

Welcome

Public Information Centre #1

Beachfront Water Servicing Strategy in the Area of Colony Rd, Windmill Point Ln E/W and Staniland Park Rd

15 July 2024, 5-7pm

Why are we here?

Public Information Centre (PIC) #1



Key Dates

Notice of Commencement – March 28, 2024

PIC No. 1 – July 15, 2024

PIC No. 2 – Fall/Winter 2024/2025

Notice of Completion – Winter 2024/2025

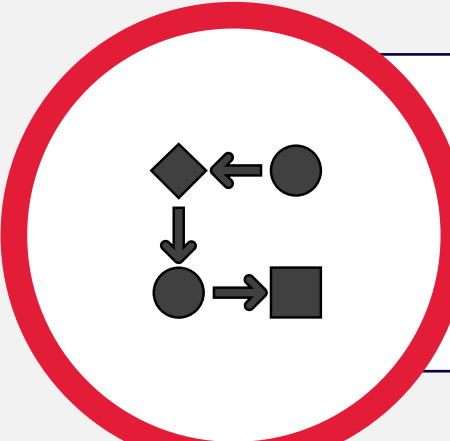
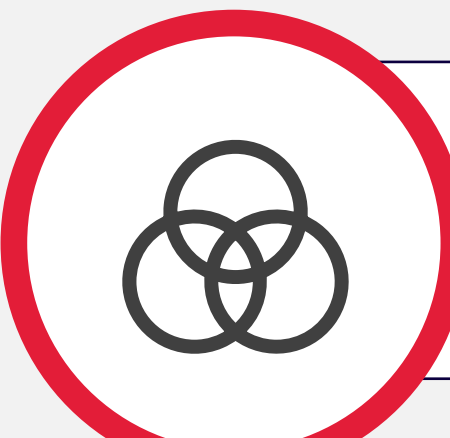
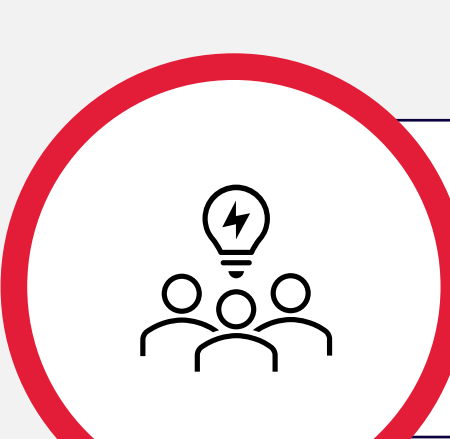
Stay Engaged!

- ✓ Please sign in and take a comment sheet.
- ✓ Have a look at the project information on display and chat with the Project Team.
- ✓ Provide your feedback regarding the information presented.
- ✓ Take a look at the project webpage – QR code below.

<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 potential water servicing alternatives.
-  Receive feedback on the study process and servicing opportunities and constraints.

