

Welcome

Public Information Centre #2

**Beachfront Water Servicing Strategy in the Area of Colony
Road, Windmill Point Lane East/West and Staniland Park Road**

25 February 2025, 5-6 PM

Key Dates

Notice of Commencement – March 28, 2024

PIC No. 1 – July 15, 2024

PIC No. 2 – February 25, 2025

Notice of Completion – Spring 2025

Stay Engaged!

- ✓ Post your questions in the chat – there will be a Question and Answer period following this presentation.
- ✓ Provide your feedback regarding the information presented to the Project Team after today’s meeting.
- ✓ Take a look at the project webpage.

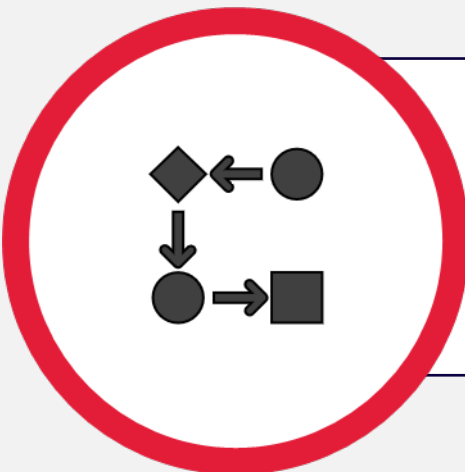
<https://letstalk.forterie.ca/beachfront-water-servicing-strategy-in-the-area-of-colony-road-windmill-point-lane-e-w-and-staniland-park-road>



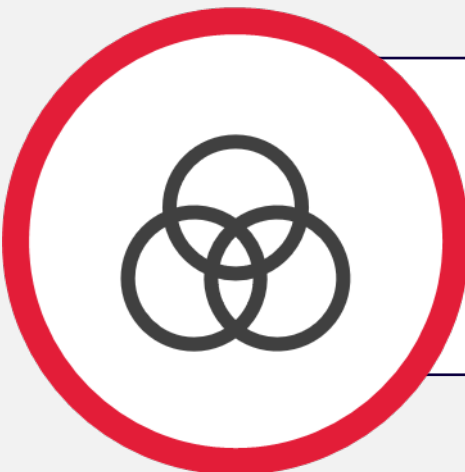
Public Information Centre (PIC) Objectives



Present the study objectives.



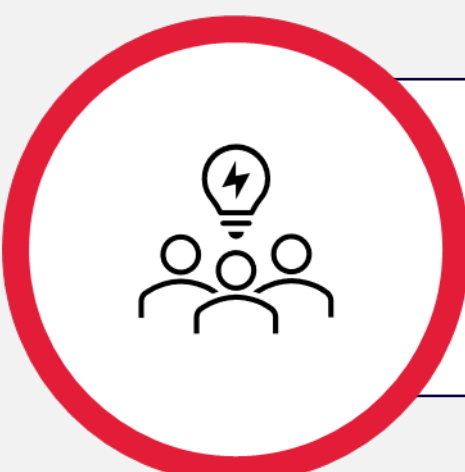
Present the environmental assessment process.



Present area opportunities and constraints.



Present preliminary preferred water servicing alternative.



Receive feedback on the preliminary preferred alternative.

