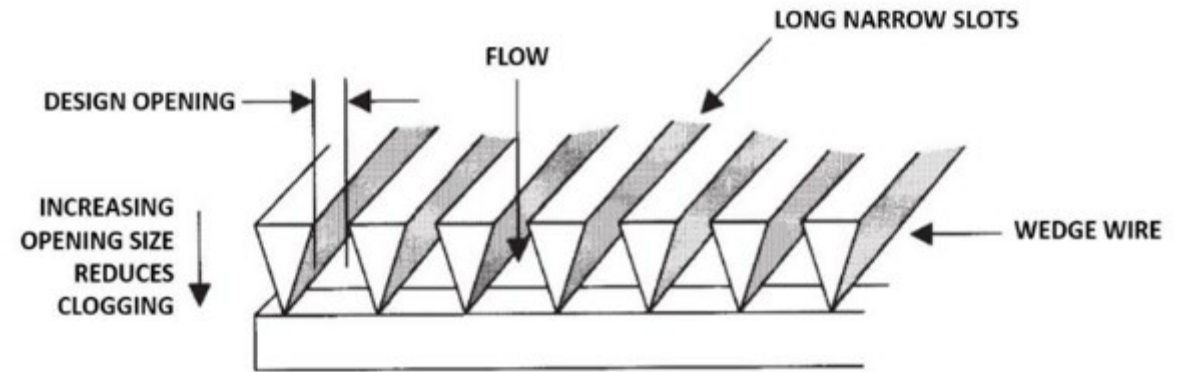
Regulations
Full Intake Screen
Low Profile Half Intake Screen

Department of Fisheries and Oceans Code of Practice: End-of-Pipe Fish Protection Screens

Key Fish Species in Yellowknife Bay				
Species Group	Species	Wiilideh Name	DFO required approach Velocity	Photos
Salmon and Walleye	Inconnu	wiilii	0.098 m/s	
	Lake Trout	łiwezo		
	Lake Whitefish	łi		
	Cisco	wiilitsòa		
	Arctic Grayling	ts'èt'ìq		
	Longnose Sucker	dohdori		
	Ninespine Stickleback	-		
	Slimy Sculpin	-		
Pike	Northern Pike	łhdaà	0.055 m/s	
Eel	Burbot	Nqhkwe	0.035 m/s	

Department of Fisheries and Oceans Code of Practice: Key Design Requirements

- Effective screen area
- Screen material
- Screen shape



Intake Replacement Locations

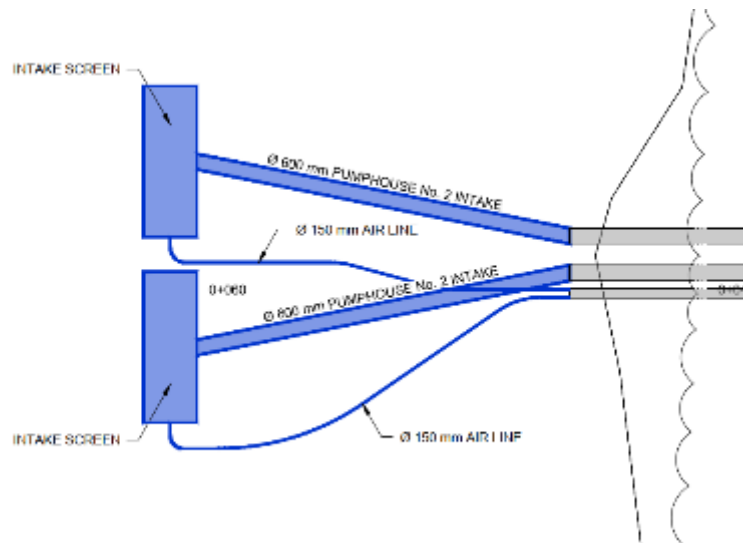
1) River Intake at Pumphouse No. 2
(Primary)



2) Bay Intake at Pumphouse No. 1
(Emergency / Secondary)



