Welcome!

Welcome to the first Public Information Centre (PIC) for the Thorndale Wastewater Treatment Plant (WWTP) Expansion Municipal Class Environmental Assessment (EA) study. After reviewing the information, we would appreciate your comments and feedback. Members of the project team are available to discuss your questions. Your input is important to us!

Thorndale Wastewater Treatment Plant Expansion Schedule C Municipal Class Environmental Assessment

Public Information Centre #1

January 25, 2024

The purpose of this PIC is to:

- Provide an overview of the Thorndale WWTP and study context.
- Identify progress to date and next steps.
- Provide an opportunity for you to learn about the project and how to get involved.

Project Overview

What are we doing?

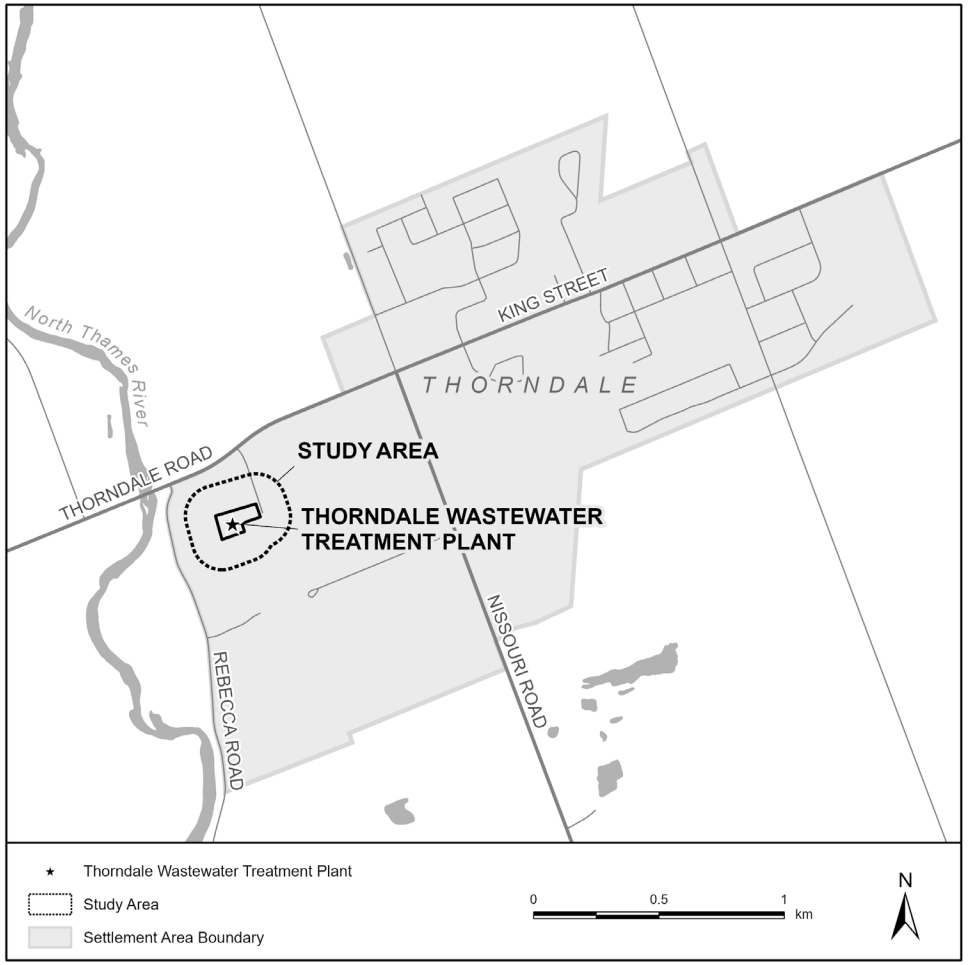
- The Municipality of Thames Centre is planning for the future expansion of the WWTP to serve the community of Thorndale.

Why are we doing it?

- To accommodate future residential and commercial/industrial development by ensuring wastewater treatment capacity is available.