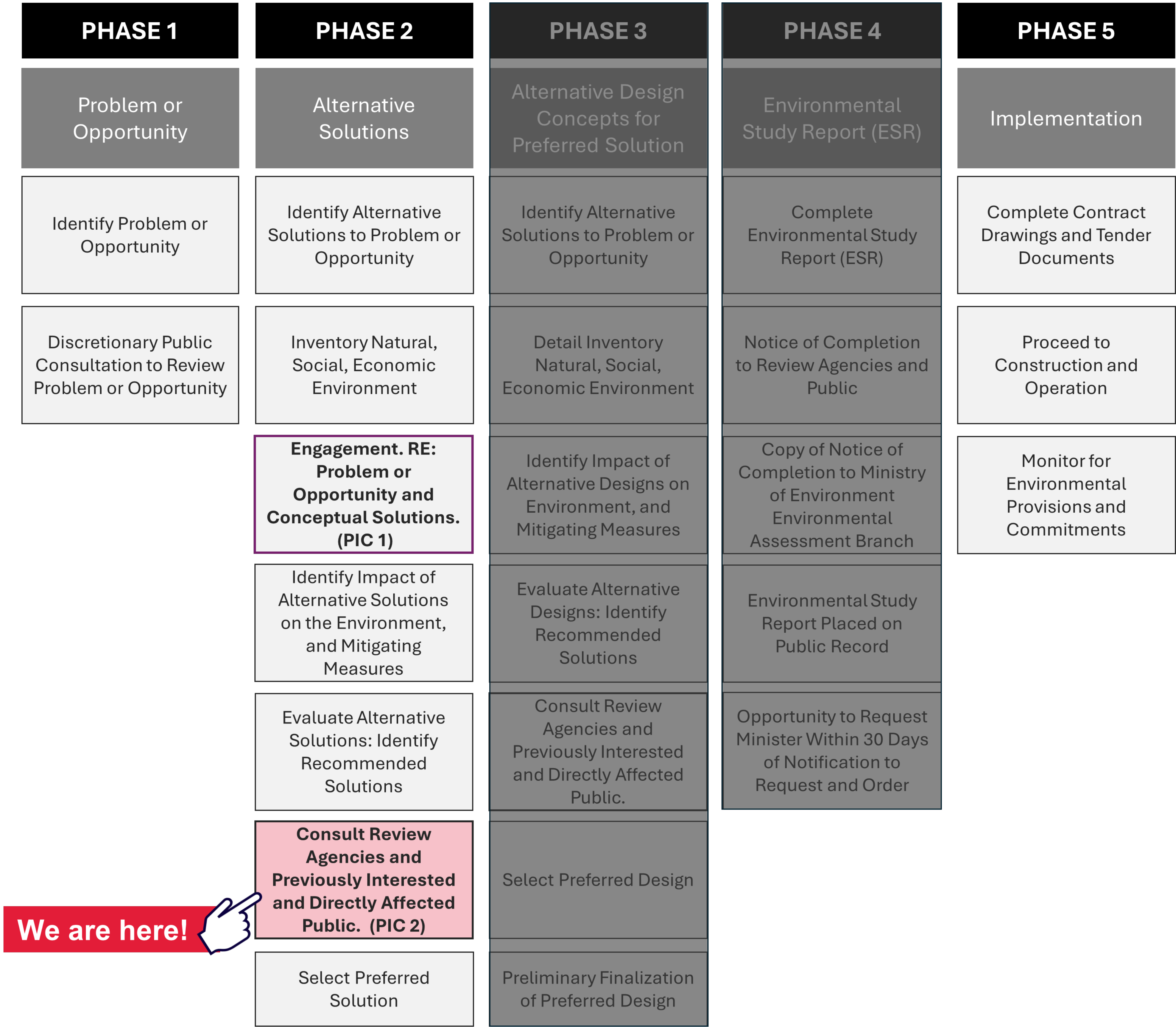
Problem and Opportunity Statement

The Beachfront Water Servicing Strategy in the Area of Colony Rd, Windmill Point Lane East and West, and Staniland Park Road study will identify and develop a water servicing solution which continues to provide a safe drinking water supply and supports fire protection for residents while minimizing long-term operational risk, at an affordable and financially sustainable cost to the Town of Fort Erie.



Municipal Class Environmental Assessment Process

- This project is being completed under the Schedule B Municipal Class Environmental Assessment (Class EA) process.
- Schedule B projects follow Phases 1 and 2 of the Class EA process. Once complete, the project may proceed directly to Implementation (Phase 5).
- The public is encouraged to provide feedback to the Project Team throughout this Class EA project.