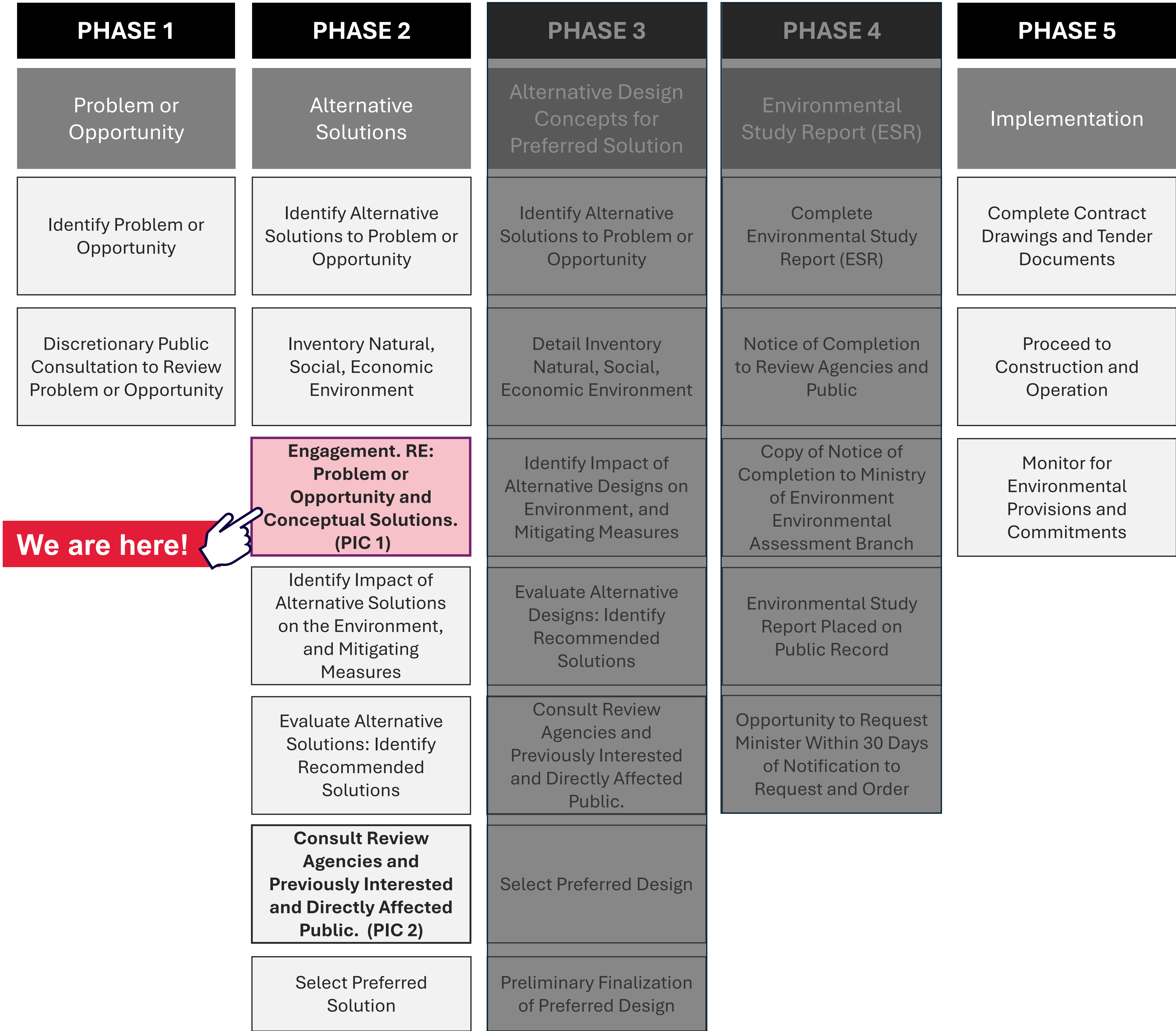
Problem & Opportunity Statement

The Beachfront Water Servicing Strategy in the Area of Colony Rd, Windmill Point Ln E/W and Staniland Park Rd 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.

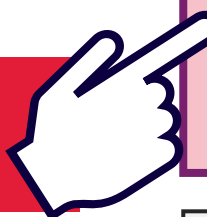


Municipal Class Environmental Assessment Process

- 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.