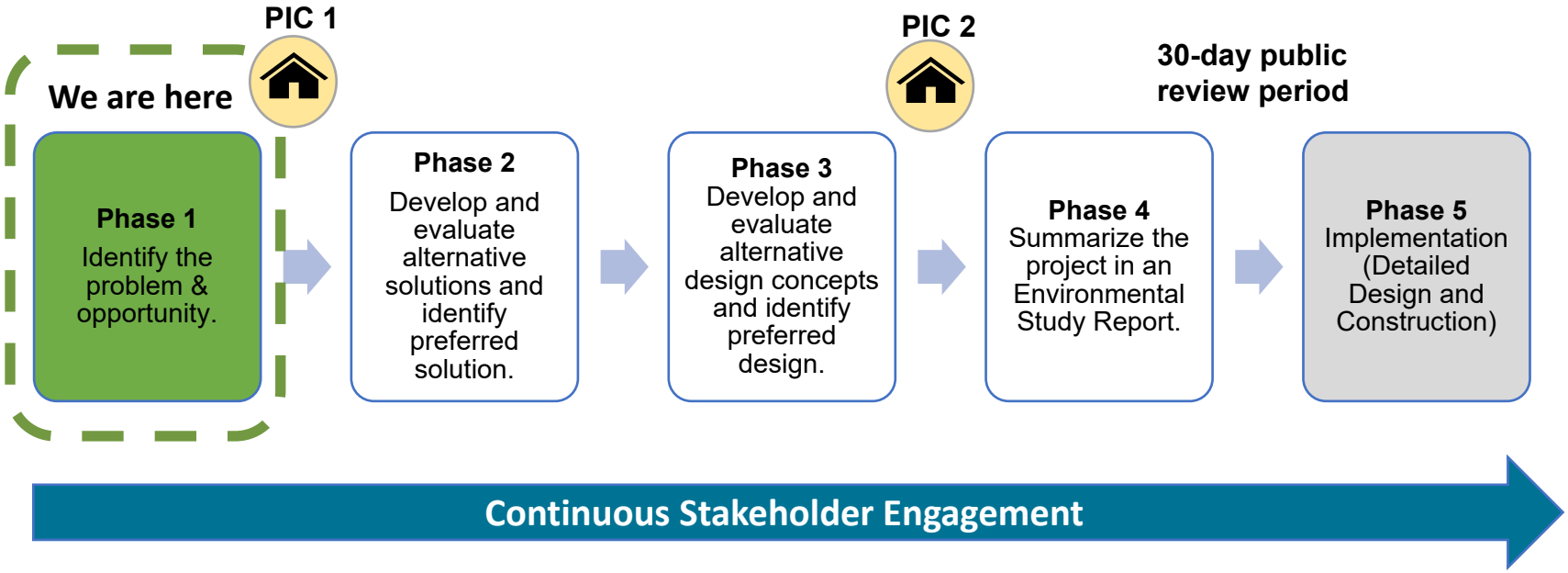
What does the Study Area include?

- The study area includes the existing WWTP on Ideal Drive and adjacent property, as shown on the map.



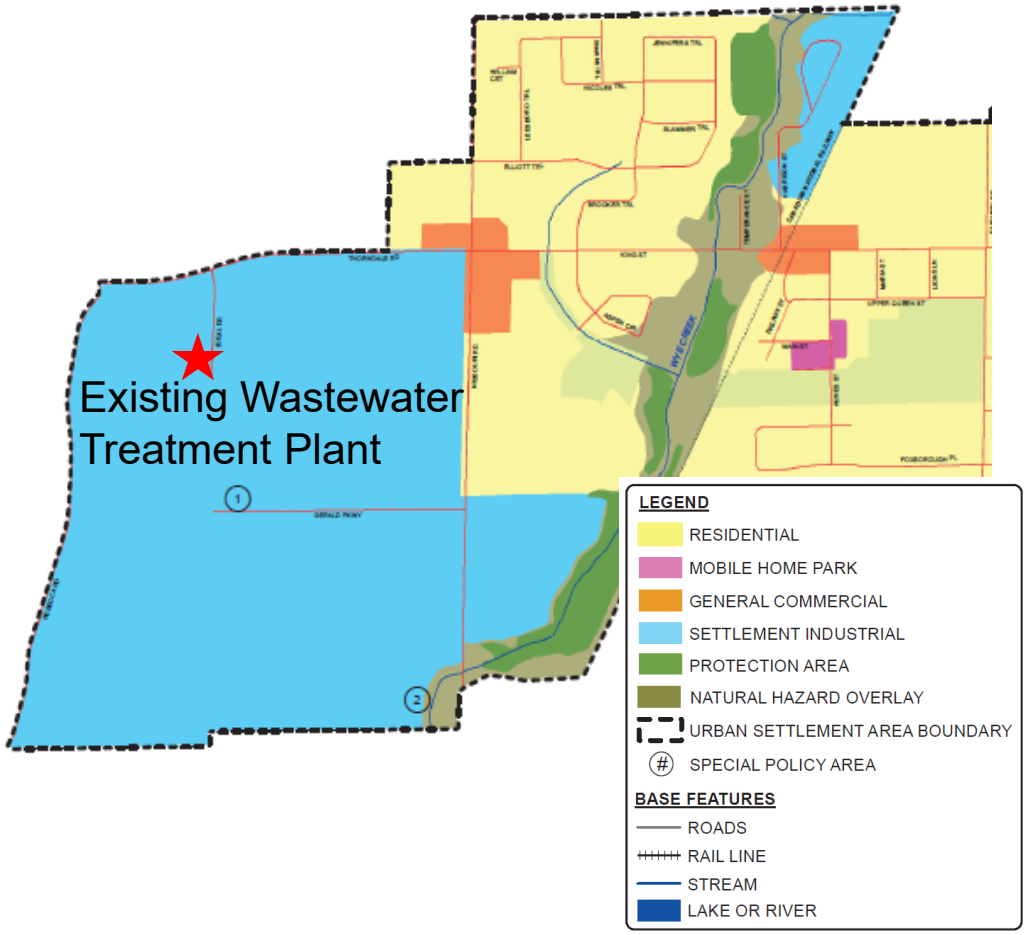
Municipal Class Environmental Assessment Process

- This study is following the requirements of a Schedule C Municipal Class Environment Assessment (EA), including the completion of Phases 1 - 4 of the process summarized below.
- The study includes opportunities for public input including two Public Information Centres (PICs) and a 30-day review of the Environmental Study Report at the end of the project.



