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**Project Update:  
Water Exploration and  
Water Infrastructure  
Renewal**

**Blacks Harbour and Beaver  
Harbour, NB**

Council Committee of the  
Whole Meeting  
Eastern Charlotte, NB

June 09, 2026

Englobe No. 2112134



Credit: Eastern Charlotte Waterways (<https://swnbclimate.ca/about/>)

# Agenda



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- **Recap: Project Refresher**
  - Phase 1 - Water Exploration
  - Phase 2 - Water System Assessment and Water Infrastructure Renewal:
    - Phase 2A: System Assessment /Short-Term Operational Improvements
    - Phase 2B: Water Infrastructure Renewal Concept Design
- **Project Update - Work Completed to date and Project Status**
- **Next Steps/Timeline/Takeaways**
- **Questions & Discussion**



# Recap: Project Refresher

## Phase 1: Water Exploration

### Phase 2 - Water System Assessment and Water Infrastructure Renewal:

- Phase 2A: System Assessment/Short-Term Operational Improvements
- Phase 2B: Water Infrastructure Renewal Concept Design

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## Phase 1: Water Exploration

- To establish the location(s) of a new water source (well) and define infrastructure needs for a future municipally owned water system
- Considered the first step in a long-term municipal water system upgrade, including:
  - Preliminary evaluations
  - Environmental Impact Assessment (EIA) registration and review
  - Landowners' drilling agreements
  - Construction of preliminary access road(s)
  - Preliminary well drilling & pumping tests
  - Provincial review and approval process
  - Funding application for infrastructure construction
- \* **Does not include** connecting new well(s) to the water system, new or upgraded water infrastructure, short-term water quality improvement measures, or evaluation of current water quality concerns.



# Recap: Project Refresher

## Phase 1: Water Exploration

### Phase 2 - Water System Assessment and Water Infrastructure Renewal:

- Phase 2A: System Assessment/Short-Term Operational Improvements
- Phase 2B: Water Infrastructure Renewal Concept Design

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## Phase 2: New Water System Assessment and Infrastructure Renewal

### Phase 2A: System Assessment - Operational Improvements (Short-Term Improvements)

- Review of water system documents
- “Gap Analysis” to identify additional documents required
- Development of proposed operational improvements

### Phase 2B: Water Infrastructure Renewal Concept/Funding Application (Short-Term Solution)

- Preliminary concept, cost estimate and financial analysis
- Preliminary discussion with the major industrial user
- Funding application process/project phasing

### Future Phase(s): Environmental Review and Permitting Process, Design and Construction (Pending Funding Approval)

- Environmental review process, EIA and permitting, public and indigenous consultation
- Design
- Construction and commissioning of new water infrastructure



# Project Update

## Phase 1

(Water Exploration)