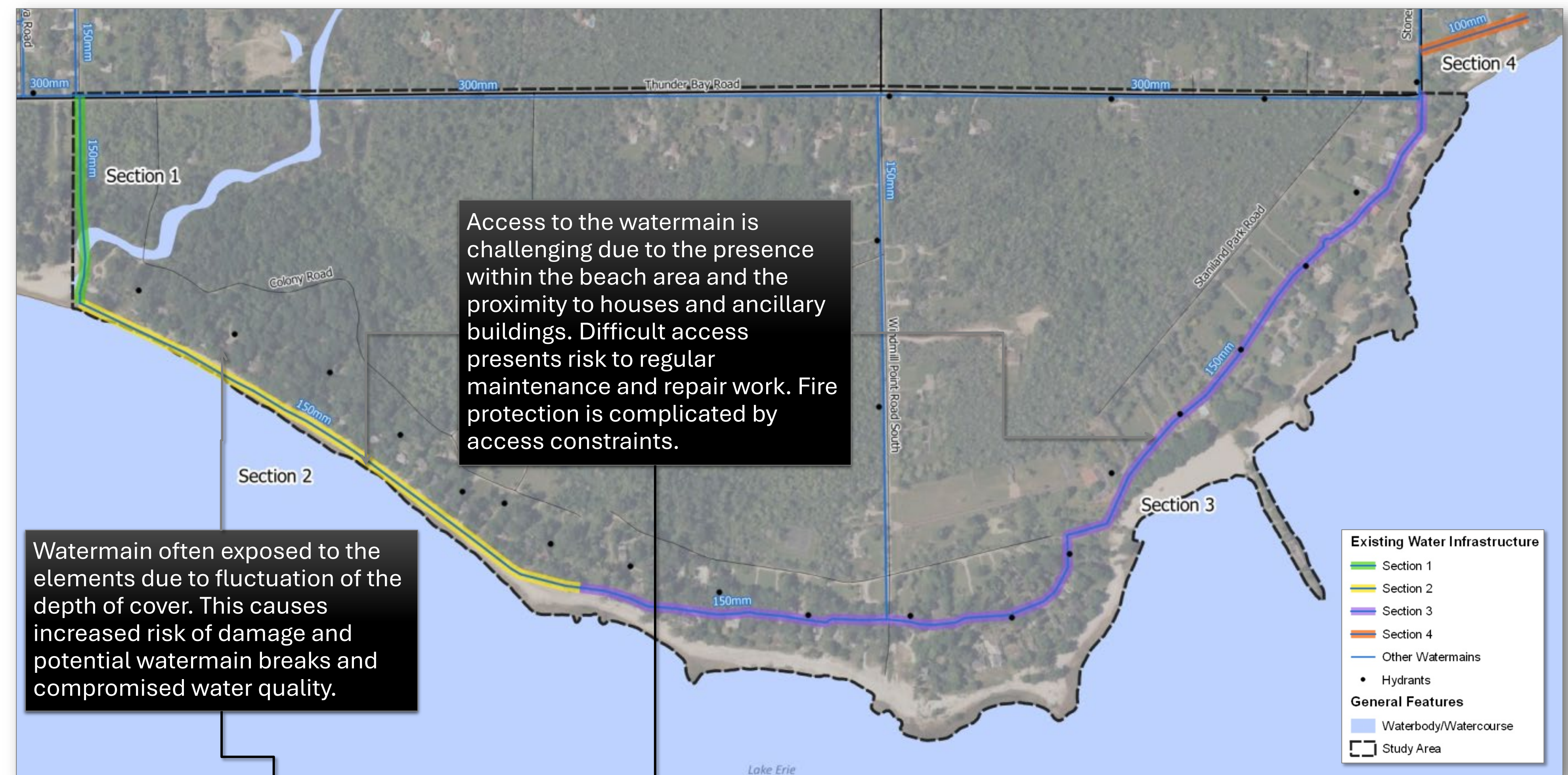
We are here!



