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Overview & Discussion of Lakeshore's WWMP Update and PIC #2

Regular Council Meeting
November 21, 2023



Agenda

What is the Purpose of a Master Plan?

Why is an Environmental Assessment Necessary?

The Municipal Class Environmental Assessment Process

What are the Phases of the EA Process?

What is the Schedule of a Project?

What does Implementation of Projects Look Like? (Based on Schedule)

Background

Expected Outcomes of the Master Plan Update

Public Information Centre #1 Overview

Implications of Do-Nothing Approach

How can Council Provide Input to the WWMP Update?

Overview of the Decision-Making Process/ How/When are Priorities Set?

Public Information Centre #2 Information & Boards

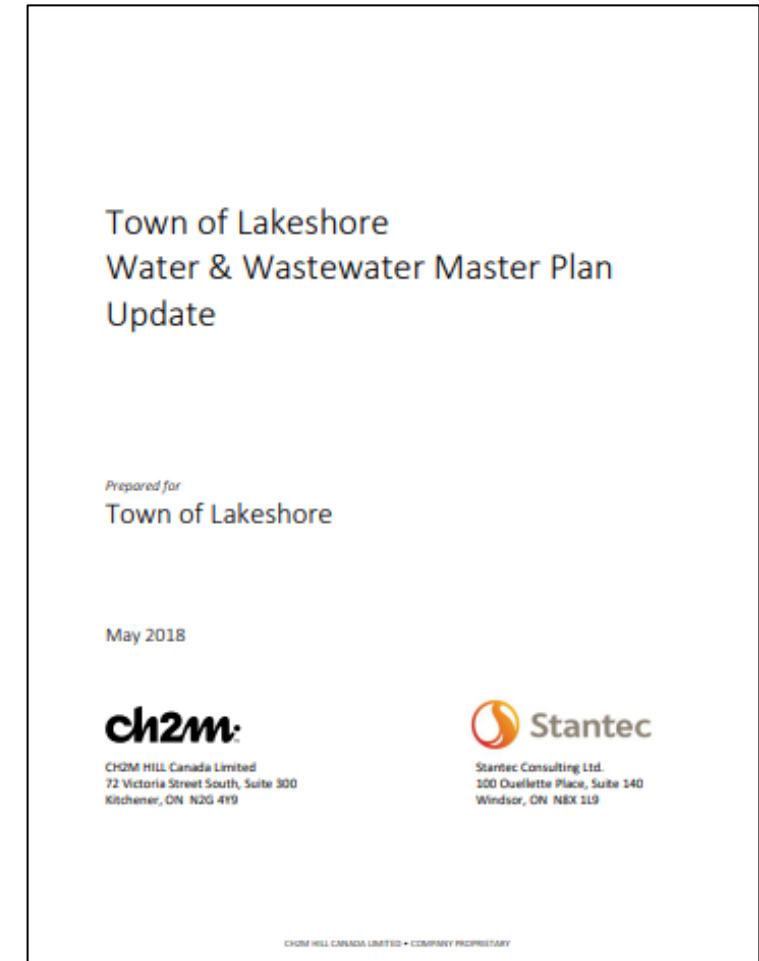
Next Steps/Look Ahead After PIC #2



What is the Purpose of a Master Plan?

- Master planning provides the municipality with a broad framework through which the need and justification for specific projects can be established and the environmental assessment process can be satisfied.
- An environmental assessment is a process to identify, predict and evaluate the potential environmental effects of a proposed project. This process happens before decisions about a proposed project are made.
- The Water and Wastewater Master Plan (Update) will set the path for proper planning and project guidelines towards the implementation of water and wastewater infrastructure improvements over the next 20 years (2042) to accommodate growth.
- This WWMP Update (2024) will expand and revise the Master Plan that was adopted in 2018.

The Master Plan is a roadmap to guide decision-making to support growth.



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Why is an Environmental Assessment Necessary?

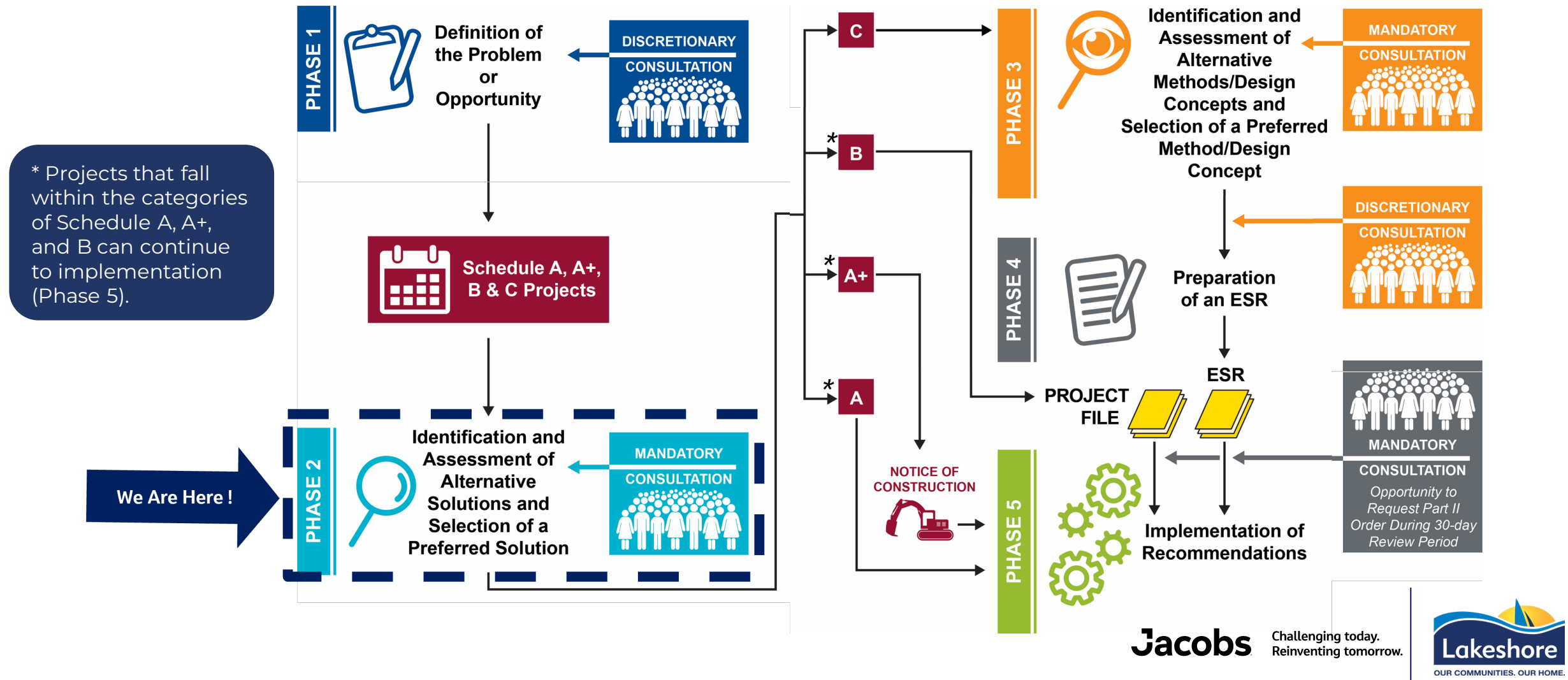
- The environmental assessment process ensures that governments and public bodies consider potential environmental effects before an infrastructure project begins.
- Environmental assessments support better decision-making by considering how a project's design could be optimized to minimize or outright avoid negative effects on the environment.
- An assessment identifies a project's potential effects. It also identifies a scope of factors to be considered, including mitigation measures. Thinking of these things early on in the project planning cycle gives proponents a chance to improve or revise plans.



Lakeshore's anticipated growth (significant) and increased demand for higher-density development has triggered the need to re-evaluate and address growth and identify future needs related to water and wastewater services ("identify the projects").

The Municipal Class Environmental Assessment Process

This Master Plan is being carried out in accordance with the Municipal Engineers Association’s Municipal Class Environmental Assessment process. This Master Plan is being completed as a Schedule B and will result in the completion of a Project File.



What are the Phases of the EA Process?

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PHASE 1



Definition of
the Problem
or
Opportunity

Identify the **problem (deficiency) or opportunity**.

PHASE 2



Identification and
Assessment of
Alternative
Solutions and
Selection of a
Preferred Solution

Identify **alternative solutions to** address the problem or opportunity by taking into consideration the existing environment **and establish the preferred solution taking into account public and review agency input**. At this point, determine the appropriate Schedule for the undertaking (see Appendix 1) and document decisions in a Project File for Schedule B projects, or proceed through the following Phases for Schedule C projects.

PHASE 3



Identification and
Assessment of
Alternative
Methods/Design
Concepts and
Selection of a Preferred
Method/Design
Concept

Examine **alternative methods** of implementing the **preferred solution**, based upon the existing environment, public and review agency input, anticipated environmental effects and methods of minimizing negative effects and maximizing positive effects.

PHASE 4



Preparation
of an ESR

Document, in an **Environmental Study Report** a summary of the **rationale, and the planning, design and consultation process of** the project as established through the above Phases and make such documentation available for scrutiny by review agencies and the public.

PHASE 5



Implementation of
Recommendations

Complete contract drawings and documents and proceed to **construction and operation; monitor construction** for adherence to environmental provisions and commitments. Where special conditions dictate, also **monitor the operation** of the completed facilities.

What is the Schedule of a Project?

The level of complexity or sensitivity can relate to the nature of the problem or opportunity being addressed, the level of investigation required to assess alternatives and environmental effects, and public and agency issues and concerns.

The level of complexity may affect the selection of the project schedule, and the scope of each phase in the Class EA process as well as the need to revisit steps in the process. **The level of complexity will therefore affect the manner in which a project proceeds through the process.**

The complexity of a project is based on many components, including environmental effects, public and agency input and technical considerations, and how these interrelate on a specific project. **Accordingly, the determination of complexity (and its ongoing assessment) requires sound professional judgement, is an inherent function of the management of a project and, is the responsibility of the proponent.**

While the Class EA document defines the minimum requirements for environmental assessment planning, the proponent is responsible for “customizing” it to reflect the specific complexities and needs of a project.

There are a set of procedures that will lead the proponent to the conclusion that the project:

- is pre-approved (Schedule A or A+);
- is approved subject to Screening (Schedule B);
- is subject to the full Five Phase Planning Process (Schedule C); or
- should proceed through an Individual Environmental Assessment.



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What Does Implementation of Projects Look Like? (based on schedule)

Schedule A/A+ - Preapproved

- These projects **can proceed now** and do not require completion of the master plan (WWMP Update).
 - Some examples of these include replacement of assets with like size (no upsizing of infrastructure).
-

Schedule B – Approved Subject to Screening

- These projects **can proceed only** when the master plan is complete.
 - Some examples include forcemain replacement & upgrade, sewer upsize/twinning, new larger sewer, new pumping station.
-

Schedule C – Subject to the full Five Phase Planning Process

- These projects **cannot proceed** when the master plan is complete and are subject to all 5 phases of the EA process.
- Some examples include larger scale projects like a new treatment plant, projects that have a larger impact driven by environmental concerns (ie archeological potential), projects that include purchase of large land area and/or include a lot of public concern/interest.



Background

Water Wastewater Master Plan was last updated in 2018.

Increased flows at Denis St. Pierre Plant in 2020 recognized the plant was exceeding its rated capacity.

Lakeshore completed an update (original model was done in 2014) to the sanitary model in 2022. This model showed additional constraints related to flows and high inflow and infiltration rates (I & I).

In 2022, both Stoney Point and Comber Sanitary Treatment Facilities (STF) (Lagoons) were identified to be over/reaching their rated capacity, limiting the ability to accommodate growth in the sewershed areas.

Exceeded expected growth as outlined in 2018 & continued demand for development within the majority of the areas within Lakeshore.

Commencement of a further WWMP Update (completion in 2024).

Expected Outcomes of the Master Plan Update/ What will the Master Plan Update Provide to Council?

- A prioritized list of recommended water and wastewater projects required to meet current and anticipated future (up to 2042) growth demands and condition-based needs.
- A plan to implement the recommended water and wastewater projects within reasonable timelines.
- Recommendations for further studies and investigations.
- Documented considerations for future project stages.
- A framework to fund the recommended projects.



All recommended infrastructure projects will be subject to subsequent EA (potential), pre-design, approvals, and detailed design prior to construction.

What was Presented at PIC #1?

- Purpose and Objectives of the Master Plan;
- Where we are in the process;
- An overview of Lakeshore's water and wastewater service areas and infrastructure (treatment & conveyance) systems;
- Summary of Key Considerations;
- Projected Population Growth (until 2042); and
- Next Steps in the process.