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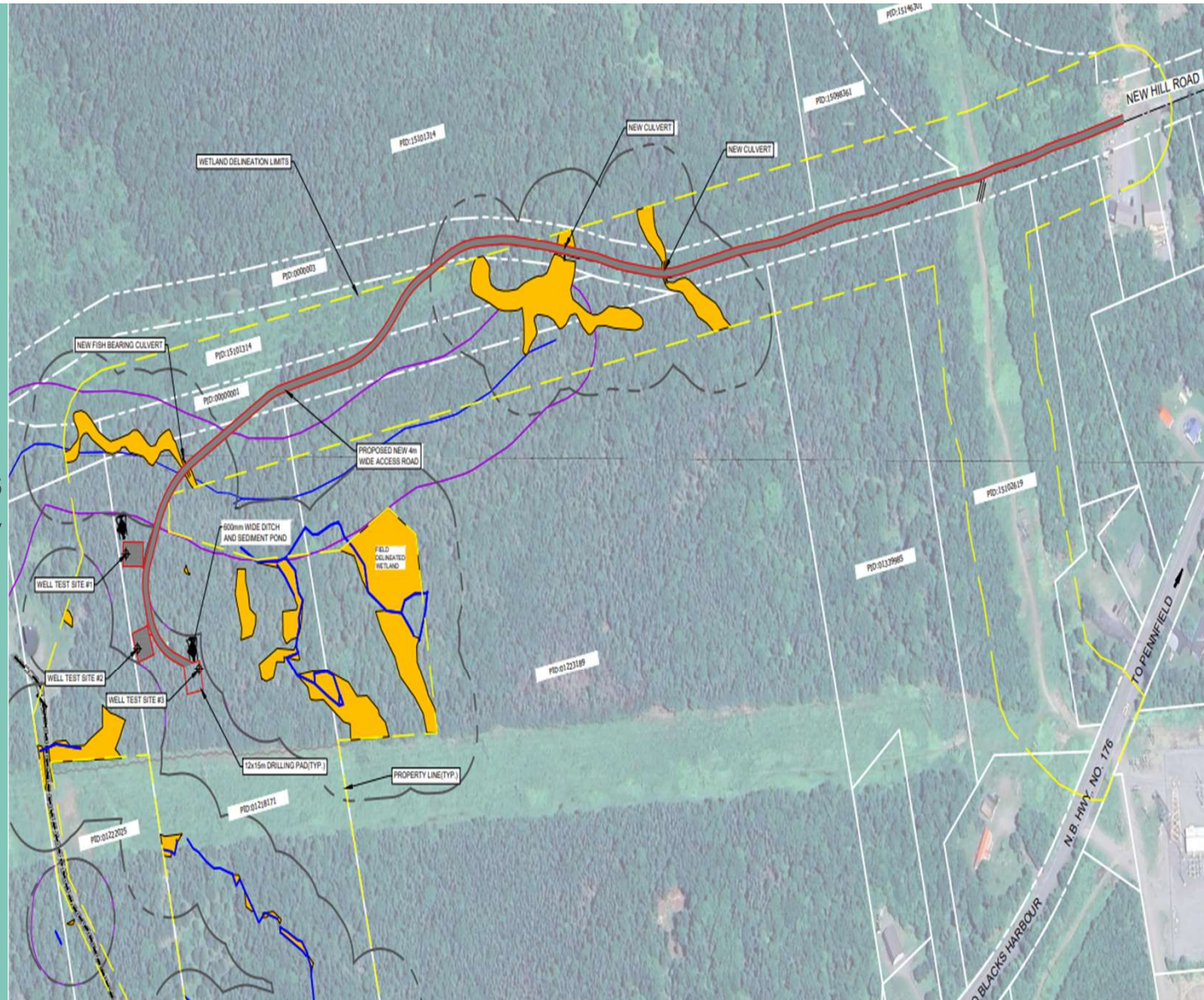


# Project Update

Phase 1: Water Exploration

Target Area - June 2026

Current Well Drilling Targets  
(June 2026) and Preliminary  
Access Road



# Project Update

## Phase 1: Water Exploration

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### Completed since November 19, 2025, meeting:

- Meetings and discussions with multiple property owners
- On-site topographical survey
- Environmental screening of an initial study area (wetlands, birds and rare plants)
- Confirmed preliminary well drilling targets with the landowner's authorization
- Development of preliminary access road concept (Multiple Locations)
- EIA Review process and WSSA Initial Application for Zone E Targets
- Revised access location following further discussions with landowners and the Province of New Brunswick
- Wetland delineation and compensation
- Finalize request for quotations documents to obtain contractors' pricing for access road and preliminary well drilling

### Landowner Approvals:

- Received approval from all affected landowners and NBDTI for the construction of the preliminary access road
- Received approval from the landowner for the proposed drilling site with three (3) potential preliminary wells and for preliminary assessment



# Project Update

## Phase 1: Water Exploration

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### Next Steps:

- Submission of the bird nesting survey results to the Technical Review Committee (EIA)
- Submission of the newly developed construction plan and schedule based on the bird nesting survey results to the Technical Review Committee (EIA)
- Construction of the preliminary access road for the well drilling equipment
- Preliminary well drilling and initial tests

### Timeline:

- Environmental submissions and approval - June 15 to July 31, 2026
- Construction of the preliminary access road - September 1 to September 30, 2026
- Preliminary well drilling and initial tests - October 1 to November 30, 2026

### Future Steps (based on favourable results of the preliminary well drilling part of a future provincial funding application):

- Final well construction
- 72-hour well pump testing, reporting, consultation process and final EIA requirements
- Conceptual Design and Preliminary Cost Estimates