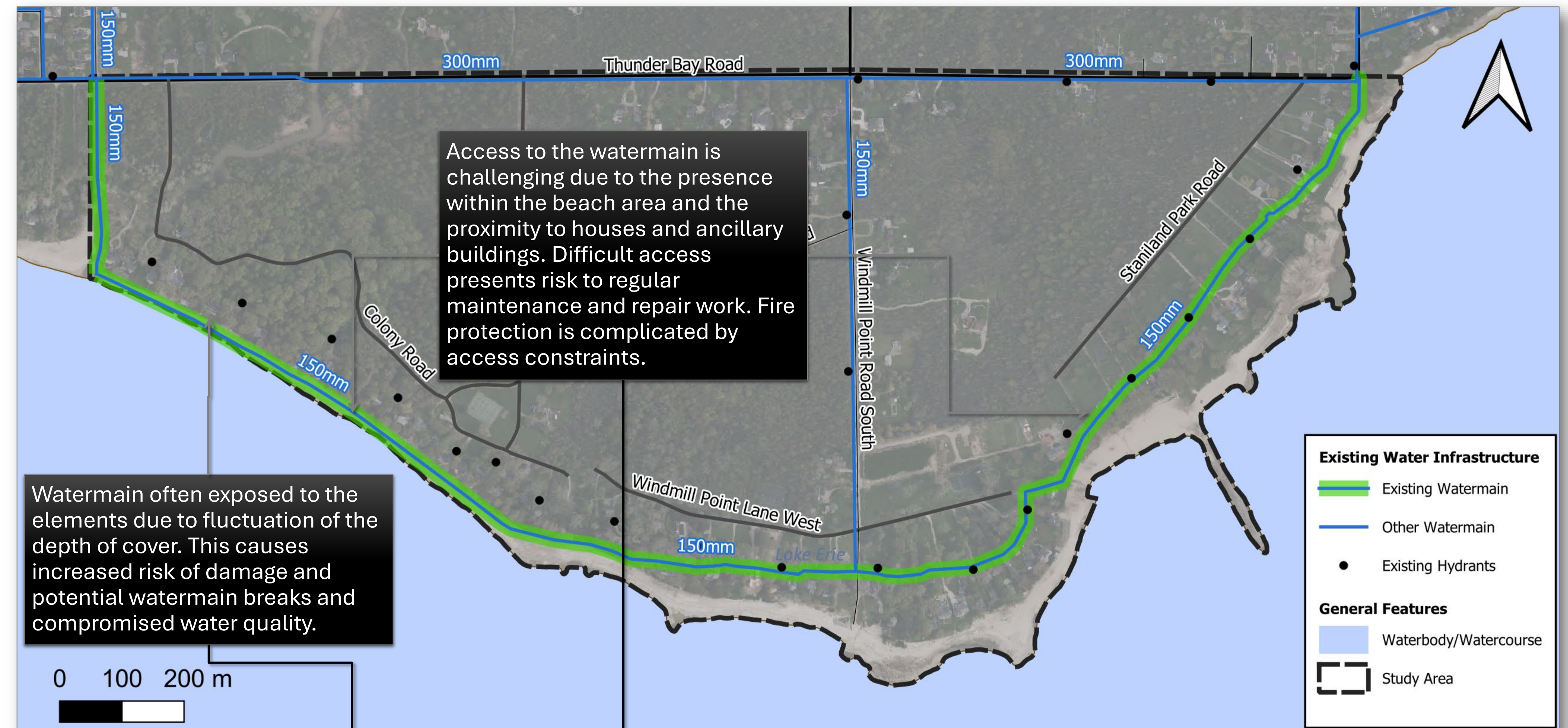


We are here!