Yellowknife River - Low Profile Half Intake Screens



- Two screens each installed on existing 600mm intake pipe
- Mounted to a concrete base
- Ideal for rivers and locations with shallow depth
- Able to operate at half the water depth of standard / traditional intake screens.
- Designed to counteract the forces of the River
- 0.035 m/s maximum approach velocity at design flow of submarine pipeline
- Compressed air cleaning system

Yellowknife Bay – Cylindrical Tee Style Screen



- New Tee screen will replace existing 600mm intake pipe
- Ideal for lakes and other locations with abundant depth
- Space efficient and easy to install relative to the half intake style screen
- 0.035 m/s maximum approach velocity at 20-year maximum instantaneous Water Treatment Plant flowrate

Land Use

- Pumphouse No. 2
- Pumphouse No. 1
- Submarine Pipeline Lease Easement



Pumphouse No. 2: Option B

- Overlapping land interests south of Highway No. 4 (Ingraham Trail)
- Proposed pipeline route will require construction and permanent easement

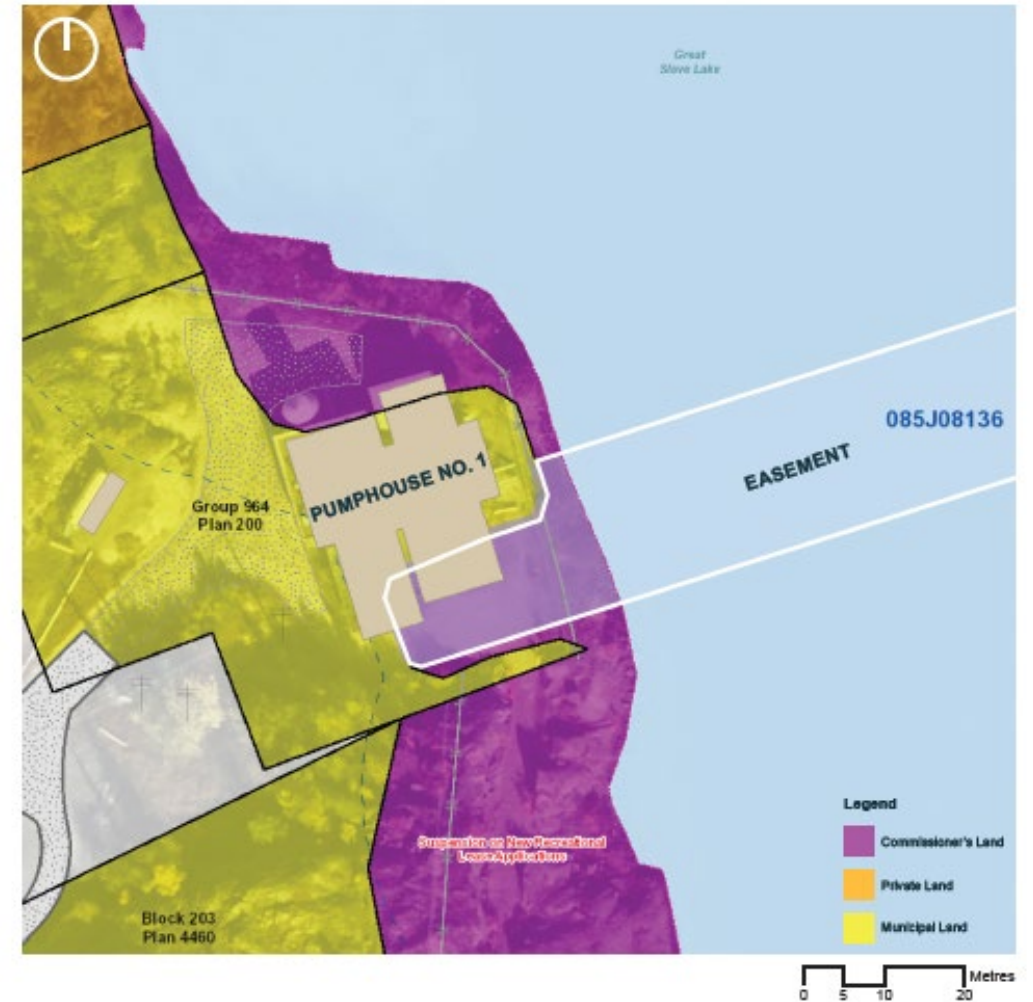


Credit: <https://www.maps.geomatics.gov.nt.ca/ATLAS>



Pumphouse No. 1

- Commissioner's land between Pumphouse No 1 property and Yellowknife Bay
- Proposed Pumphouse No 1 expansion will further encroach on this property
- Connects to existing pipeline easement



Credit: <https://www.maps.geomatics.gov.nt.ca/ATLAS>



Submarine Pipeline Lease

- Lease agreement between City and Government of the Northwest Territories
- Existing pipeline lease easement 20 m width along existing alignment (16.78 ha)
- Revised alignment will require revised lease agreement