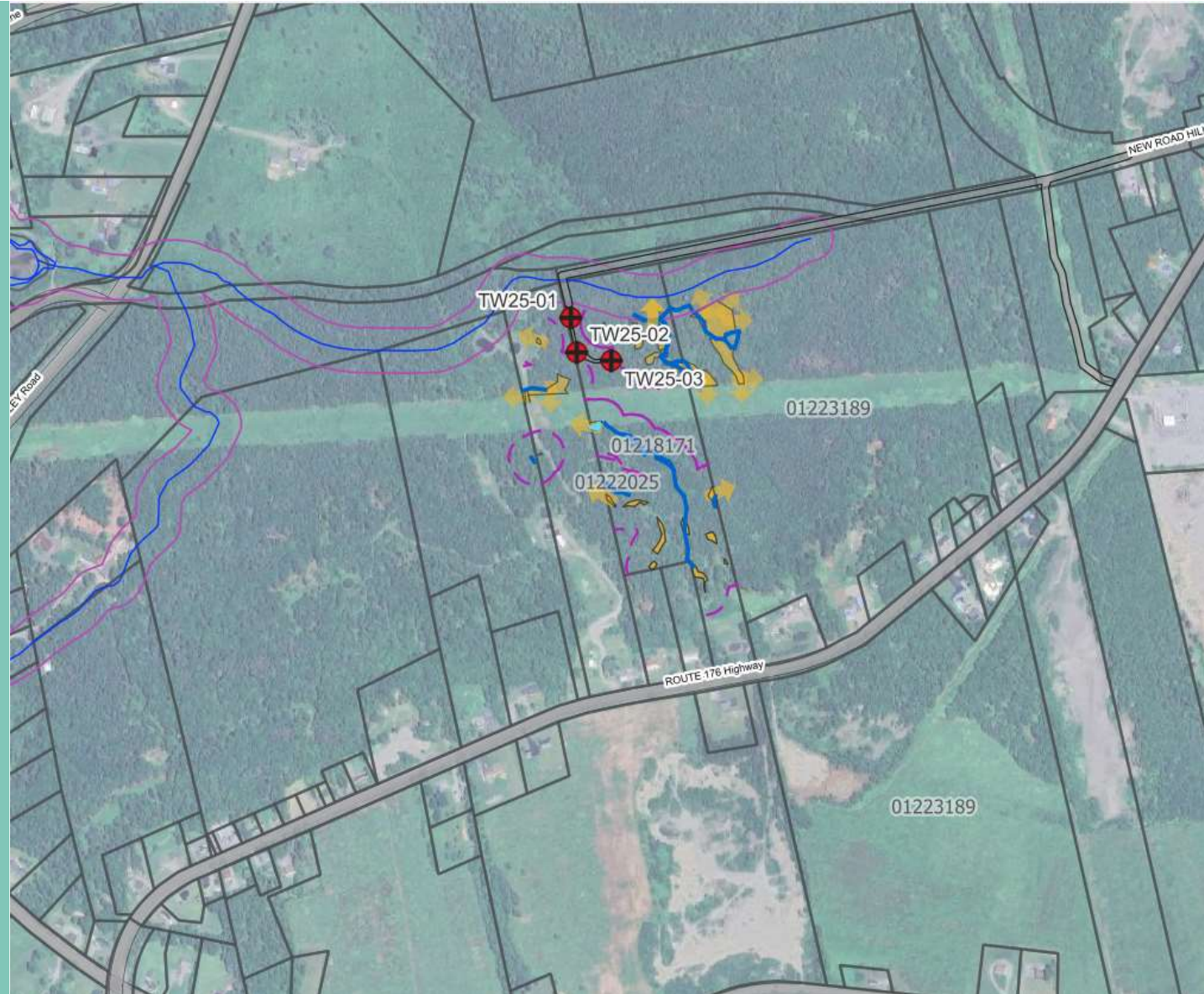


# Project Update

Phase 1: Water Exploration  
(Well Development & Testing)