As part of PIC #1, the project team completed enhanced outreach to strengthen consultation with developers and vacant landowners so that adequate feedback could be obtained to ensure the success of the plan.



Municipality of Lakeshore Water and Wastewater Master Plan Update

Public Information Centre #1

Welcome!

Please sign in, and feel free to browse the information panels.

Your comments are important to us. Please complete the survey (sheets provided) or online at www.Lakeshore.ca/WWMP prior to July 28, 2023.

Staff from the Municipality and their consultants (Jacobs) are available to answer any questions that you have.



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What Did We Hear at PIC #1?

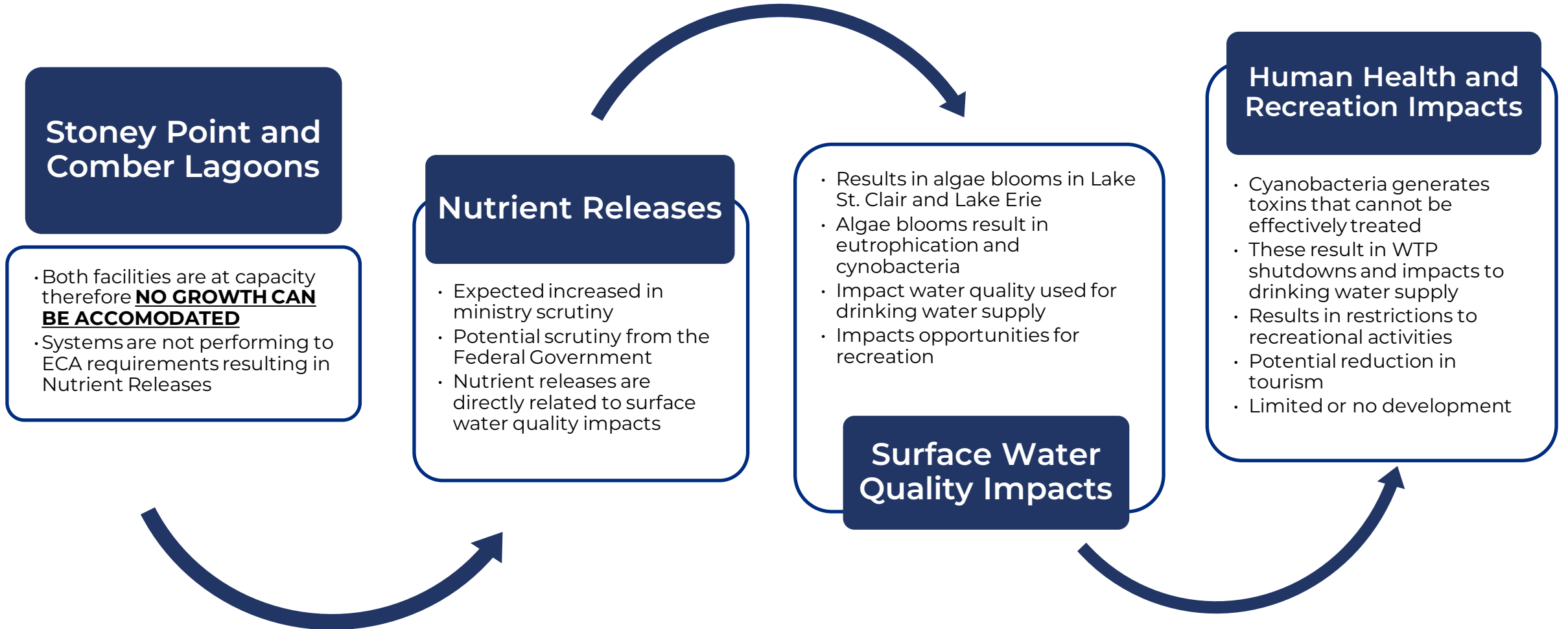
- Residential Community and Local Agency concerns and questions regarding servicing and plans for the Lighthouse Cove area (related to recommendations for Stoney Point and Comber);
- Existing residents (Ross Beach Area, etc.) and future development areas (Town & country development) requesting to received and/or be added to the municipal servicing area;
- Conveyance capacity availability and constraints in the Belle River Area;
- Timing of study completion and implementation of projects; and
- Requesting buffer zone clarification around the Denis St. Pierre WPCP and the resulting impact to existing properties and development potential.



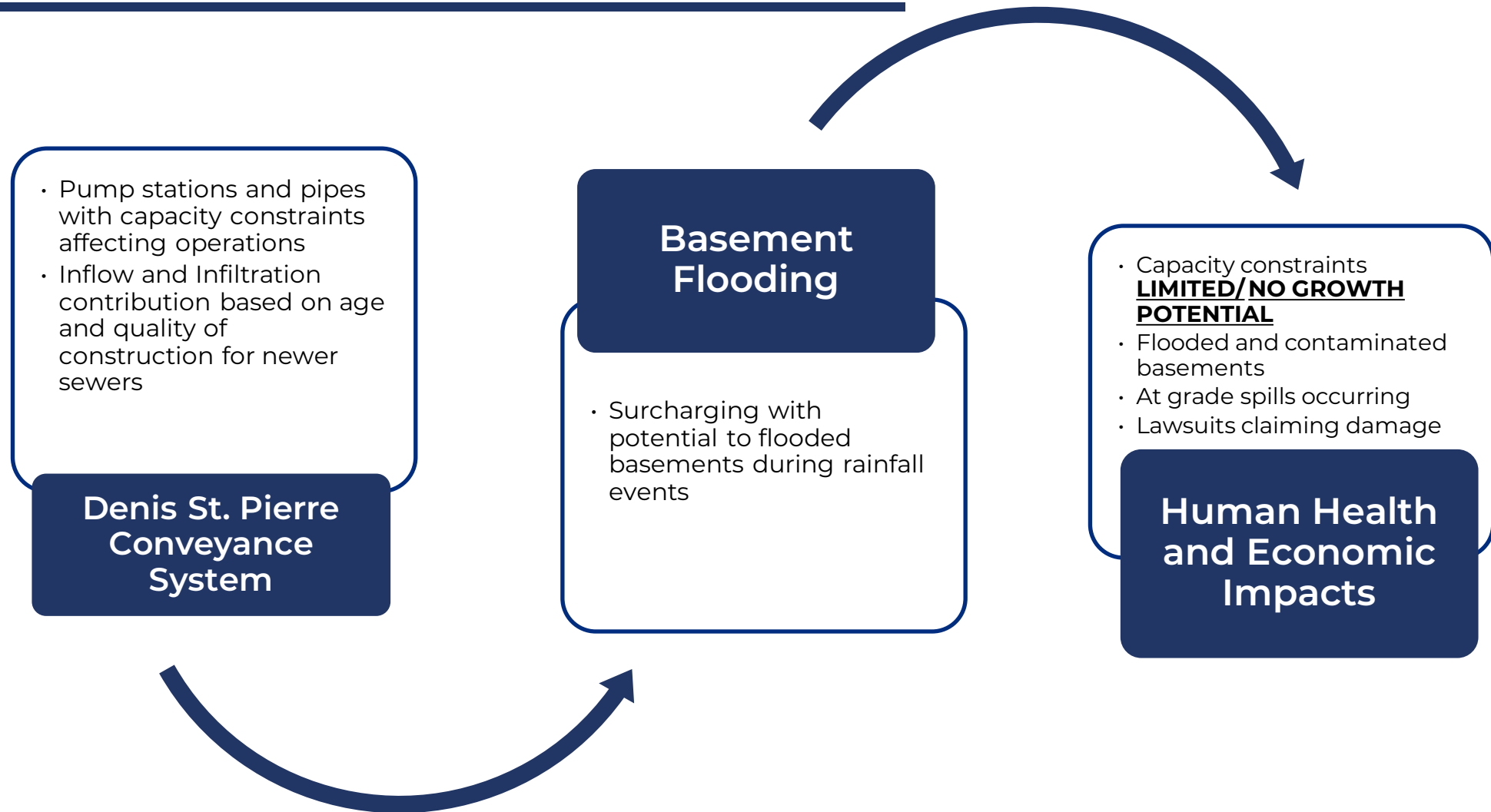


What Happens If We Do Nothing?

Implications of Do-Nothing Approach: Stoney Point & Comber Lagoons

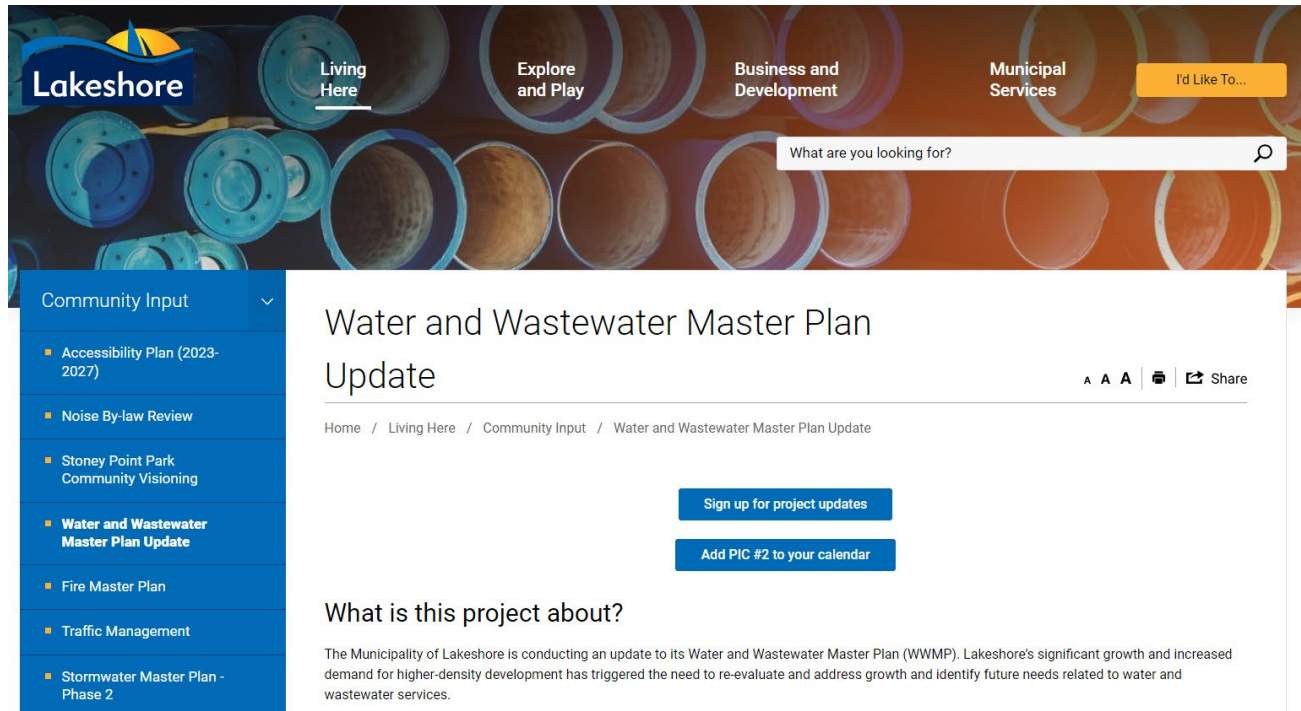


Implications of Do-Nothing Approach: Denis St. Pierre Conveyance System



How Can Council Provide Input to the WWMP Update?