Regulatory Context



Regulatory Requirements and Reviews

MVLWB

- Preliminary Screening *Mackenzie Valley Resource Management Act*
- Amendment Application to Type A Water Licence MV2021L3-0003 + plan updates
 - Engagement
 - Spill Contingency
 - Waste Management
- Type A Land Use Permit
 - Geotechnical investigations
 - Pumphouse expansions and upgrades
 - Pipeline alignment overland route and Horizontal Directional Drilling



Source: www.cklradio.com

Regulatory Requirements and Reviews

Department of Fisheries and Oceans *Fisheries Act*

- Codes of Practice
- Measures to protect fish and fish habitat
- Request for Review

Transport Canada *Canadian Navigable Waters Act*

Government of the Northwest Territories

- Lands

Others

- Explosives permit
- City permits



Cisco run at Tartan Rapids, Yellowknife River. Photo: Paul Vecsei

Considerations

- Drinking Water Quality + Monitoring
- Decommissioning the Existing pipeline
- Construction Timing

Drinking Water + Quality

- Water is drawn from Yellowknife Bay for maintenance and emergencies
- The City will seek permission to draw water from the Bay for a period of construction.
- Water is tested monthly, annually, and each time water is drawn from the Bay.



Decommissioning the Existing Submarine Pipeline

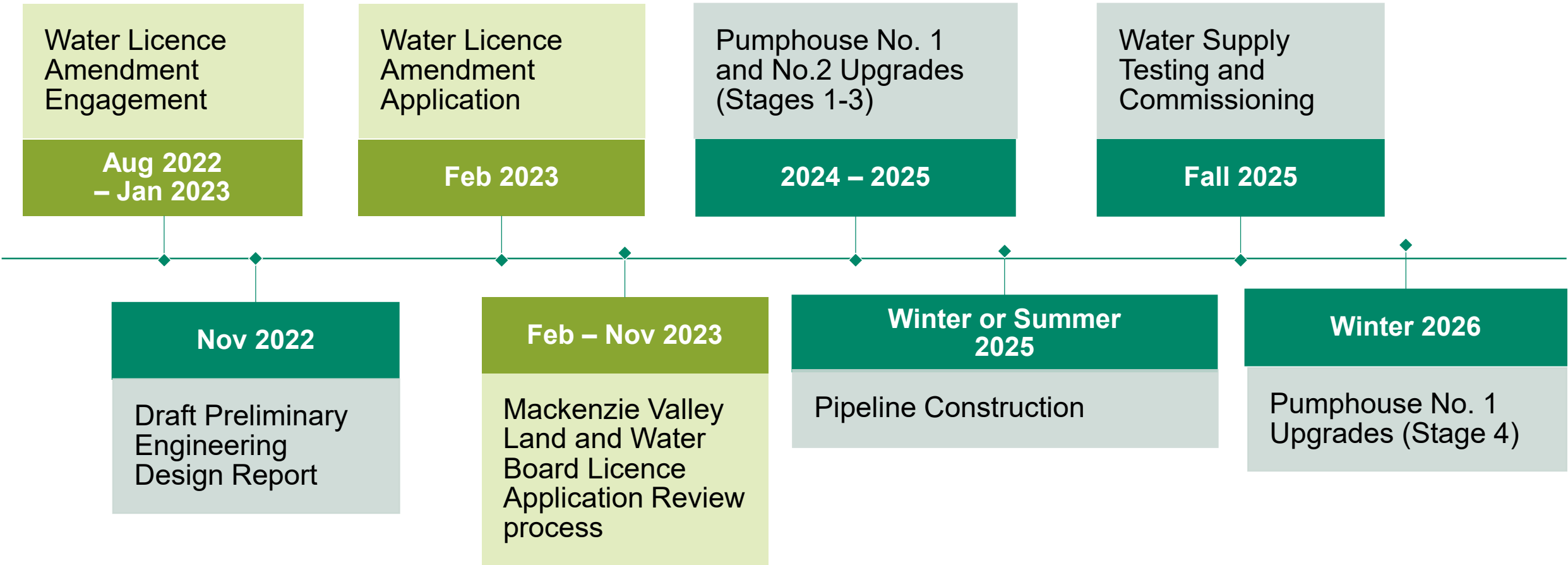
- Existing pipeline will be left in place.
- Limit sediment disturbance to Yellowknife Bay lake bed
- Localized, short term disturbance as pipeline settles.
- Seeking stakeholders' input to understand concerns
- Ongoing sediment sampling and water quality monitoring during construction