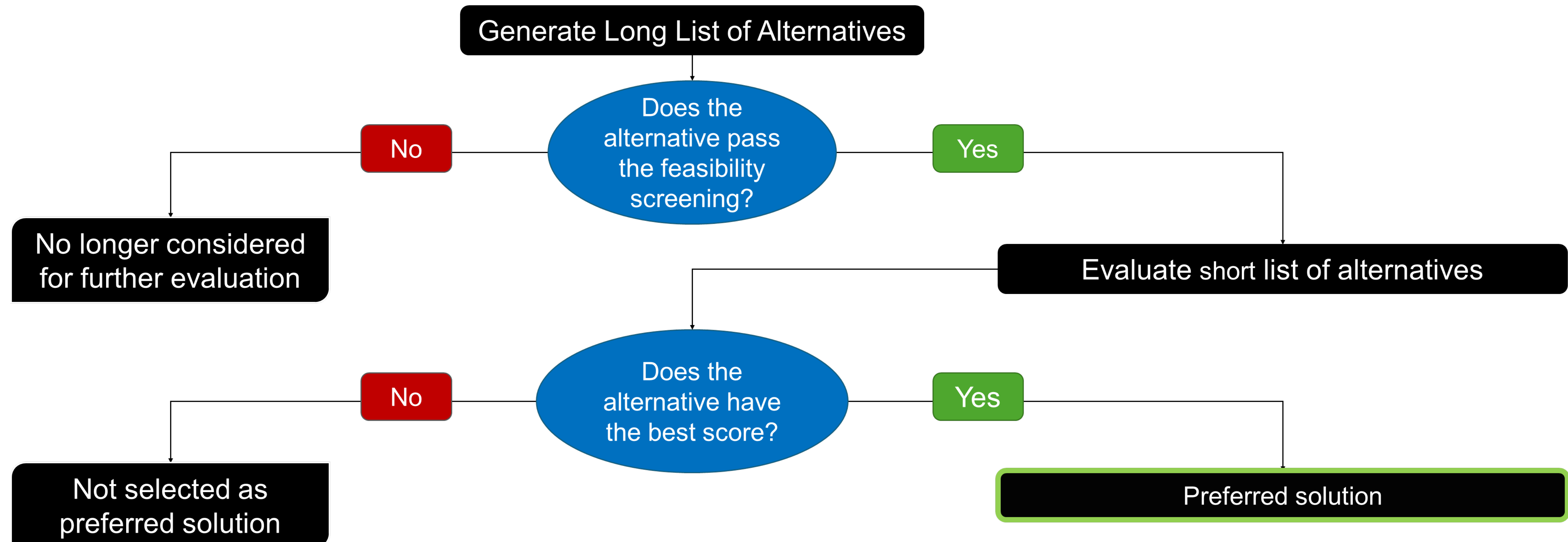
Notice of Commencement	March 2024
Desktop Investigations	March to July 2024
Public Information Centre #1	July 2024
Evaluation of Alternatives	Fall 2024
Public Information Centre #2	Winter 2025
Selection of Preferred Alternative	Winter 2025
Notice of Completion for Class EA Process	Spring 2025
Enhanced Conceptual Design	Fall 2025
Project Implementation	2026/2027

Current Conditions

- The condition and location of the existing watermain presents operational and maintenance risks for the Town.
- Existing watermain faces challenges in maintaining adequate water pressure, fire flow, and water quality due to the configuration and age of the infrastructure.
- Construction within the area is complicated by the age and density of the naturalized area, as well as the narrow road access. Existing alignment is also challenging due to its location along the beach and proximity to structures.
- Large number of homes within the study area are seasonal. This results in an increased frequency of flushing required during months with low occupancy. Frequent watermain flushing is required to maintain water quality.
- Desktop studies indicate several significant natural heritage features, shallow groundwater, and archaeological potential and some cultural sensitivity.



- Feasibility screening criteria were developed to align with the Problem & Opportunity statement
- Long list of alternatives is developed and screened through feasibility screening criteria
- Short list of alternatives is evaluated with evaluation criteria in 4 categories: technical, environmental, social / cultural, financial
- Desktop studies and hydraulic modelling for the short list of alternatives were used as part of the evaluation assessment
- Alternatives scored for each evaluation criterion and weighted in each category
- Alternative with the best score is the preferred solution



Natural Heritage Desktop Study*

- The desktop study identified several significant features within the Study Area, including:
 - Provincially Significant Wetlands
 - Significant Woodlands
 - Significant Valleylands and Fish Habitat associated with Six Mile Creek
 - White-tailed deer wintering area
 - Waterfowl Winter Concentration Area
 - Habitat for Endangered or Threatened Species