Current Target Areas and  
Preliminary Access Road

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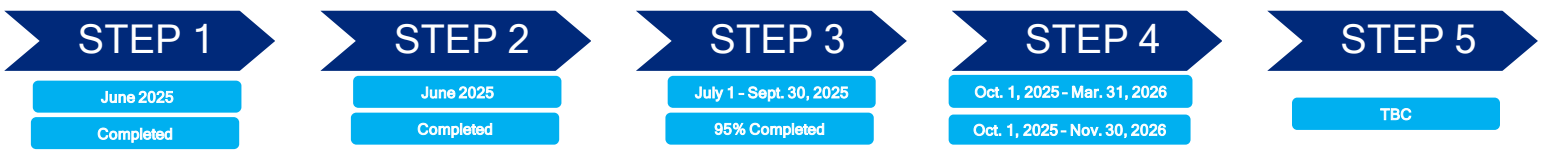
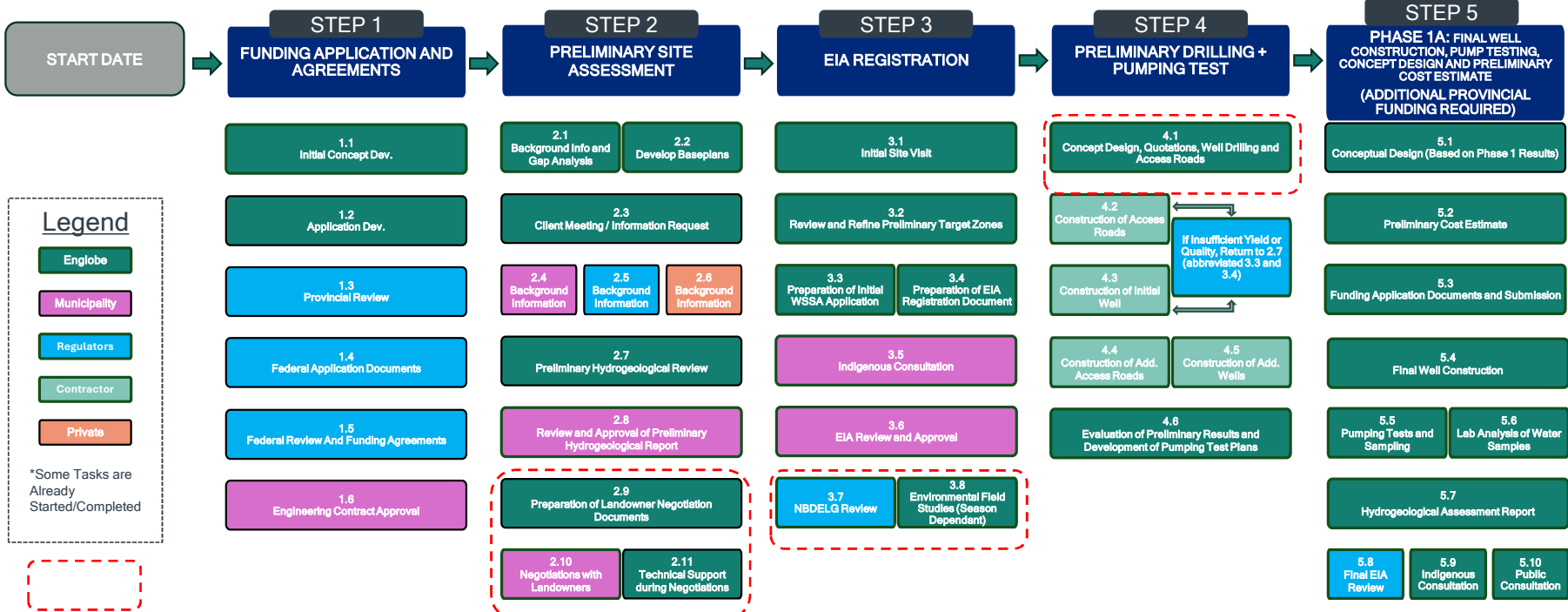


**Project Roadmap**  
**Phase 1 - Water Exploration**  
 2026-06-09



**PHASE 1 - WATER EXPLORATION**

**FUTURE PHASE**



Timeline Presented on 2025-11-19  
 Updated Timeline

# Project Update Phase 2

Phase 2A: System  
Assessment/Short-Term  
Operational Improvements

Phase 2B: Water Infrastructure  
Renewal Concept Design

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# Project Update - Phase 2

Phase 2A: System  
Assessment/Short-Term  
Operational  
Improvements

Phase 2B: Water  
Infrastructure Renewal  
Concept Design

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## Recap: Phase 2 Project Approach