- Tonight, through documentation of questions, comments & concerns;
- Attendance at the PIC #3;
- Continued involvement in the process;
- Continued submission of comments through the process;
- Comments submitted through the website, Lakeshore.ca/WWMP
- Adoption of the WWMP Update – Final Plan

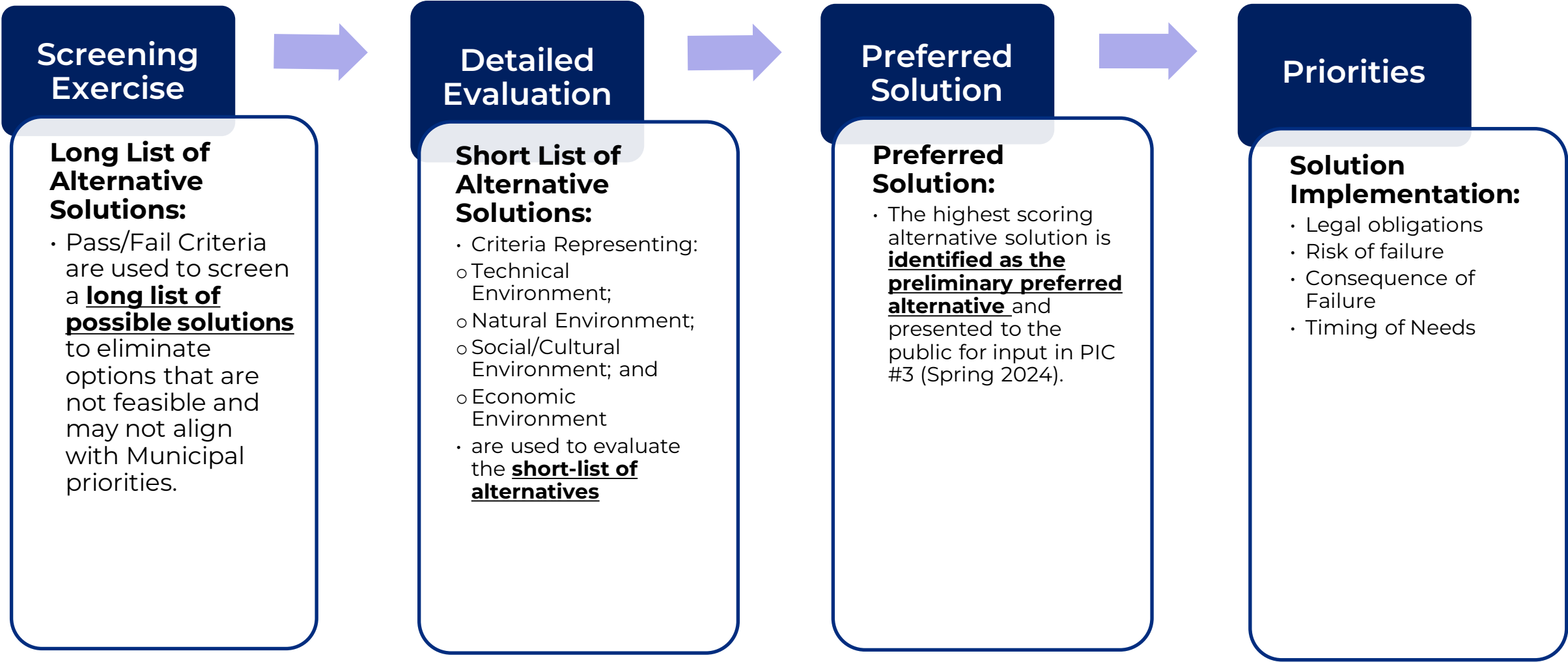


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Overview of Decision-making Process: How/when are Priorities Set?



The implementation plan outlining project prioritization, capital cost estimates, and timelines will be presented in PIC #3.



WWMP Update: PIC #2 Information Boards

Municipality of Lakeshore

Water and Wastewater Master Plan Update



Public Information Centre #2

Welcome!

- Please sign in, and feel free to browse the information panels.
- Your comments are important to us. Please complete the survey (sheets provided) or online at www.Lakeshore.ca/WWMP prior to December 22, 2023.
- Staff from the Municipality and their consultants (Jacobs) are available to answer any questions that you have.



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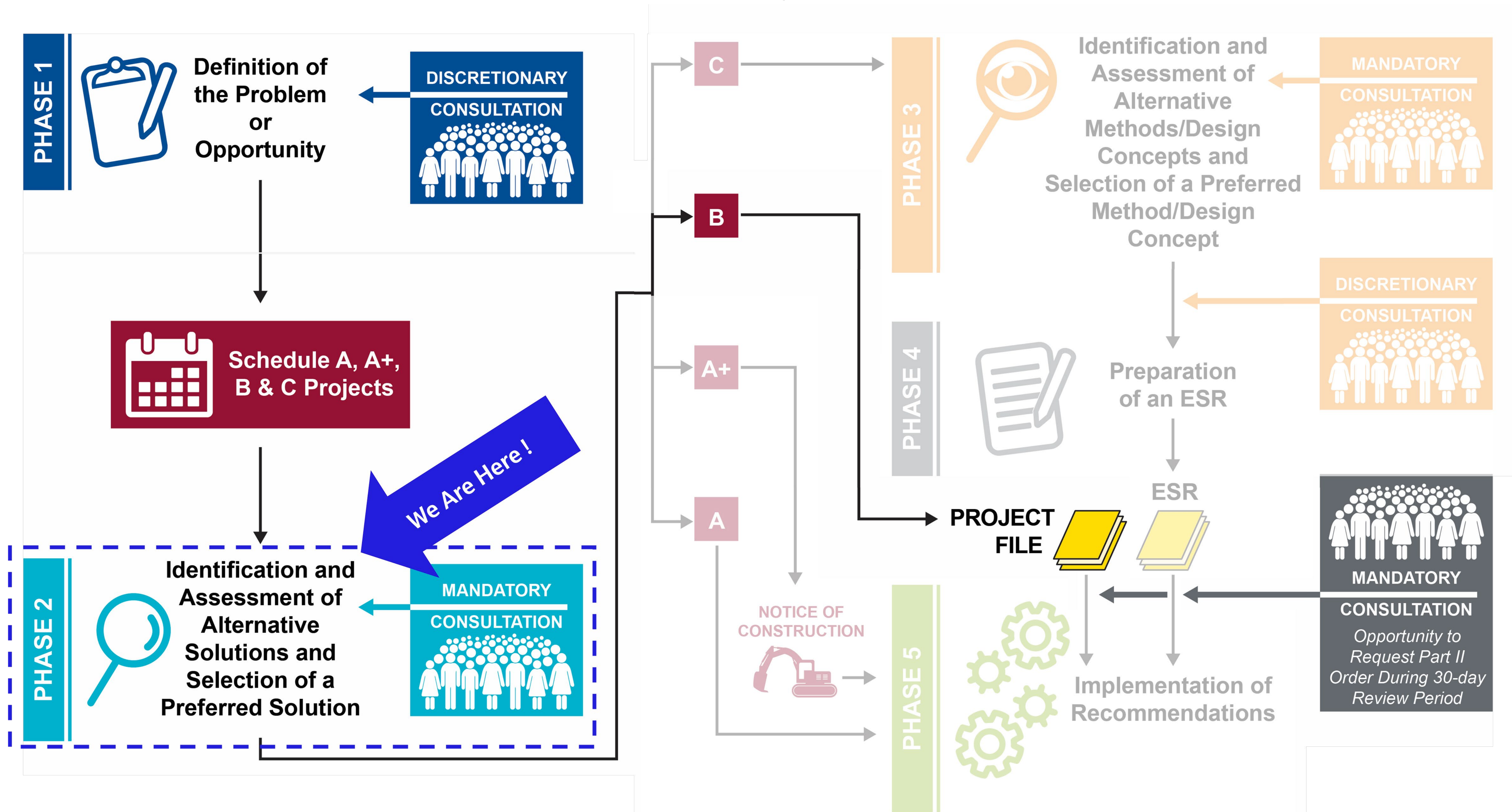


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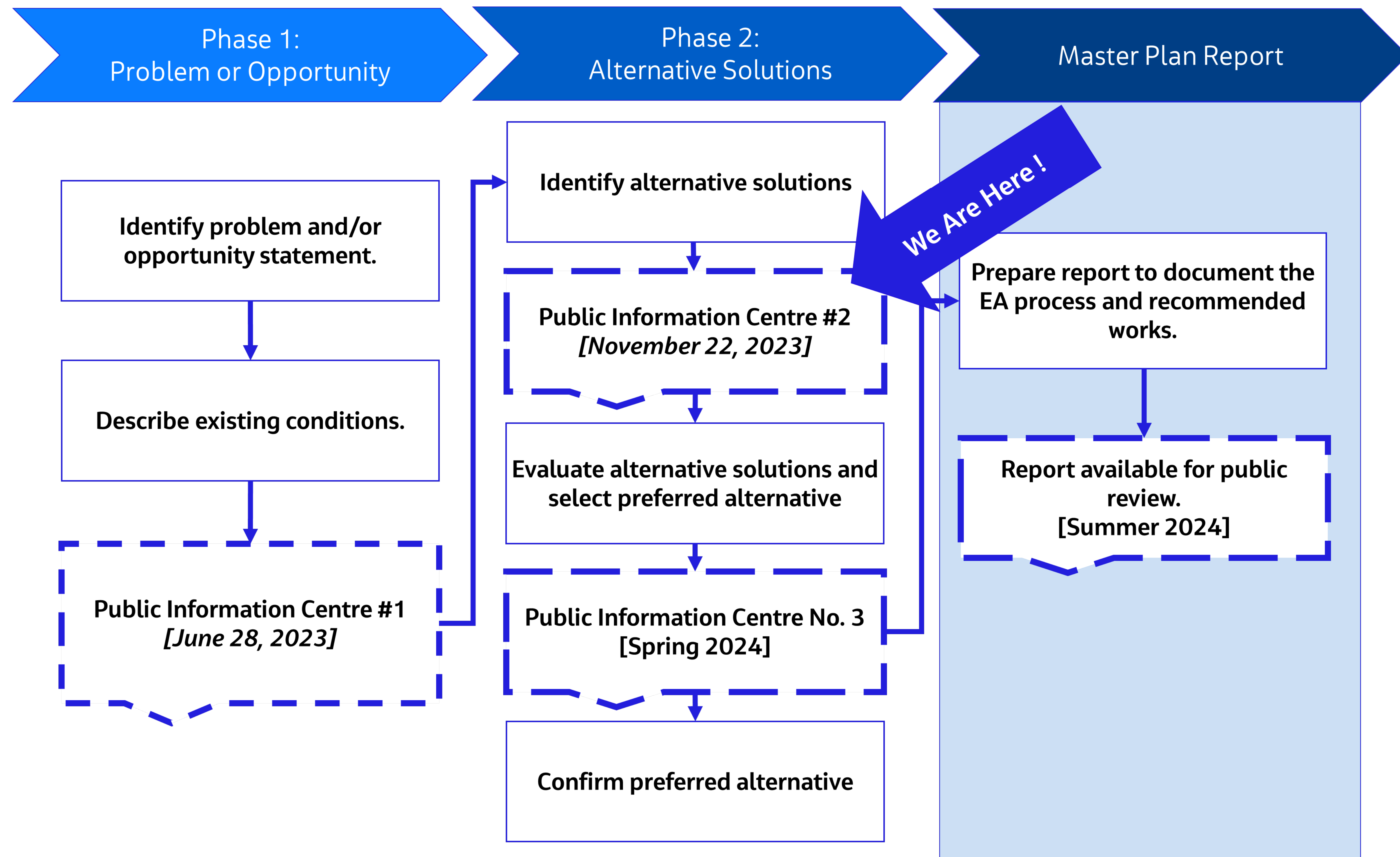
Class Environmental Assessment Process

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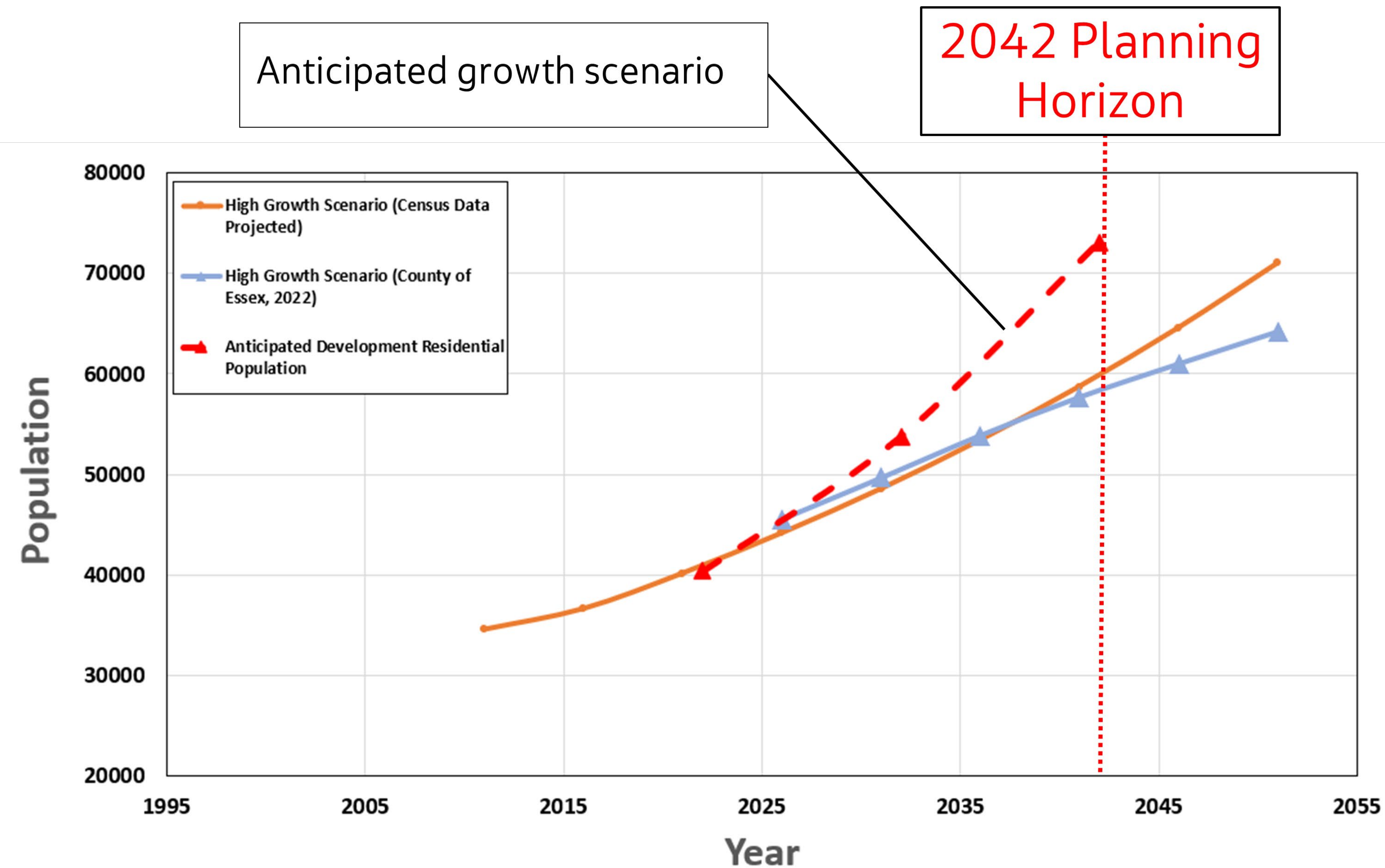
Overview of Planned Public Engagement & Schedule

Opportunities for engagement include three Public Information Centres and an opportunity to comment on the WWMP report.