Cultural Heritage Desktop Study

- The Study Area has a history of rural and residential land use dating back to the early 19th century
- The Study Area contains no known Built Heritage Resources or Cultural Heritage Landscapes
- There are 4 areas with potential heritage sensitivity that may require further assessment depending on the detailed design

Geotechnical/Hydrogeological Desktop Study

- Bedrock may be encountered at shallow depth. Not expected to be a major constraint due to typical depth of water services.
- Shallow groundwater within the Study Area.
- Subsurface material (organic/peat deposits) within wetlands may present challenging construction conditions.

Stage 1 Archaeological Assessment*

- The Study Area meets criteria indicative of archaeological potential, including water sources within 300 m, early settlements within 100 m, and early historic transportation routes within 100 m (Thunder Bay Road, Colony Road, Windmill Point Road, and Stonemill Road)
- Stage 2 Archaeological Assessment by test pit survey may be required depending on the detailed design

*** Further Natural Heritage Studies and Stage 2 Archaeological Assessment may be required, based on detailed design.**

Long List of Alternatives



Alternative	Water Servicing	Fire Flow
1	Maintain existing infrastructure (do nothing)	Maintain existing hydrants
2	Watermain lining in low-risk areas and replacement with deeper watermain in high-risk areas along the same / similar alignment	Maintained and / or relocated existing hydrants
3	Replace entire length with deeper watermain along same / similar alignment	Maintained and / or relocated existing hydrants
4	Relocate watermain generally along existing roadways	New hydrants along new watermain
5	Relocate watermain with small diameter servicing generally along existing roadways	Pumper / tanker trucks with supply from Thunder Bay Road; Requires localized roadway expansions to allow for fire tanker and pumper truck operations
6	Replace municipal service with individual private servicing, such as water cisterns or wells	Pumper / tanker trucks with supply from Thunder Bay Road; Requires localized roadway expansions to allow for fire tanker and pumper truck operations

Feasibility Screening Results

Alternative	Meets Fire Flow Objectives	Improves Access and Maintenance	Improves Water Quality Management	Screening Result
1	Criteria is not satisfied	Criteria is not satisfied	Criteria is not satisfied	Carried Forward for purpose of environmental assessment.
2	Criteria is satisfied	Criteria is not satisfied	Criteria is not satisfied	Not Carried Forward ; does not alleviate access and maintenance issues and may not improve water quality.
3	Criteria is satisfied	Criteria is not satisfied	Criteria is satisfied	Not Carried Forward ; does not alleviate access and maintenance issues.
4	Criteria is satisfied	Criteria is satisfied	Criteria is satisfied	Carried Forward
5	Criteria is satisfied	Criteria is satisfied	Criteria is satisfied	Carried Forward
6	Criteria is satisfied	Criteria is satisfied	Criteria is satisfied	Carried Forward

Option 4

Relocate watermain to roadways; New hydrants along new watermain

Advantages

- Replacement with a new watermain is likely to improve fire flow conditions
- Relocation to existing roadways will largely improve issues of access and maintenance
- Improved water quality with new watermain; occasional flushing may still be required during periods of very low water usage

Challenges

- Impact to natural environment, and tree removal
- Requires reconstruction and replacement of water services
- Likely requires open-cut construction on narrow roadways
- High capital cost



Relocate watermain generally along existing roadways;
Fire protection provided through traditional hydrants

Option 5

Small diameter watermain on roadways; Pumper / tanker trucks for fire flow

Advantages

- Use of tanker trucks provides fire flow consistent with target level of service for rural residential properties
- Relocating to existing roadways will largely improve issues of access and maintenance, and minimizes construction impacts
- Improved water quality with new watermain; flushing likely not required with small diameter watermain

Challenges

- Requires reconstruction and replacement of water services
- Localized roadway expansions to allow for fire tanker and pumper truck operations; however, impact is less than a traditional larger diameter watermain
- Highest capital cost