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

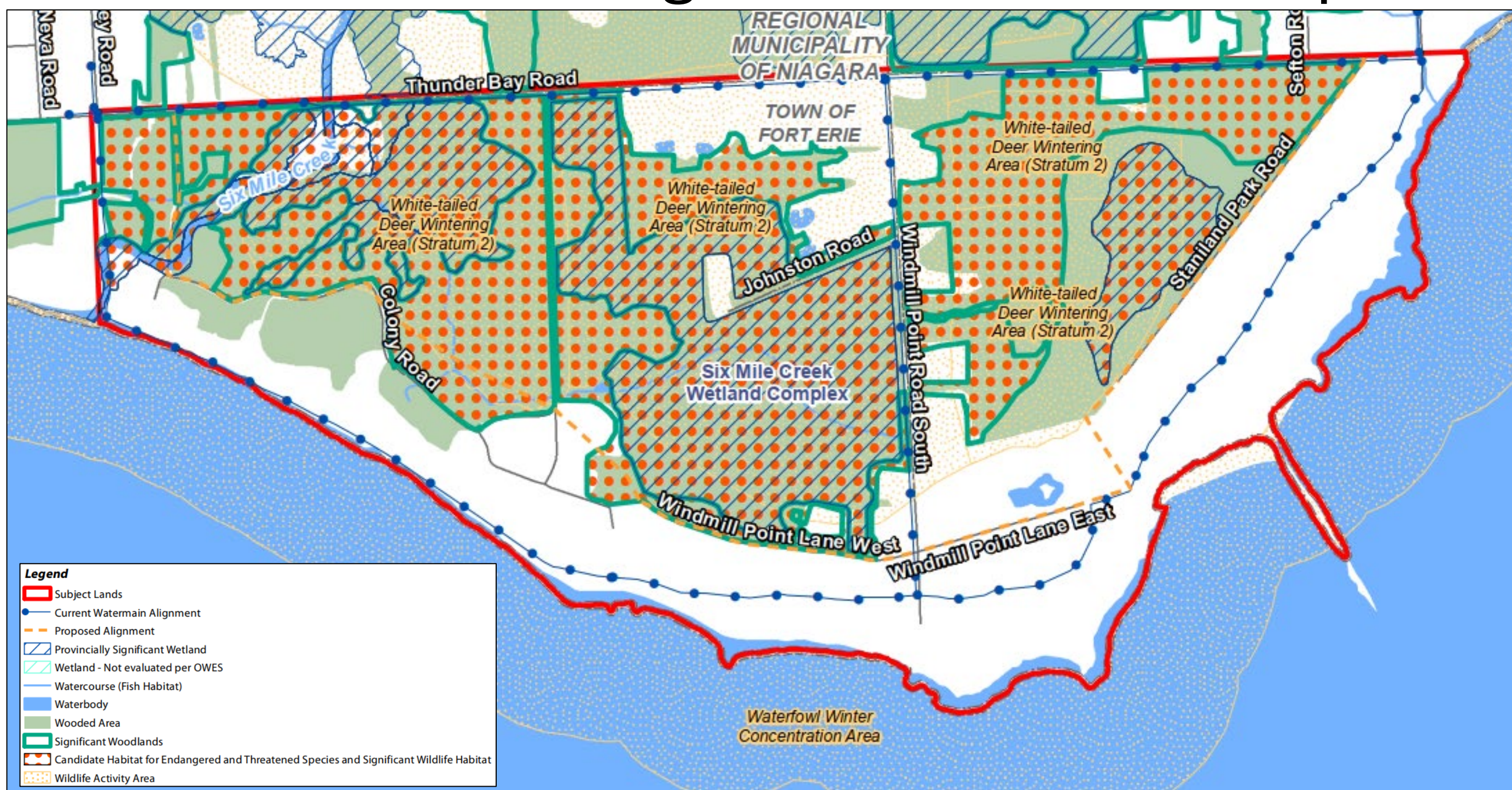
Current Conditions

- The condition of the existing watermain presents operational and maintenance risks due to its location and condition.
- 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 residents.
- Majority of the houses 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.