Construction Timing



Construction Sequencing



* Estimated schedule - to be revised as planning progresses

Submarine Pipeline Construction (1969)

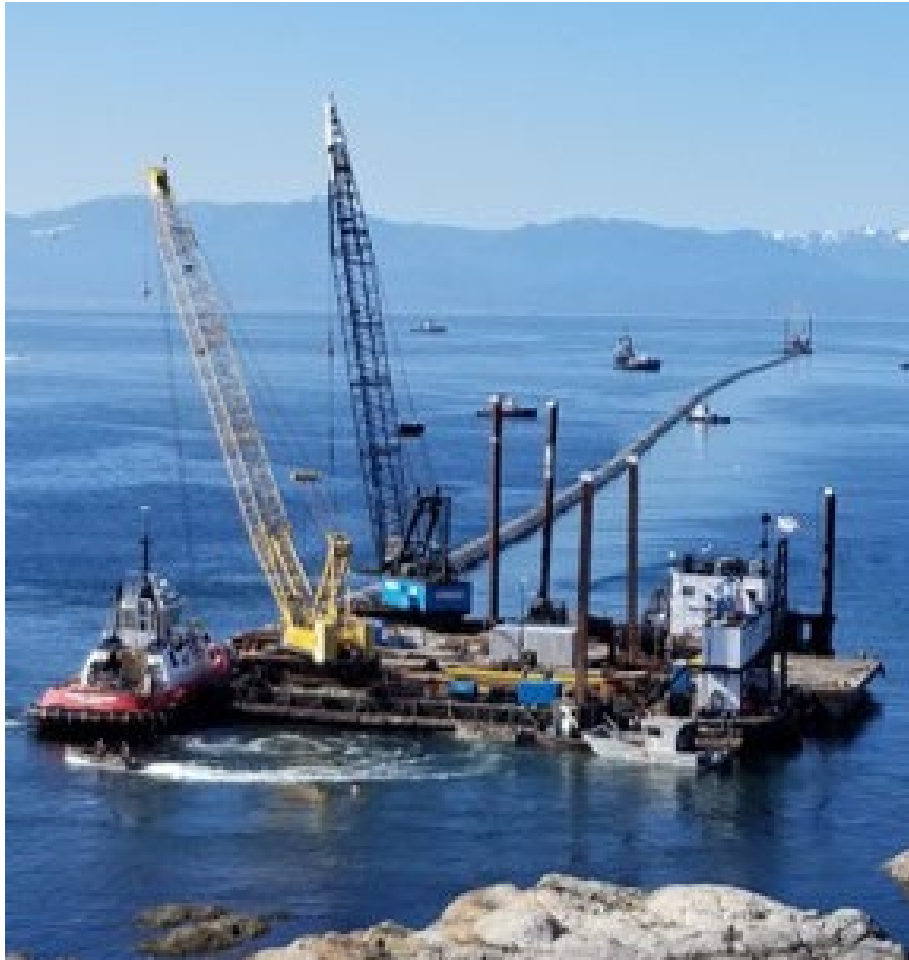


Photo credit:
Ray Coutts



Submarine Pipeline Construction

Summer Installation



vs

Winter Installation



Discussion & Questions



CITY OF YELLOWKNIFE

MEMORANDUM TO COMMITTEE

COMMITTEE: Governance and Priorities

DATE: December 5, 2022

DEPARTMENT: Corporate Services

ISSUE: Whether to designate all Councillors as signing authorities for the disbursement of the municipal corporation's money.

RECOMMENDATION:

That Council, in accordance with s.100(2)(b) of the *Cities, Towns and Villages Act*, designate Mayor Rebecca Alty, Councillor Stacie Arden-Smith, Councillor Garrett Cochrane, Councillor Ryan Fequet, Councillor Ben Hendriksen, Councillor Cat McGurk, Councillor Tom McLennan, Councillor Steve Payne, and Councillor Rob Warburton to be signing authorities for disbursement of the municipal corporation's money in the event of the absence of both the Mayor and Deputy Mayor.

BACKGROUND:

The City of Yellowknife holds multiple bank accounts with TD Canada Trust. In July 2022 Council updated its corporate resolution regarding signing authorities. That resolution allows the Mayor and City Administrator to update the named signing authorities with TD Canada Trust. However, Council must first designate new councillors to be signing authorities in accordance with the *Cities, Towns and Villages Act*.

Designating all City councillors as signing authorities allows for disbursements to continue to be made in the absence of both the Mayor and Deputy Mayor.

COUNCIL POLICY / RESOLUTION OR GOAL:

GOAL #2: Delivering efficient and accountable government

Council Motion 0121-22 "That:

1. Council, in accordance with s.100(2)(b) of the *Cities, Towns and Villages Act*, designate Councillor Konge, Councillor Morgan and Councillor Payne to be signing authorities for disbursement of the municipal corporation's

- money in the event of the absence of both the Mayor and Deputy Mayor;
and
2. Council adopt the TD Canada Trust Corporate Resolution attached to and forming part of the July 25, 2022 Special Council Agenda, regarding signing authorities for the Municipal Corporation and the transactions that these officers can undertake.”

APPLICABLE LEGISLATION, BY-LAWS, STUDIES, PLANS:

Cities, Towns and Villages Act, S.N.W.T. 2003,c.22, as amended.

CONSIDERATIONS:

Legislative

The *Cities Towns and Villages Act* (the Act) requires the Mayor, or Deputy Mayor (in the absence of the Mayor), and the City Manager to sign on all disbursements of the municipal corporation’s money (see sections 100(2) and 39(2)). Section 100(2) of the Act allows Council to designate a councillor (or councillors) to sign for disbursements of the municipal corporation’s money. Designating all City councillors as signing authorities allows for disbursements to continue to be made in the absence of both the Mayor and Deputy Mayor.

Corporate Impact

An updated designated signing authorities is needed to ensure continued efficient banking services.

ALTERNATIVES TO RECOMMENDATION:

That Council designate specific Councillors as signing authorities for the disbursement of the municipal corporation’s money.

RATIONALE:

The recommendation follows the principles of prudent financial management. Appointing the Mayor, along with their potential alternates, as signing authorities ensures disbursements of funds can continue seamlessly in the event of absences, either anticipated or otherwise.

ATTACHMENTS:

None.

Prepared: November 24, 2022; LV

Revised: November 25, 2022; LV