Relocate watermain with small diameter servicing generally along existing roadways; Fire protection provided by pumper / tanker trucks with supply from Thunder Bay Road

Option 6

Replace watermain with private servicing; Pumper / tanker trucks for fire flow

Advantages

- Use of tanker trucks provides fire flow consistent with target level of service for rural residential properties
- Access and maintenance issues are alleviated with private servicing
- Improved water quality with private servicing
- Solution provides the ability to implement individualized private service solutions based on property needs

Challenges

- Potential disruption to landscaping to install private service
- Localized roadway expansions to allow for fire tanker and pumper truck operations; however, impact is less than a traditional larger diameter watermain
- Difficulty in siting due to potential proximity to septic beds



Replace municipal service with individual private servicing, such as water cisterns or wells;
Fire protection provided by pumper / tanker trucks with supply from Thunder Bay Road

- The short list of alternatives were evaluated under the following categories: Technical, Environmental, Social / Cultural, and Financial
- Weightings for categories were decided through consensus with the Project Team

Technical (30%)	Environmental (20%)
▪ Provides a Safe Drinking Water Supply ▪ Supports Fire Protection ▪ Minimizes Operations and Maintenance Risks ▪ Minimizes Conflict with Existing Infrastructure ▪ Complexity of Implementation ▪ Ease of Property / Land Acquisition	▪ Minimizes Impact to Environmental and Natural Heritage Features ▪ Protects Wildlife and Species at Risk (SAR)
Social / Cultural (20%)	Financial (30%)
▪ Manages and Minimizes Construction (Short-term) Impacts ▪ Manages and Minimizes Long-term Impacts to Residents ▪ Protects Archaeological and Cultural Heritage Features	▪ Minimizes Capital Cost ▪ Minimizes Operations & Maintenance Costs

Scoring



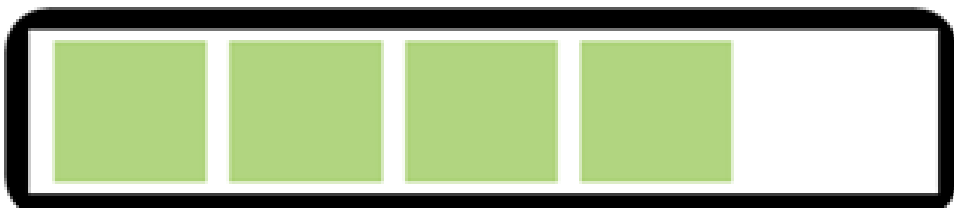
Permanent negative impacts and/or significant technical challenges



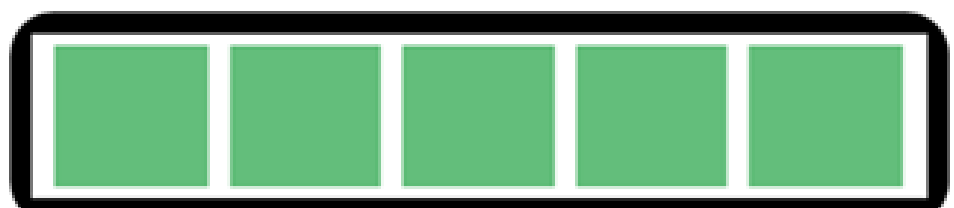
Temporary negative impacts and/or major technical challenges