### Objective:

- To provide a short-term solution for improving the current water quality issues
- To reduce the timeframe for short-term water quality improvement
- To begin working on water quality improvement measures prior to completion of phase 1 (water exploration)
- To reduce over-pumping of existing wells and potential impacts on nearby private wells
- Focus on infrastructure improvements that will be part of the future major infrastructure renewal project

### Approach:

- Phase 2A: System Assessment - O&M Improvements / Communication Process (Short-Term Operational Improvements)
- Phase 2B: Water Infrastructure Renewal Concept Design
- Future Phase - Environmental Review, Design and Construction - Initial Water Infrastructure Renewal Items
- Future Phase - Municipal Water Distribution System Infrastructure Renewal



# Project Update

## Phase 2A: System Assessment/Short-Term Operational Improvements

## Phase 2B: Water Infrastructure Renewal Concept Design

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### Work in Progress (August 2025 to May 2026):

#### 2A: Operational Improvements

- Meeting with private water system staff
- Meeting with municipal water staff
- Obtain and review water system documents from multiple sources (*Municipality, Province, Private water system*)
- Gap analysis
- On-site condition review (major components)
- Development of water system model
- Development of new watermain flushing plan
- Review of raw water quality (wells)
- Watermain On-site Flushing Assistance
- Watermain Flushing Summary Report with recommendations

#### 2B: Water Infrastructure Renewal Concept Design

- Topographical survey of key infrastructure locations
- Development of theoretical water demands (*current and future scenarios*)
- Preliminary modelling - proposed water transmission main concept (*Blacks Harbour & Beaver Harbour*)
- Blacks Harbour and Beaver Harbour Water System Upgrades Report and Preliminary Cost Estimate
- Preliminary Funding Letter of Intent and Meeting with RDC (Provincial Funding Agency)
- Discussions with Major Water Users



# Project Update

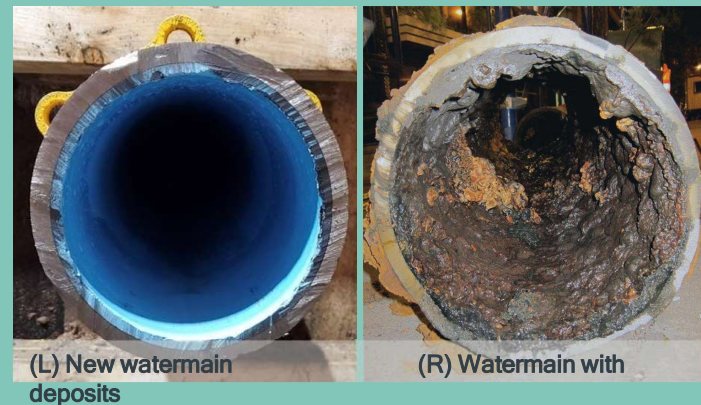
## Phase 2A: System Assessment / Short-Term Operational Improvements

### Key Preliminary Findings:

- System operators are following provincial requirements
- Considerable background documents have been provided (*~360 since late Oct.*)
- Well water quality - most parameters meet regulatory limits, except for the manganese (0.186 mg/L vs 0.02 mg/L limit - New regulatory limit as of January 2026)
- Turbidity issues at the end of the water transmission line, prior to chlorination and distribution at the Farm Road Reservoir
- Water discoloration/deposit issues potentially caused by daily water movement patterns

### What is the impact of manganese (and iron) in the raw water supply?

- All municipal water must be disinfected, typically using chlorine
- When chlorine is added to water containing iron and manganese, oxidation occurs and forms particles that deposit in the pipes and reservoirs
- These deposits can be transported through the system as water is used