Overview of Population Projections (Updated)

Lakeshore is expected to reach a population of more than 73,000 people by 2042, which is a population increase of approximately 80 percent.



- The Anticipated Development Residential Population growth scenario is based on a prioritized list of criteria, including legal commitments.
- These population projections will be used to identify future needs and the timing of recommendations.
- Population projections have been refined since Public Information Centre 1

Problem and Opportunity Statement

Lakeshore has realized growth more quickly than projected in the 2018 Water and Wastewater Master Plan Update. Lakeshore continues to experience rapid growth and increased interest in new development.

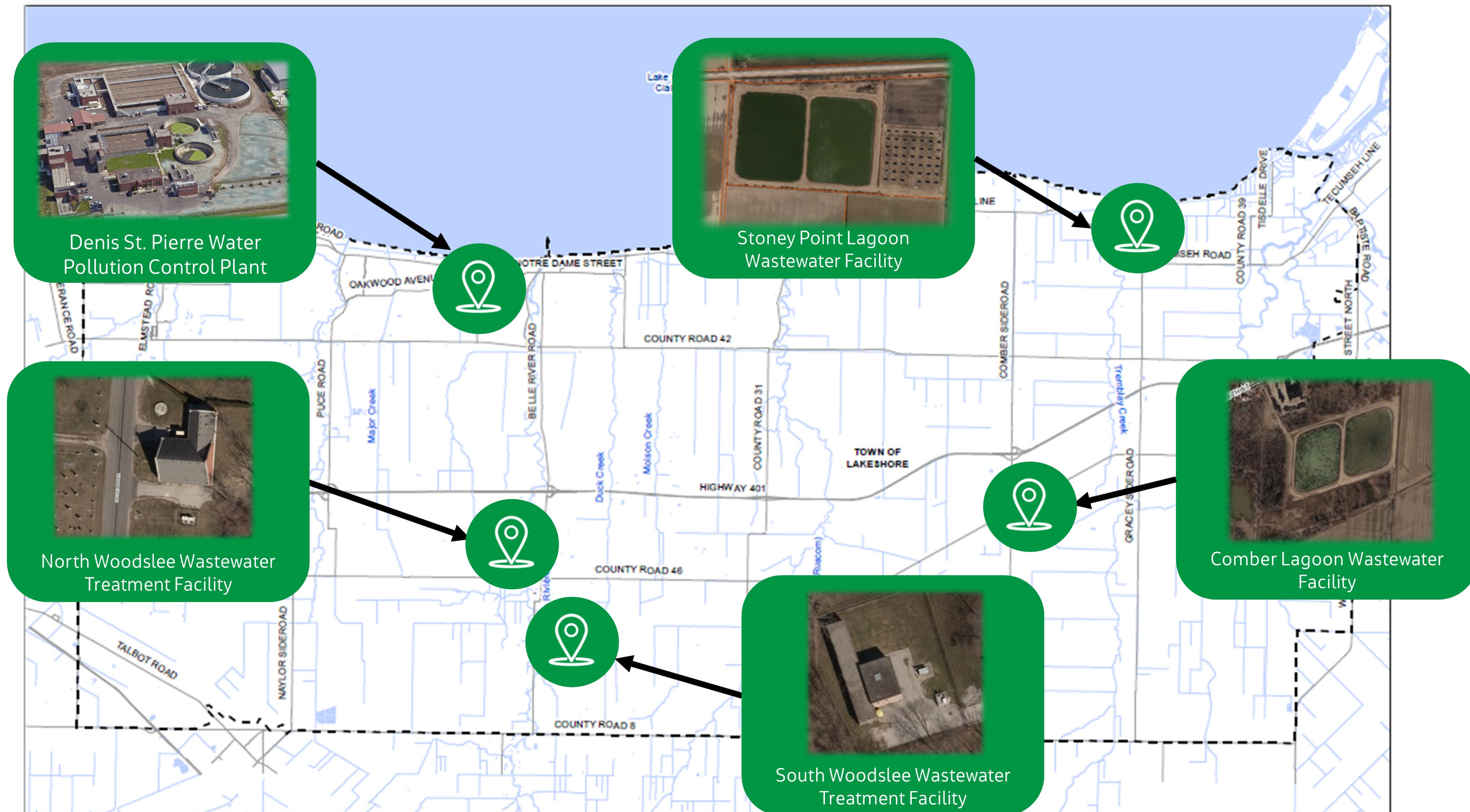
This presents challenges and opportunities for Lakeshore as follows:

- Multiple wastewater treatment facilities (specifically the Stoney Point and Comber Lagoon Wastewater Facilities) are or have triggered the requirement to expand to continue to receive and treat wastewater from the existing communities and accommodate growth.
- Lagoon systems at the Stoney Point Lagoon Facility and the Comber Lagoon Facility have drawn attention from regulatory authorities and provincial agencies due to long-term hydraulic capacity constraints (identified in 2008 and 2018 Master Plans) and recent effluent quality non-compliance.
- There are numerous sanitary conveyance capacity constraints in the Denis St Pierre sewershed limiting Lakeshore's ability to service planned growth areas and accept new development.
- Conveyance and treatment system capacities are significantly impacted by high levels of inflow and infiltration within the collection systems.
- Provincial policy and direction emphasize redevelopment to provide additional housing opportunities, including intensification, and allowing for the approval of additional residential units (ARUs)
- Intensification of residential areas result in increased wastewater flow and drinking water demands greater than the designed capacity of the infrastructure.
- Growth realized since the 2018 Water and Wastewater Master Plan Update has exceed projections impacting Lakeshore's ability to proactively implement the recommendations.

When addressing these challenges, there are opportunities to implement solutions that provide adaptation to a changing climate, decrease energy usage, protect the environment, and protect human health and safety.

Identified Wastewater Treatment Needs & Constraints

- There are capacity constraints identified at multiple wastewater treatment facilities, specifically the Stoney Point and Comber Lagoon Wastewater Facilities.
- In PIC 1, three out of five treatment facilities were identified as approaching or over their rated hydraulic capacity under existing conditions. The expansion of the Denis St. Pierre Water Pollution Control Plant (WPCP) currently underway will address the existing constraint up to approximately 2032.



Identified Wastewater Treatment Needs & Constraints Continued



- Phase 1 of the expansion at the Denis St. Pierre WPCP is currently underway and will address existing constraints to 2032 by increasing the capacity to 25,000 m³/day. A second phase of expansion to a capacity of 30,000 m³/is expected to commence in approximately 2032.
- The Stoney Point and Comber Lagoon Facilities are at or have exceeded 80% of their rated capacity, triggering the need to plan for additional treatment capacity. In addition, the ability of these facilities to meet the effluent requirements have declined.

Treatment Plant	Current Rated Capacity (m ³ /day)	Existing Average Daily Flows (m ³ /day)	Projected Average Daily Flows 2032 (m ³ /day)	Projected Average Daily Flows 2042 (m ³ /day)	Remarks
Denis St. Pierre Water Pollution Control Plant	14,500	13,558	20,525	29,429	An expansion to the Denis St. Pierre facility is currently underway. The first phase of the expansion will increase the capacity of the plant to 25,000 m ³ /day with plans for expansion to 30,000 m ³ /day. A Schedule C Class EA for the Plant Expansion will be initiated in 2032.
Stoney Point Lagoon Facility	949	1,211	1,211*	2,412*	The Stoney Point Lagoon Facility is currently over the rated hydraulic capacity.
Comber Lagoon Facility	430	402	487*	531*	The Comber Lagoon Facility is near capacity, triggering the need for expansion. Existing reserve capacity has already been allocated.
North Woodslee Treatment Facility	330	44	44	44	The North Woodslee facility has remaining hydraulic capacity.
South Woodslee Treatment Facility	210	46	46	46	The South Woodslee facility has remaining hydraulic capacity.

*Projected growth and flows are impacted due to treatment capacity constraints

Long-List of Wastewater Treatment Alternatives – Stoney Point and Comber Lagoon Wastewater Facilities



A high-level screening of wastewater treatment alternatives was completed using the following questions:

- 1

Is this option allowed in Ontario by Regulation?
- 2

Is this option aligned to Municipal Planning Objectives?
- 3

Is this option able to provide reliable treatment?

Alternatives (1st Stage Screening)	Question 1	Question 2	Question 3	Pass/Fail	Remarks
Alternative 1 Do nothing	-	-	-	-	Comparison with the baseline condition is necessary under the Master Planning Class EA process.
Alternative 2 Individual new mechanical Sanitary Treatment Facilities (STF) at the Comber & Stoney Point Lagoon Facilities	Yes	Yes	Yes	Pass	-
Alternative 3 Common mechanical STF at the Stoney Point Lagoon Facility	Yes	Yes	Yes	Pass	-
Alternative 4 Diverting flows from the Comber & Stoney Point Lagoon Facilities to Denis St. Pierre WPCP	Yes	Yes	No	Fail	The majority of the future growth is expected to occur in the area serviced by Denis St. Pierre WPCP, it is important to maintain the reserve capacity to accommodate growth.

Long-List of Wastewater Treatment Alternatives – Stoney Point and Comber Lagoon Wastewater Facilities Continued



Alternatives (1st Stage Screening)	Question 1	Question 2	Question 3	Pass/Fail	Remarks
Alternative 5 Diverting flows from the Comber and Stoney Point Lagoon Facilities to the Tilbury WWTP	Yes	Yes	No	Fail	Tilbury WWTP is operating at 35% capacity (performance report 2022). However, diverting flows to Tilbury WWTP requires approvals and coordination from Chatham-Kent.
Alternative 6 Diverting flows from the Comber Lagoon Facility to the Tilbury WWTP	Yes	Yes	Yes	Pass*	*This solution may not provide sufficient capacity for the development of all available vacant lands (beyond 2042).
Alternative 7 Diverting flows from the Stoney Point Lagoon Facility to the Tilbury WWTP	Yes	Yes	No	Fail	Tilbury WWTP is operating at 35% capacity (performance report 2022). However, diverting flows to Tilbury WWTP requires approvals from Chatham-Kent. Tilbury WWTP does not have capacity to accept flows from the Stoney Point Lagoon Facility to 2042.