Low or neutral impacts after mitigation and/or some technical challenges



No adverse impacts and no substantial technical challenges



Ideal conditions and/or generates beneficial impacts

Short List of Alternatives

Evaluation Category	Do Nothing	Option 4	Option 5	Option 6
Technical Feasibility	- Limited fire flow availability and reliance on pumper trucks to achieve fire flows - Provides acceptable water quality but requires frequent flushing - Poor access for operations and maintenance	- Provides acceptable water quality, pressures, and fire flow - Improved access for operations and maintenance - Increased construction complexity	- Provides acceptable water quality, pressures, and fire flow - Reliance on pumper trucks to achieve fire flows - Improved access for operations and maintenance - Increased construction complexity due to trenchless methods	- Residents responsible for water quality - Reliance on pumper trucks to achieve fire flows - Increased construction complexity for cisterns
Environmental Impacts	- No planned construction - Increased risk of pipe breaks / leaks requiring repairs leading to environmental disruption	Open cut construction has potential for greatest impact to environment	Trenchless construction reduces potential for impact to environment	Siting of cistern locations may reduce potential for impact to environment
Social / Cultural Impacts	- No planned construction - Increased risk of watermain breaks and repair work that would impact residents in future	- Longer construction time (6-8 months) and limited access to private properties during construction - Residents heavily supportive of maintaining hydrants - Open cut construction has potential for greatest impact to archaeological features - Stage 2 archaeological assessment is required	- Moderate construction time (4-6 months) and limited access to private properties during construction - Trenchless construction reduces potential for impact to archaeological features - Stage 2 archaeological assessment is required	- Difficult constructability on private properties - Removal of hydrants perceived as less advantageous for home insurance and property value
Financial Viability	- No capital cost - High operations and maintenance costs	Approximate capital cost is \$3.8M	Approximate capital cost is \$6.9M	Approximate capital cost is \$3.5M

Evaluation Results

Category	Criteria	Do Nothing	Option 4	Option 5	Option 6	Comments
Technical Feasibility	Safe drinking water supply					- Alternatives 4 and 5 score highest due to Town-supplied water and improved access for operations and maintenance - Alternative 4 scores high for fire protection as it maintains traditional fire hydrants - Alternative 6 scores highest in operations and maintenance as it eliminates need for municipal access for watermain operations and maintenance - Alternatives 5 and 6 score lowest in construction complexity due to respective trenchless construction and cistern construction difficulty
	Supports fire protection					
	Operations and maintenance					
	Existing utility conflicts					
	Construction complexity					
	Land acquisition					
	Summary Score					
Environmental	Impacts to environment					Alternative 4 scores lowest due to open cut construction having potential for greatest impact to environment and wildlife
	Wildlife and Species at Risk					
	Summary Score					
Social / Cultural	Short-term impacts					- Alternative 4 is strongly favoured by residents due to preservation of Town-supplied water and hydrants - Alternative 4 scores low in archaeological impact due to potential risk from open cut construction
	Long-term impacts					
	Archaeological impact					
	Summary Score					
Financial	Capital cost					- Alternatives 4 and 6 have comparable costs for the Town and are lower estimated cost than Alternative 5 - Do nothing option presents the highest operations and maintenance cost
	O&M cost					
	Summary Score					
Rank		3	1	2	4	