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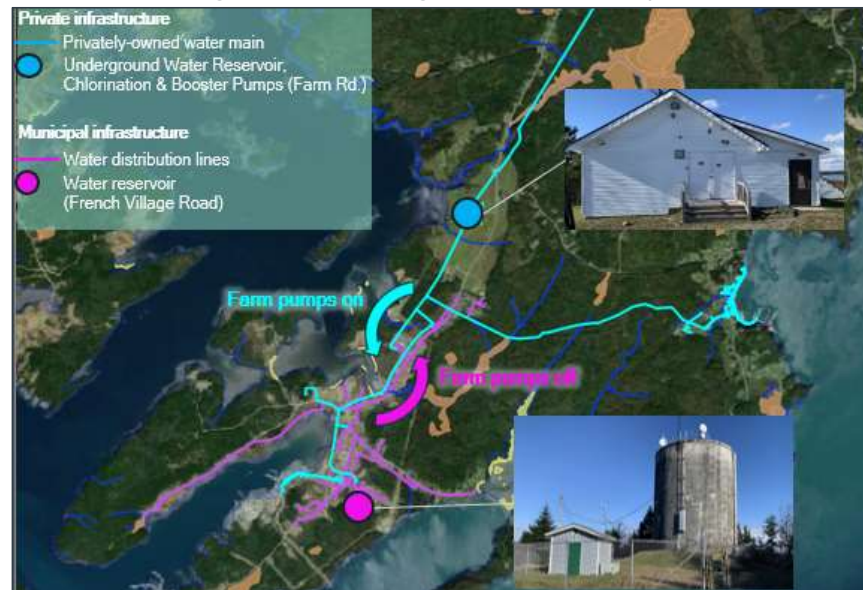


# Project Update

## Phase 2A: System Assessment / Short-Term Operational Improvements

### Key Preliminary Findings: Water quality: what can we do now?

- Initial focus: Watermain Flushing Plan - New Site-Specific Strategy
  - Due to water chemistry and current pipe conditions, a specific, thorough flushing sequence was developed
  - Expected to provide short-term improvements, but will not resolve long-term operational issues and water quality concerns
- New Watermain Flushing Plan completed on March 20, 2026, and the system was flushed between April 16 and 17, 2026. Additional work to be completed:
  - Specific reservoir cleaning schedule to be reviewed and implemented
  - Implement flushing plan on a regular schedule (minimum twice a year)



## Project Update

# Phase 2B: Water Infrastructure Renewal Concept Design

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- Current Major Components of the existing water system are at the end of their useful life with major deficiencies that require complete replacement.
- Manganese Concentrations exceed the new, more stringent NB Drinking Water Guidelines effective January 2026. Currently, manganese (and iron) are not treated, leading to its oxidation and precipitation throughout the entire water distribution system.
- Key Items to be renewed/New Infrastructure requirements:
  - Replacement of aging transmission mains (Blacks Harbour and Beaver Harbour)
  - Development of a new municipally owned elevated reservoir (replacing the Farm Road Reservoir and Pumps)
  - Construction of a new Water Treatment Plant to effectively remove Manganese and Iron
  - Upgrades to the well infrastructure, system monitoring, and flow metering.



# Project Update

## Phase 2B: Water Infrastructure Renewal Concept Design

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# Project Update

## Phase 2B: Preliminary Water Renewal Concept

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### Preliminary Financial Assessment

- Total Preliminary Construction Cost Evaluation
  - ± \$ 38M (Net HST)
- Cost shared Approach
  - Federal, Provincial, and Municipal
  - Varying contributions per Funding Program (evaluated at 16.67%, to be confirmed)
  - Municipal Contribution ± \$ 6,4M
- Annual Loan Repayment based on 5% financing over 25 years and annual O&M Cost
- User fee repayment system affected by the following items:
  1. Total number of equivalent users (current and future)
    - Equivalent users to be within provincial average for municipalities with recent major upgrades
  2. Major users
    - Based on water consumption/requirements
- Preliminary fee analysis shows Provincial Average for municipalities with recent major upgrades can be achieved by proper cost sharing between user types
- Preliminary Fee analysis to be refined following funding approach confirmation and preliminary major water user agreements



# Next Steps

- **Continuation of Phase 1:**
  - Construction of the access road and preliminary drilling pending environmental review
- **Communication Protocol:**
  - Initiate a monthly water reporting system between the Industrial User and the Municipality
- **Water Flushing Summary Report:**
  - Currently being finalized to provide recommendations to improve the short-term operation of the water system (reservoir and stand-pipe cleaning and flushing requirements)
- **Funding Approach:**
  - Meet with the Regional Development Corporation (RDC) to confirm the funding approach for this major project and application process (meeting being scheduled)
- **Preliminary Water User Agreements with Industrial User**
- **Public Information Session:**
  - Present findings to the public/water users



# Questions & Discussion



Thank you!



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