Long-List of Wastewater Treatment Alternatives – Stoney Point and Comber Lagoon Wastewater Facilities Continued (2)



Alternatives (1st Stage Screening)	Question 1	Question 2	Question 3	Pass/Fail	Remarks
Alternative 8 Diverting flows from the Comber and Stoney Point Lagoon Facilities to the North and South Woodslee Treatment Plants	Yes	Yes	No	Fail	<p>North and South Woodslee plants have sufficient rated capacity. These facilities are unable to reliably meet regulatory effluent limits.</p> <p>It is important to maintain reserve capacity to accommodate growth.</p> <p>Significant construction would be required to collect and convey flow from the Comber and Stoney Point Lagoon Facilities to the North and South Woodslee WWTPs.</p>
Alternative 9 Upgrade/Expand lagoons at the Comber and Stoney Point Lagoon Facilities	No	Yes	No	Fail	<p>Lagoon expansion is not supported under current Ontario Regulations or MECP Policy, however upgrading lagoons with a newer treatment technology is not going to address the identified hydraulic constraints.</p> <p>This alternative would require a shutdown of the lagoon(s) for upgrades, and the diversion of flows to another available treatment plant.</p>

Short-List of Wastewater Treatment Alternatives – Stoney Point and Comber Lagoon Wastewater Facilities



Alternatives	Description & Considerations
Alternative 1 Do nothing	This alternative represents the baseline condition for the purposes of comparison and is necessary to consider under the Master Planning Class EA process.
Alternative 2 Individual new mechanical STFs at the Comber and Stoney Point Lagoon Facilities	This alternative involves the construction of two new mechanical STFs at both the Comber and Stoney Point lagoon sites. This alternative will require land acquisition adjacent to the Comber Lagoon Facility to accommodate a new treatment facility.
Alternative 3 Common mechanical STF at the Stoney Point Lagoon Facility	This facility will service both Stoney Point and Comber. Flows from the Comber Lagoon Facility will be redirected to Stoney Point.
Alternative 3 & 6* (Combined) A new mechanical STF at Stoney Point (Alternative 3) and diverting flows from the Comber Lagoon Facility to the Tilbury WWTP (Alternative 6*)	<p>This alternative involves conveying flows from the Comber Lagoon Facility to the Tilbury WWTP for treatment and the construction of a new mechanical treatment facility at the Stoney Point Lagoon Facility to treat flows from Stoney Point.</p> <p>*This solution may not provide capacity for the development of all available vacant lands in Comber beyond 2042.</p>

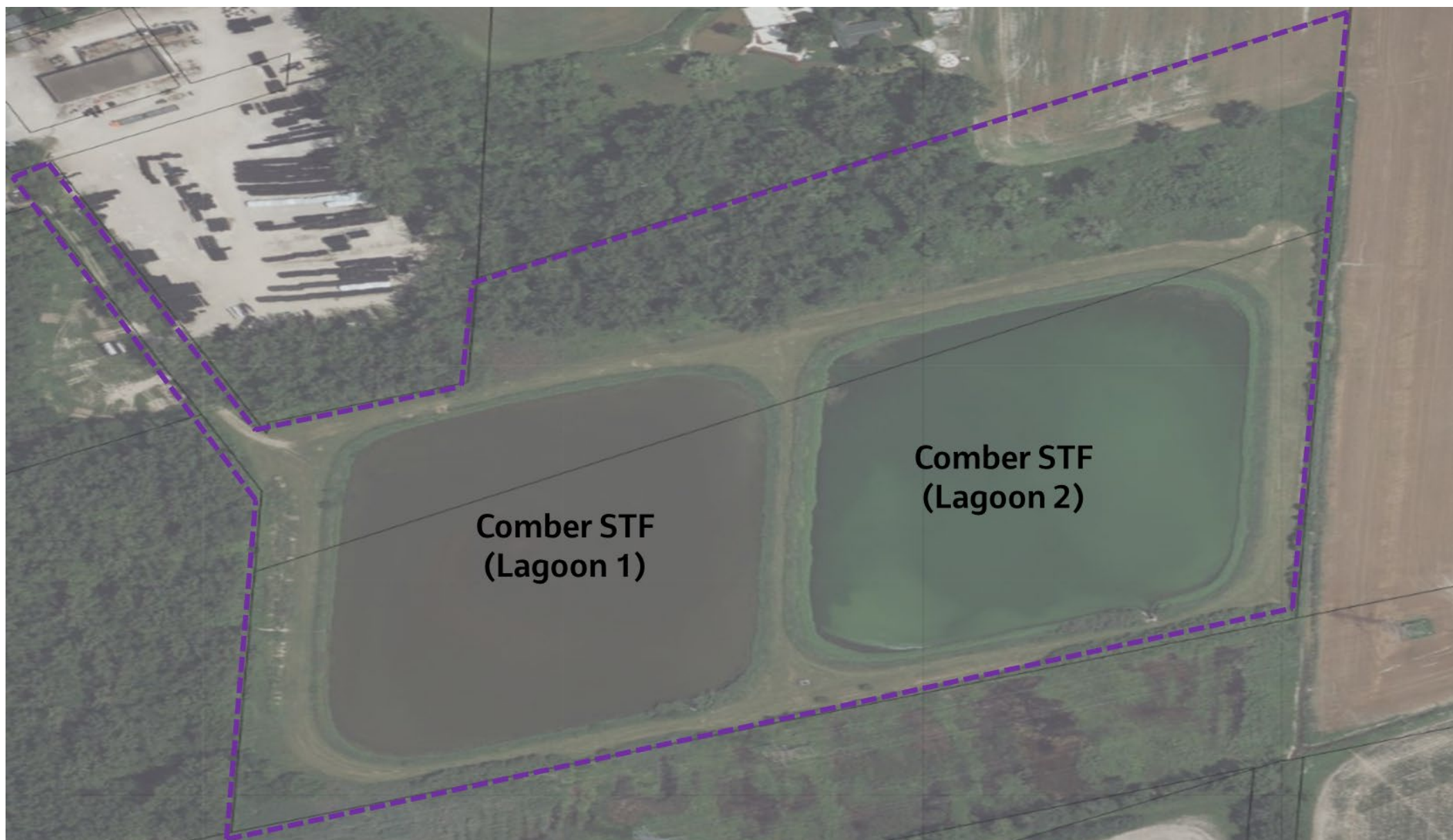
The short-listed alternatives will be subjected to detailed evaluation.

Short-List of Wastewater Treatment Alternatives – Stoney Point and Comber Lagoon Wastewater Facilities Continued

Alternative 1 Do Nothing

Alternative 2

Individual new mechanical STFs at the
Comber and Stoney Point Lagoon Facilities



Alternative 3

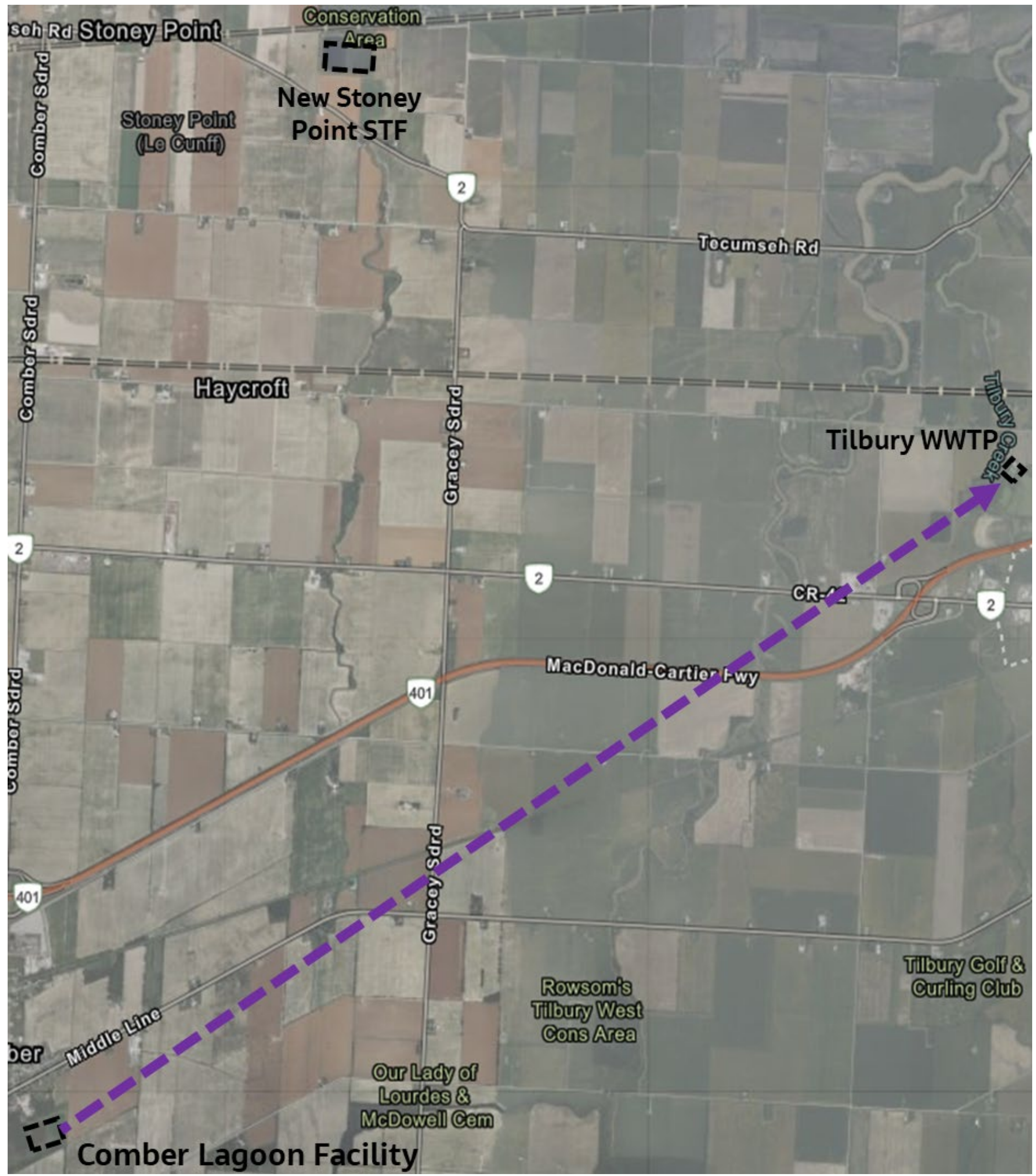
Common mechanical STF at the
Stoney Point Lagoon Facility



Note: The conveyance route presented (purple colour) is adapted from Municipality of Lakeshore, Eastern Communities ESR, 2012

Alternative 3 & 6* (Combined)

A new mechanical STF at Stoney Point
(Alternative 3) and diverting flows from the
Comber Lagoon Facility to the Tilbury WWTP
(Alternative 6*)



Short-List of Wastewater Treatment Alternatives – Denis St. Pierre Wastewater Pollution Control Plant (WPCP)



The short-listed alternatives will be subjected to detailed evaluation.

Alternative	Description & Considerations
Alternative 1 Do nothing (2032-2042)	The Denis St. Pierre WPCP is undergoing expansion to a new rated capacity of 25,000 m ³ /day. Based on the population projections, Denis St. Pierre WPCP will reach 80% of its rated capacity by 2032 – triggering the initiation of the Phase 2 expansion to 30,000 m ³ /day in 2032. Additional capacity within the Denis St. Pierre sewershed will be required by 2042.
Alternative 2 Expand plant on existing site (2032-2042)	<p>This alternative expands the treatment capacity at the existing Denis St. Pierre WPCP site.</p> <p>An adequate buffer area will be required to expand the plant capacity. Land acquisition for the buffer zone will be required. This alternative is expected to include purchasing/compensation for the land to maintain future buffer zone requirements.</p>
Alternative 3 Service with distributed packaged plants (2032-2042)	This alternative will consider the use of small package plants to provide distributed treatment capacity in the Denis St. Pierre service area.
Alternative 4 Site a new WPCP within the servicing boundary (2032-2042)	This alternative will consider the siting of a new conventional wastewater treatment plant facility to provide treatment capacity in the Denis St. Pierre service area.