 Preliminary Preferred Alternative

Preferred Alternative - Option 4

Relocate watermain to roadways; New hydrants along new watermain

Implementation

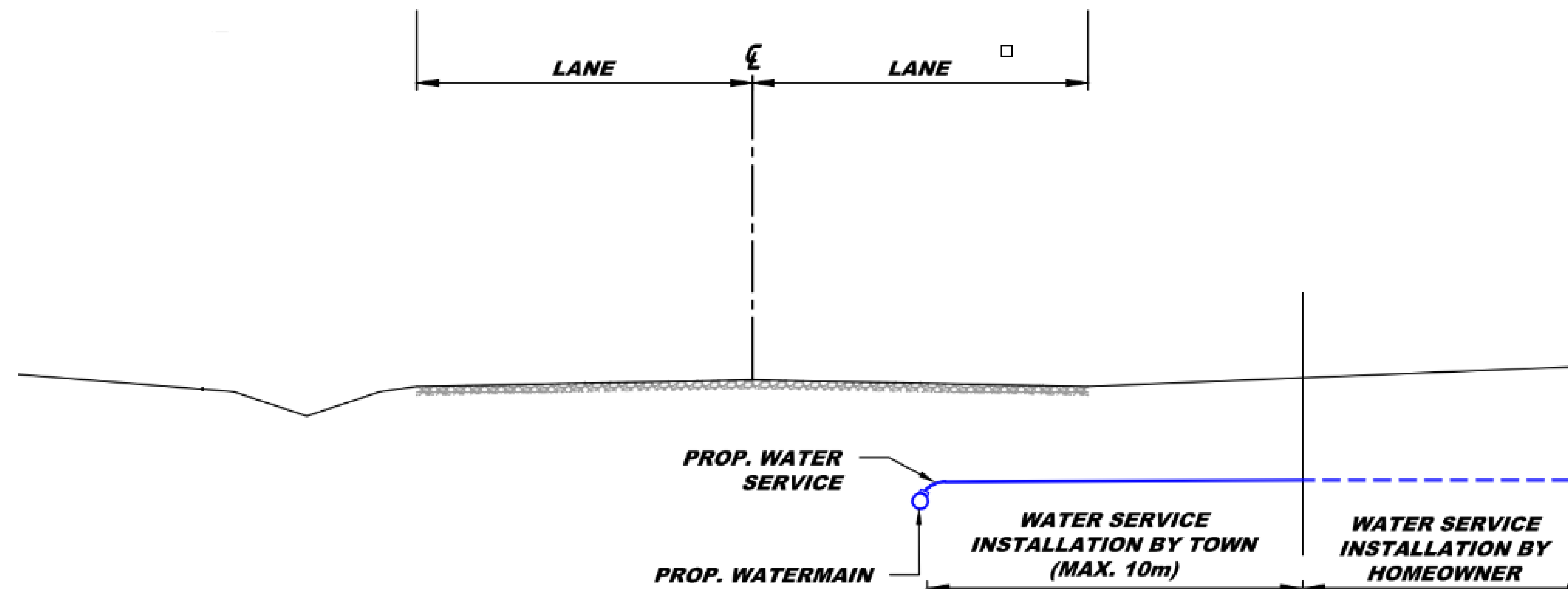
- Further archaeology study may be required prior to construction depending on the watermain alignment
- Further environmental screening for Species at Risk may be required prior to construction depending on the watermain alignment
- Potential for phasing with Colony Road and Windmill Point Lane West section completed first, followed by Windmill Point Lane East and Staniland Park Road section
- New service laterals required for all properties
- Estimated construction cost for the new watermain and town-funded service lengths is \$3.8M (-/+50% accuracy, with 1-2% engineering conducted).



Relocate watermain generally along existing roadways;
Fire protection provided through traditional hydrants

Implementation – Construction

- Construction will be coordinated to allow for continued access for residents
- A new water service will be required for all residents as the watermain is moving from the south side of most homes to the north side
- The Town will pay for the first 10 m of service, with the remainder cost shared by the homeowner. This is consistent with the Town's current practices



- **How will the construction be paid for?**

- The Town will cover the cost of the new watermain and the cost of the first 10 m of a new service connection for each property.
- Residents will be responsible for the cost of the remaining length of service connection to their house.

- **What will happen to the old watermain?**

- The old watermain along the beach will be removed. Any watermain that is not along the beach is expected to stay in place and be abandoned.

- **Will there be disruption to environmental features?**

- Construction will be within the road right-of-way wherever possible to limit the impact to the environment; however, some tree removal will likely be required. The road will be reinstated as it exists today.
- Further Natural Heritage study may be conducted to confirm the locations of Species at Risk in the area, depending on watermain alignment.

- **When will the new watermain be in place?**

- Design and Construction is planned for 2026-2027
- The project may be phased with the west portion (Colony Road and Windmill Point Land West) completed first up to Windmill Point North/South, with the second phase including Windmill Point Lane East and Staniland Park Road

Project Next Steps

- Finalize preferred alternative implementation plan and Project File report
- Notice of Completion – Spring 2025
- Enhanced conceptual design of preferred alternative – Fall 2025
- Design in 2026
- Construction starting in 2027

Do you have any questions, comments, or want to stay up to date on this project? Please contact us any time!

Town Contact	Consultant Contact
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Additional project information can be found on the project website:
<https://letstalk.forterie.ca/beachfront-water-servicing-strategy-in-the-area-of-colony-road-windmill-point-lane-e-w-and-staniland-park-road>