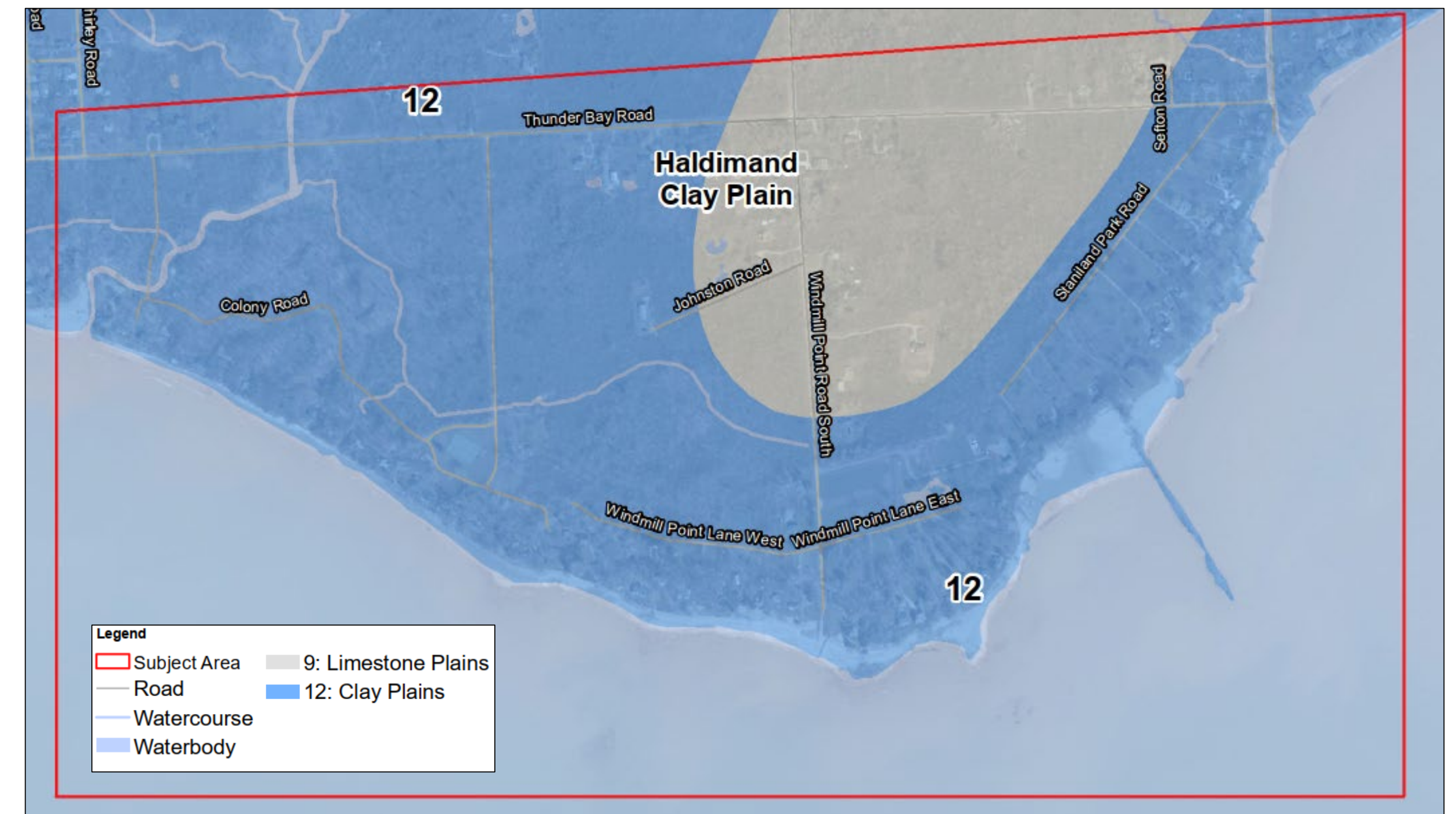
Natural Heritage Desktop Study

- The desktop study identified several significant features within the Study Area, including:
 - Provincially Significant Wetlands as part of the Six Mile Creek Wetland Complex
 - Significant Woodlands
 - Significant Valleylands and Fish Habitat associated with Six Mile Creek
 - White-tailed deer wintering area
 - Waterfowl Winter Concentration Area (on the shoreline of Lake Erie)
 - Habitat for Endangered or Threatened Species



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.



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:
 - Lake Erie
 - Watercourse through the Study Area
 - Northeastern corner where early residential structures may still be present
 - Historical location of the windmill / gristmill on the shoreline



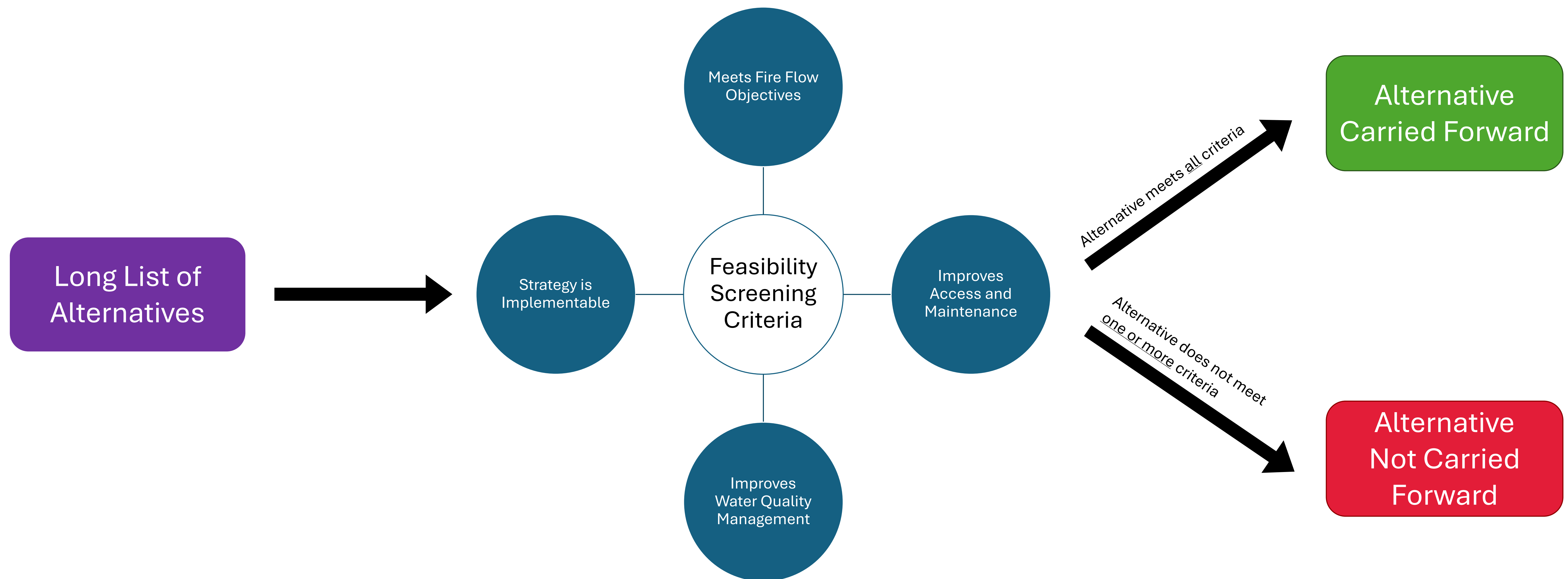
Stage 1 Archaeological Assessment

- 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 is required:
 - In the areas that exhibit archaeological potential, which is most of the Study Area
 - To confirm the extent of wetlands and permanently saturated poorly drained soil