Identified Wastewater Conveyance Needs & Constraints

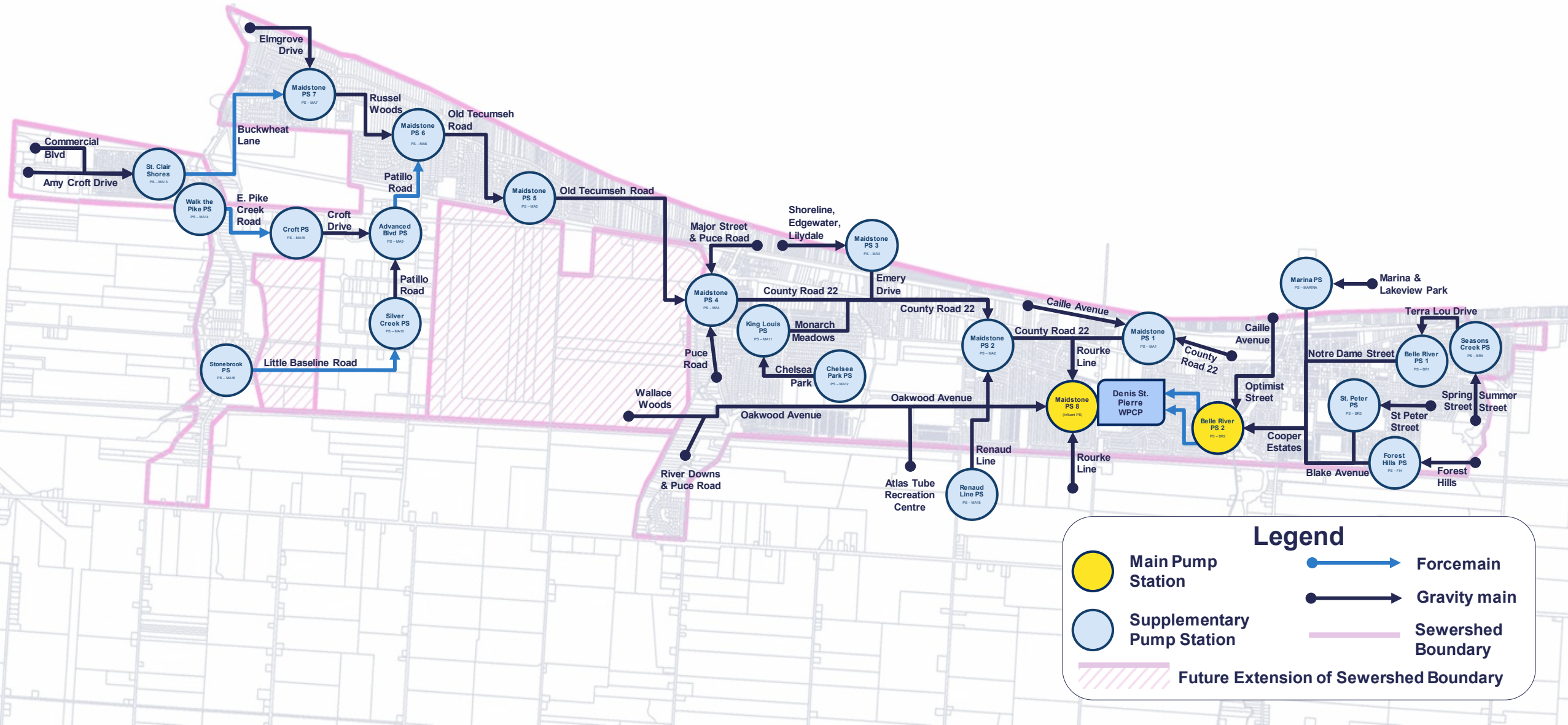
- Conveyance infrastructure includes sewage pumping stations and trunk/sanitary sewer pipelines.
- There are numerous sanitary conveyance system constraints identified in the Denis St. Pierre sewershed.
- Existing hydraulic constraints at the Comber and Stoney Point Lagoon Facilities and reports of basement flooding indicate the potential for capacity constraints within the respective conveyance systems. More investigation will be required to define these constraints.
- Constraints in the system were grouped based on location and hydraulic connectivity within the conveyance system to assist with identifying alternatives.

Long-list of Wastewater Conveyance Solutions

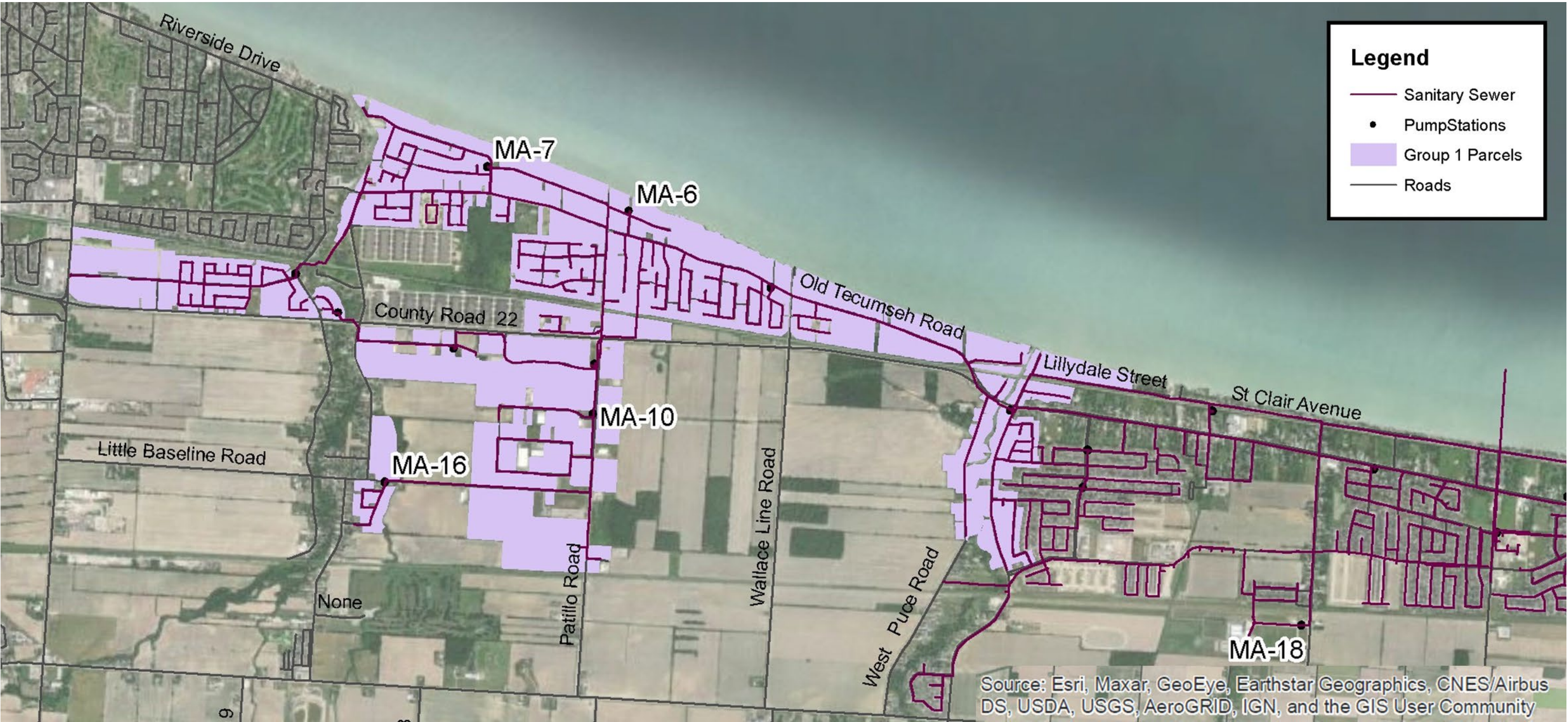
Conveyance solutions are often addressed through a combination of best practices and infrastructure. A wide range of potential solutions were screened to help identify alternatives for capacity constraints.

Category	Alternative	Pass/Fail	Remarks
Source Control	Downspout Disconnection Rain Barrel Program Weeping Tile (Foundation Drain Disconnection) Sewer Lining Cross-Connection Disconnection	Fail	Source Control Alternatives (where possible) are currently being implemented by the Municipality of Lakeshore; however, these cannot be relied on as the primary solution to address conveyance needs.
Conveyance Control	Inline Storage	Pass	-
	Sewer Separation	Fail	The Municipality of Lakeshore does not have combined sewers
	Pipe Upsizing or Twinning	Pass	-
	Increase Pump Station Capacity and/or replacement of Pump Station(s)	Pass	-
Flow Directions and End-of-Pipe Controls	Weir	Fail	No feasible locations
	Flow diversion	Fail	No feasible locations for flow diversion to existing sewers within the Denis St. Pierre sewershed
	New Trunk Sewer to New WWTP in Maidstone	Fail	Timing inconsistent with treatment capacity needs
	New Trunk Sewer in Maidstone to Denis St. Pierre WPCP	Pass	-
	Offline Storage (at pump station or WWTP)	Pass	-

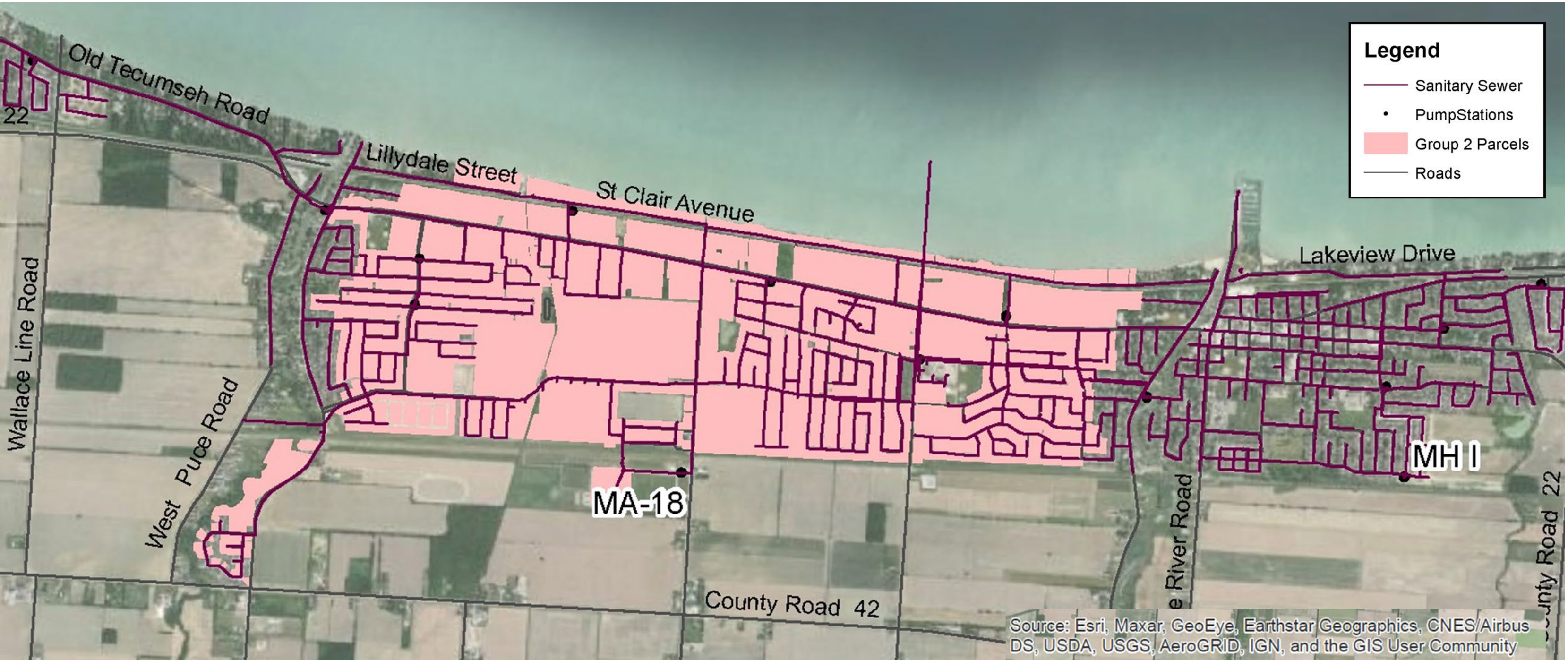
Sanitary Distribution Schematic



Group 1 Conveyance Constraints



Group 2 Conveyance Constraints



Constraints	Constrained under Existing Conditions	Constrained under Future (2032) Conditions	Constrained under Future (2042) Conditions
Amy Croft Drive Trunk Sewer	No	Yes	Yes
St. Clair Shores – Pump Station (MA-13)	No	Yes	Yes
Russel Woods Drive – Trunk Sewer	Yes	Yes	Yes
Maidstone Pump Station 6	Yes	Yes	Yes
Maidstone Pump Station 5*	No	No	No
Wintermute Area	No	Yes	Yes
Patillo Industrial Area	Yes	Yes	Yes
Puce Area	Yes	Yes	Yes
Maidstone Pump Station 4	Yes	Yes	Yes

Constraints	Constrained under Existing Conditions (Y/N)	Constrained under Future (2032) Conditions (Y/N)	Constrained under Future (2042) Conditions (Y/N)
IC Roy/Mancini Group (Downstream of Chelsea Park PS)	Yes	Yes	Yes
Oakwood Trunk Area *	No	No	No
Maidstone Pump Station 8 *	No	No	No

* Maidstone Pump Station 8 upgrades are currently underway, once commissioned some constraints will be resolved. Group 2 receives flows from Group 1 therefore, the extent of the constraints in Group 2 will depend on the Group 1 preferred alternative.

* Extent of constraint depends on Group 1 preferred alternative

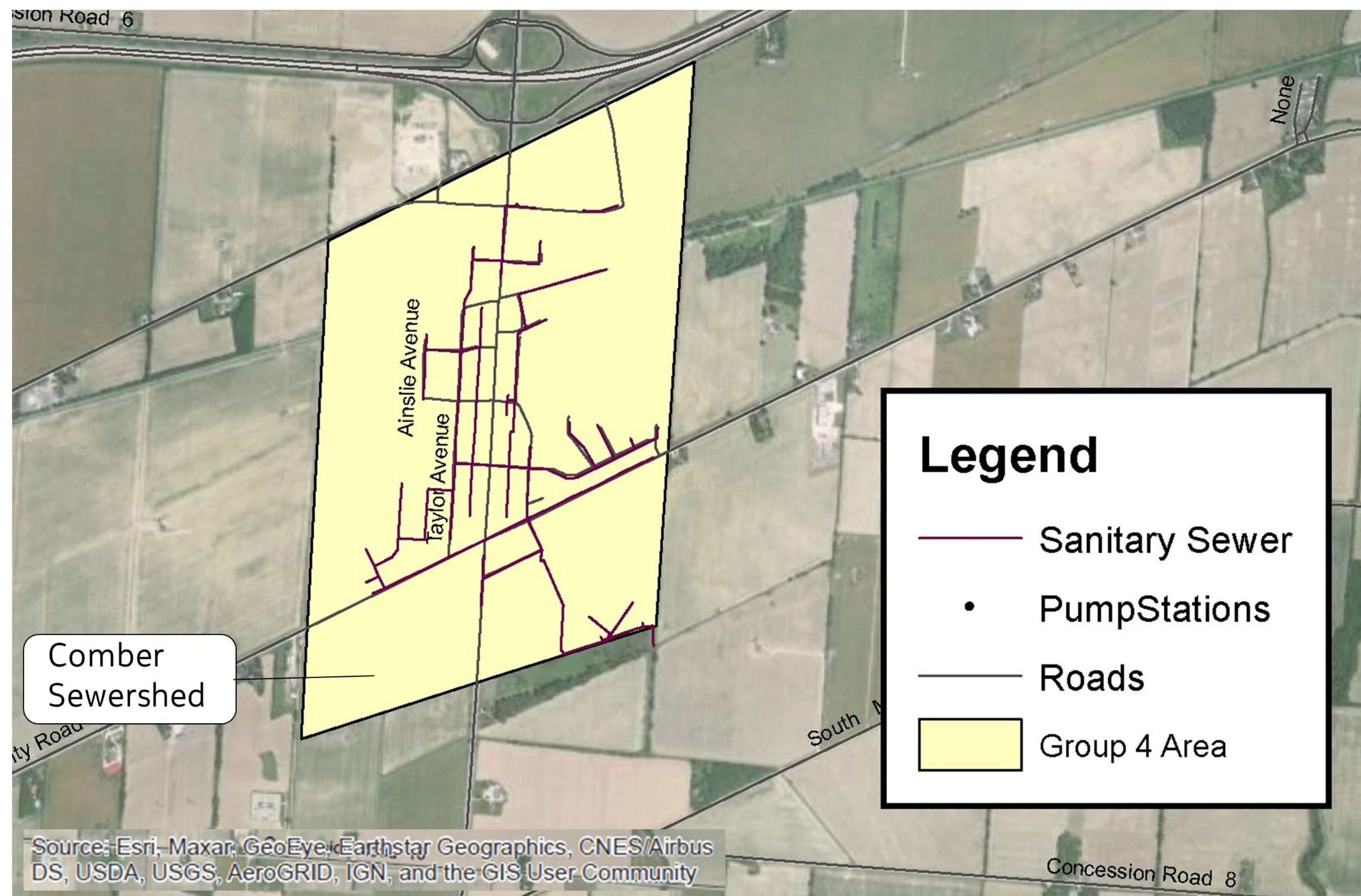
Group 3 Conveyance Constraints



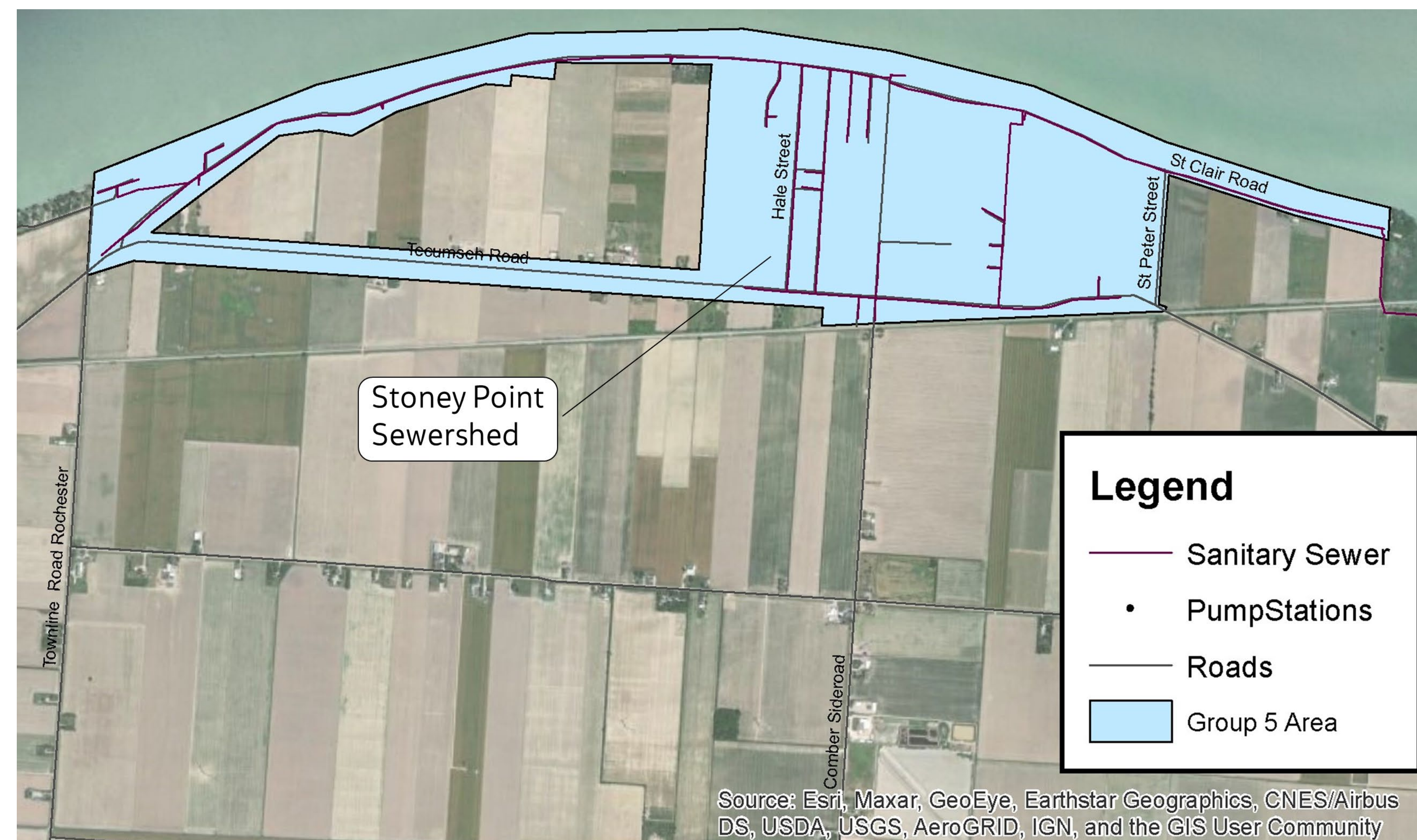
Group No. Constraints		Constrained under Existing Conditions	Constrained under Future (2032) Conditions	Constrained under Future (2042) Conditions
4	Belle River Pump Station 2	No**	Yes	Yes

** This is a condition-based need under existing conditions based on an ongoing condition assessment

Group 4 Conveyance Constraints



Group 5 Conveyance Constraints



- There have been several reports of basement flooding with unclear cause, therefore flow monitoring in Stoney Point and Comber sewersheds is recommended to monitor system performance during dry and wet weather conditions.
- Flow monitoring is recommended to be completed prior to implementing treatment alternatives in Stoney Point and Comber.

Short-list of Conveyance Alternatives



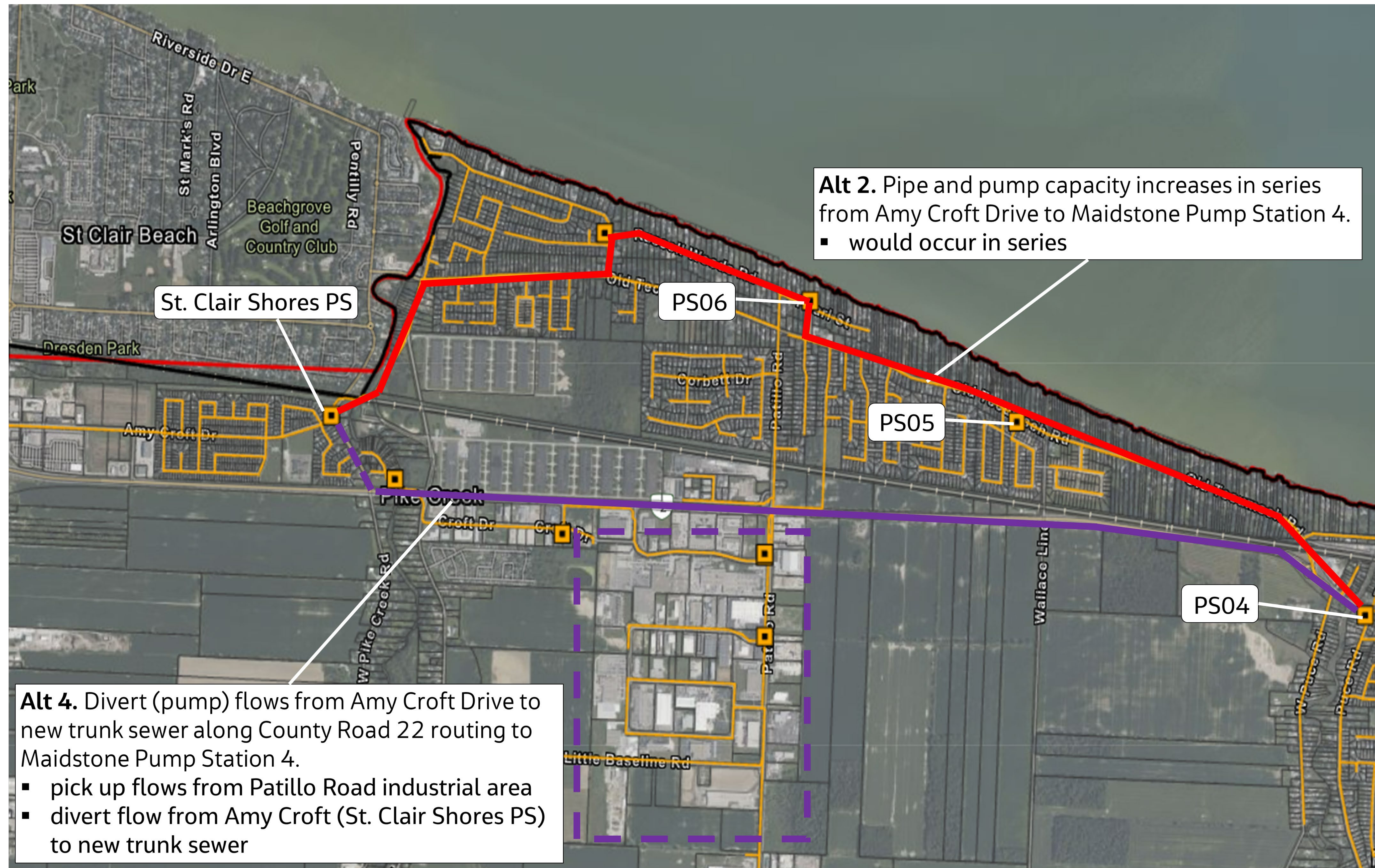
The short-listed alternatives will be subjected to detailed evaluation

Alternative No.	Alternative
Group 1	
Alternative 1	Do Nothing
Alternative 2	Pipe and pump capacity increases in series from Amy Croft Drive to Maidstone Pump Station 4 and local sewer upgrades as necessary.
Alternative 3	Offline storage at each pump station with local pipe upgrades as required
Alternative 4	Divert (pump) flows from Amy Croft Drive to new trunk sewer along County Road 22 routing to Maidstone Pump Station 4, local sewer upgrades as necessary, and upgrade Amy Croft Drive Trunk Sewer.
Group 2	
Alternative 1	Do Nothing
Alternative 2	Increase capacity of County Road 22 sewer and local pipe upsizing/twinning/inline storage as required. May require upsizing of Maidstone Pump Station 8*
Alternative 3	Offline storage at Maidstone Pump Station 8* combined with Alternative 2 or Alternative 4.
Alternative 4	Divert flows from Maidstone Pump Station 4 to new trunk sewer (Twin the Oakwood Trunk Sewer) and local pipe upsizing/twinning/inline storage as required. May require upsizing of Maidstone Pump Station 8*
Group 3	
Alternative 1	Do Nothing
Alternative 2	Replace Belle River Pump Station 2 forcemain
Alternative 3	Replace and upsize Belle River Pump Station 2 forcemain and increase pump capacity
Alternative 4	Construct new pump station