Feasibility Screening

- The Project Team developed a long list of alternatives
- Screening criteria were developed to align with the Problem & Opportunity statement
- Alternatives were screened against the feasibility screening criteria, with consideration for water servicing, fire flow, and water quality
 - If alternative meets all criteria, it is **Carried Forward** to the short list of alternatives for detailed evaluation
 - If alternative does not meet one or more criteria, it is **Not Carried Forward** for further evaluation



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	Feasibility of Implementation	Screening Result
1	N	N	N	Y	Not Carried Forward; fire flow, access and maintenance, and water quality conditions are not improved.
2	Y	N	~	~	Not Carried Forward; does not alleviate access and maintenance issues and may not improve water quality.
3	Y	N	Y	~	Not Carried Forward; does not alleviate access and maintenance issues.
4	Y	Y	Y	~	Carried Forward
5	Y	Y	Y	Y	Carried Forward
6	Y	Y	Y	Y	Carried Forward

Y	Criteria is satisfied
~	Additional investigation required
N	Criteria is not satisfied

Option 4

Relocate watermain to roadways; New hydrants along new watermain

Advantages	Challenges
▪ 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 low water usage	▪ Impact to natural environment, and tree removal ▪ Requires reconstruction and replacement of water services ▪ Further investigation required to determine the feasibility of implementation with respect to 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	Challenges
■ 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 ■ Solution is implementable with directional drilling	■ 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 ■ High capital cost ■ Requires construction and replacement of water services



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 is implementable and 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



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

- Private water systems are common for the majority of rural properties in Ontario, with many properties in Fort Erie currently serviced via private water systems. Examples of private water systems include wells and water cisterns.
- Water cisterns are filled as needed (typically on a weekly or bi-weekly basis) by water delivery to the property; the residents pay only for the delivery and cost of water that they need.
- A water well would provide water on demand but would require drilling of a new well. The capacity and quality of the well water would not be known until after the well has been drilled.
- Regular water quality checks are required by the residents to maintain water quality. Niagara Region provides free water test kits and step-by-step instructions for water testing.
- A new private service may require minor modifications to internal plumbing, including a pressure tank and/or jet pump. Replacement pressure tank and/or jet pump are commonly available at many hardware and specialized pumping stores and can be typically accommodated in utility rooms.
- The use of private water servicing in this area eliminates the need for regular flushing during periods of low water usage, which ultimately reduces the Town's water usage.
- Private servicing prevents the requirement for construction in the naturalized area.
- Supports fire protection for residents via pumper / tanker trucks.

- The short list of alternatives will be evaluated under the following categories: Technical, Environmental, Social / Cultural, and Financial

Technical	Environmental
▪ Provides a Safe Drinking Water Supply ▪ Supports Fire Protection ▪ Minimizes Operations and Maintenance Risks ▪ Minimizes Conflict with Existing Infrastructure ▪ Minimizes and Manages Construction Risk ▪ Ease of Property / Land Acquisition	▪ Minimizes Impact to Environmental and Natural Heritage Features ▪ Protects Wildlife and Species at Risk (SAR) ▪ Minimizes Climate Change Impacts
Social / Cultural	Financial
▪ Manages and Minimizes Construction Impacts ▪ Manages and Minimizes Impacts to Residents ▪ Protects Cultural Heritage Features ▪ Protects Archaeological Features ▪ Consideration for Indigenous interests	▪ Minimizes Capital Cost ▪ Minimizes Operations & Maintenance Costs

Project Next Steps

- Continued discussions with residents and stakeholders
- Evaluation of short list of alternatives, including input from desktop studies, costing of alternatives, field work, and topographic survey
- Public Information Centre #2 (Fall 2024)
- Selection of preferred alternative

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
Lisa Vespi Project Manager 1 Municipal Centre Drive Fort Erie, ON L2A 2S6 905-518-4770 LVespi@forterie.ca	Lindsay Currie Project Manager 1266 South Service Road, Unit C31 Hamilton, ON L8E 5R9 905-643-6688 lcurrie@geiconsultants.com

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>