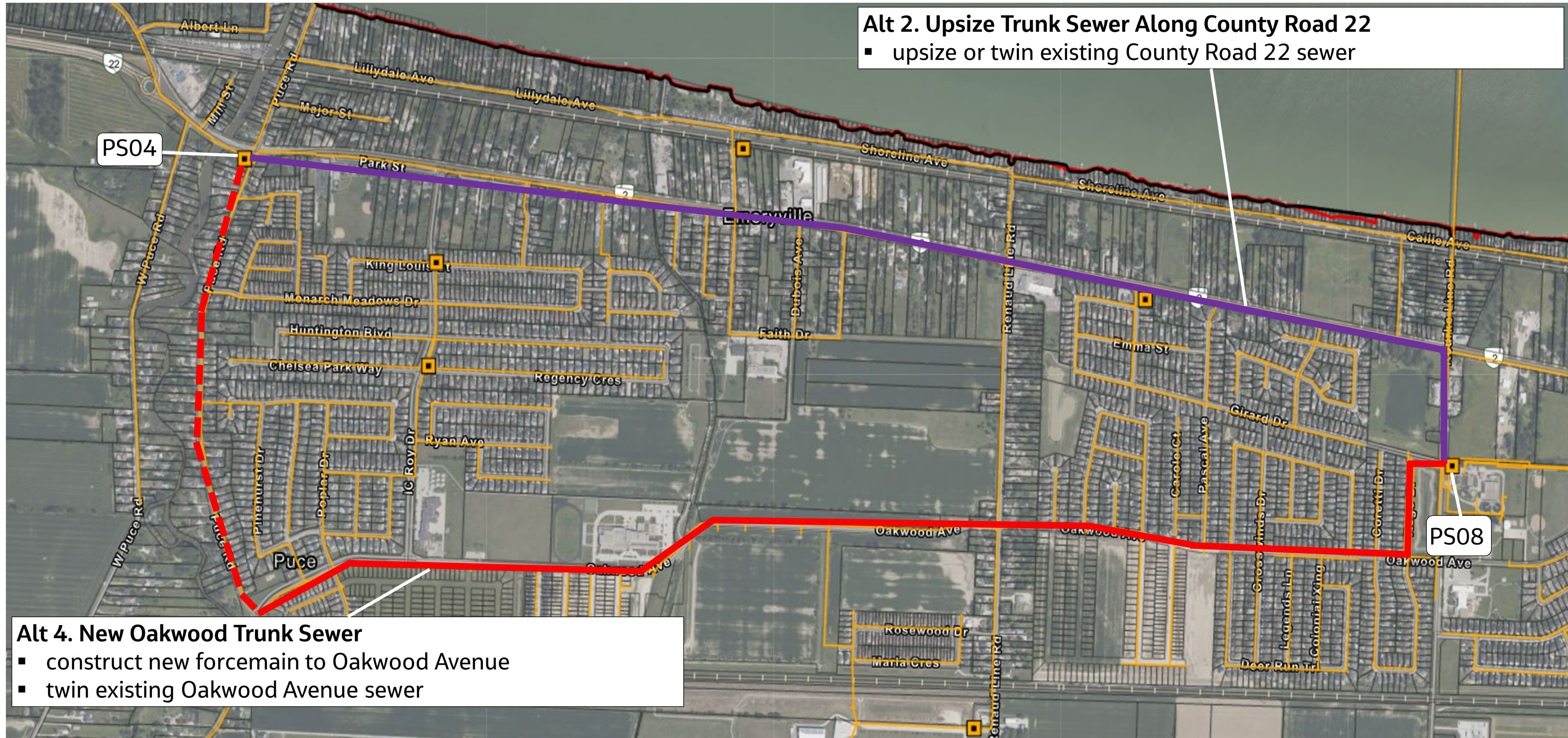
Groups 4 and 5: Further investigation through flow monitoring will be required to identify capacity constraints prior to identifying alternatives.

*Need for upgrade depends on the Group 1 preferred alternative

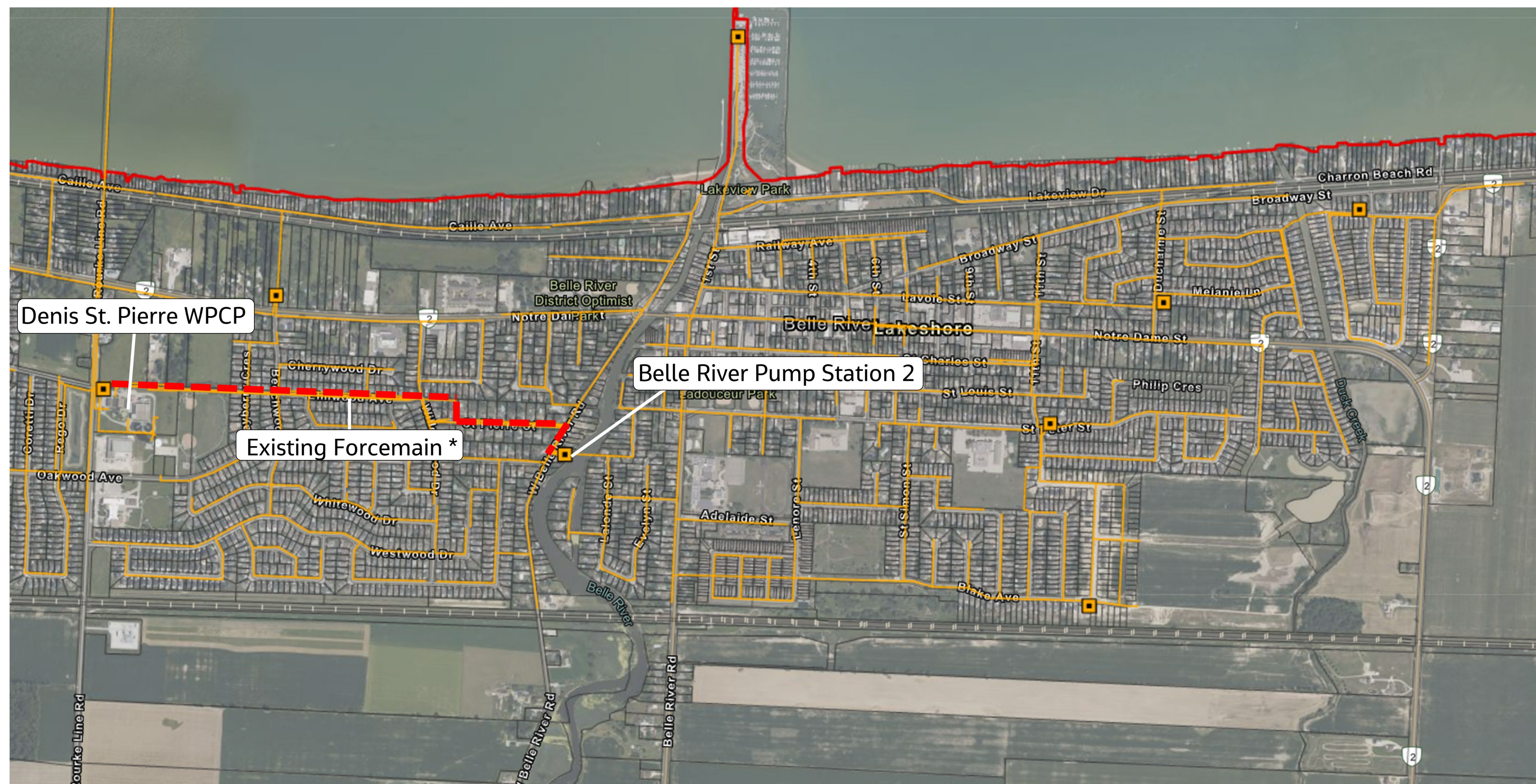
Conveyance Constraints – Group 1 Alternative 2 and 4



Conveyance Constraints – Group 2 Alternatives 2 and 4

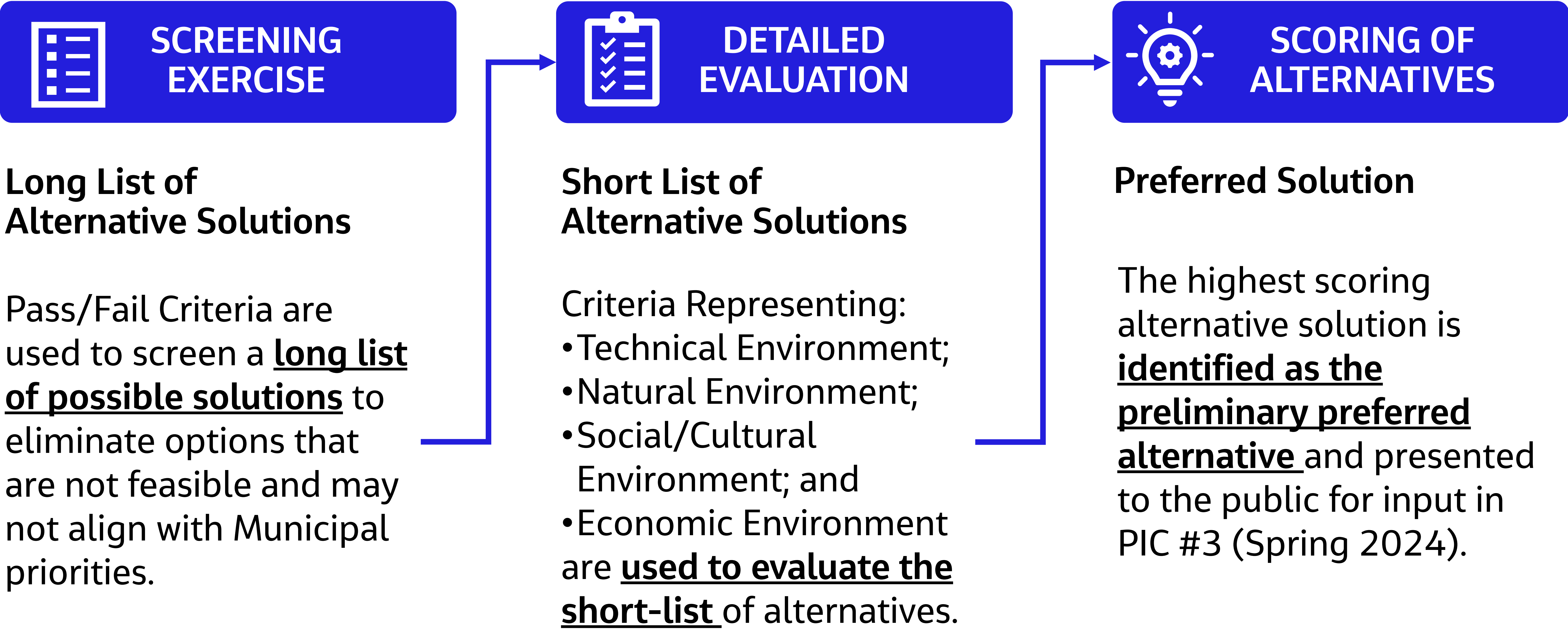


Conveyance Constraints Group 3



*If a new forcemain is identified as a preferred alternative, a route will need to be selected

Overview of Decision-Making Process



The implementation plan outlining project prioritization, capital cost estimates, and timelines will be presented in PIC #3.

Next Steps

Thank you for your interest in Lakeshore's WWMP Update. Your feedback is an important part of the Master Plan process.

- Please refer to the Municipality's website for the most up-to-date information related to the WWMP Update and to sign up for the project mailing list: www.Lakeshore.ca/WWMP
- Public Information Centre #3 will be held in the Spring 2024 and will summarize the preferred solutions for the water and wastewater systems.
- A dedicated email address has been set up for this study. To provide your comments or request more information please email LakeshoreWWMP@jacobs.com
- Alternatively, you can reach the following contacts:

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Next Steps/look Ahead After PIC #2

- ✓ Identify Key Considerations and Population Growth for Planning Horizon (PIC #1) **COMPLETE**
- ✓ Identify wastewater system constraints and alternatives (PIC #2) **COMPLETE**
- ❑ Identify water system constraints and alternatives (PIC #3)
- ❑ Select preferred water and wastewater system alternatives (PIC #3)
- ❑ Prepare Master Plan Report for public and Ministry Review and Comment
- ❑ Report is finalized and adopted by Council

Following the completion of the Master Plan Report, the Municipality will need to complete the following steps to implement the recommendations:

- Complete the required Supportive Studies (such as Cultural Heritage, Archaeological Assessment, Natural Heritage, Geotechnical, etc.)
- Environmental Study Report for Schedule C projects (Phases 3 and 4 of the Class EA process)
- Project Implementation (Funding, Design of solutions, Required Approvals, Construction)

Success of Implementation of the Master Plan Update:

Aligning strategies, staying focused on the plan, and making a long-term commitment to implement the plan.

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