Existing Conditions - Land Use Context

- The Municipality of Thames Centre Official Plan (2004, consolidated 2022) designates the WWTP property as “Settlement Industrial”.
- The Middlesex County Official Plan (2023) designates Thorndale as a “Community Area”. Community Areas must have potential to accommodate future growth, serve a community function, and provide a level of service necessary to support future growth.
- The County Official Plan encourages the development and improvement of sanitary services in the County.
- The Provincial Policy Statement (PPS, 2020) requires that municipal wastewater supply systems consider factors such as:
  - Forecasted growth
  - Health & safety
  - Natural environment
- Growth is directed to Settlement Areas and must make efficient use of land and natural resources.



Municipality of Thames Centre Official Plan - Thorndale Land Use

Existing Conditions - WWTP Infrastructure

- The Thorndale WWTP has a design capacity of 674 m^3/day.
- The site services approximately 1,500 Thorndale residents.
- The WWTP has shown good operational performance and good effluent quality, based on historical data (2018-September 2023).

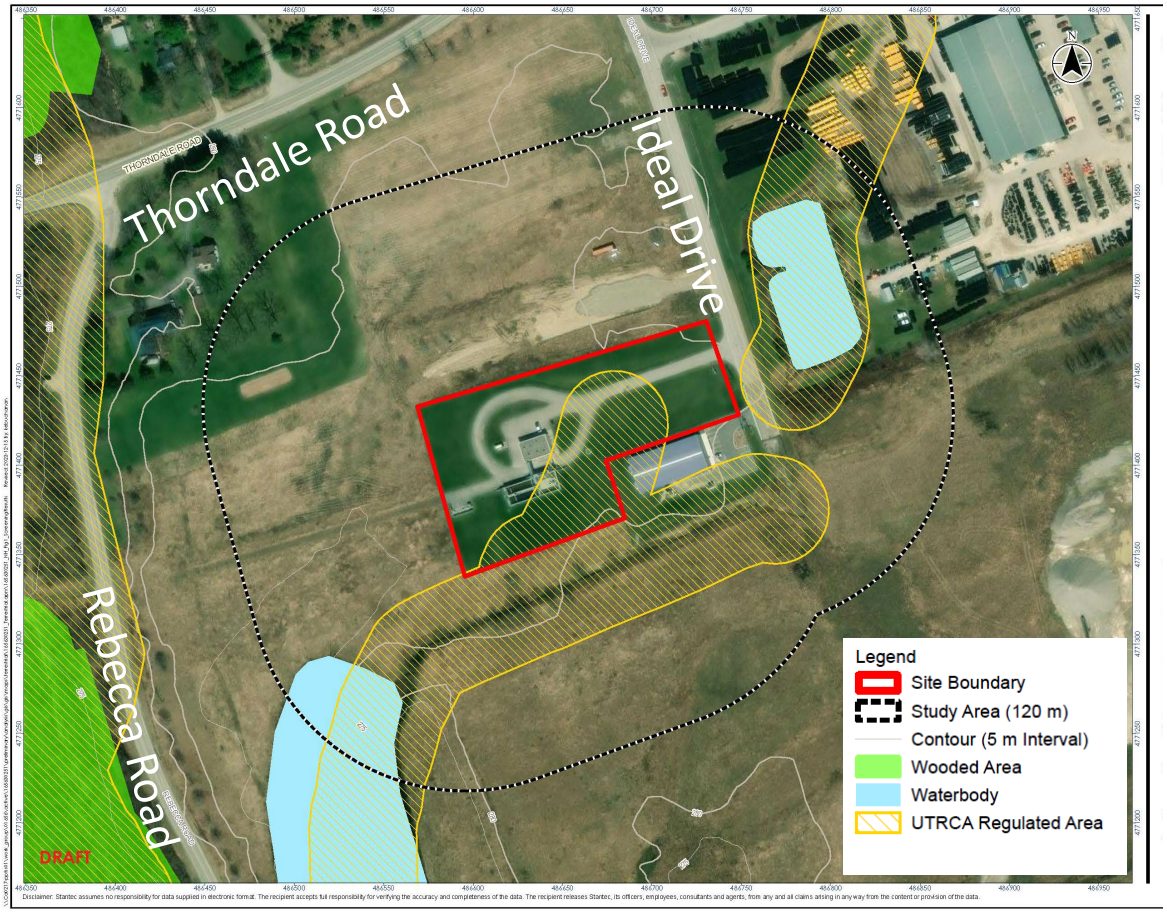
Existing Thorndale WWTP (Google Streetview, 2023)

The existing WWTP has the following key process features:

- Wastewater arrives using a low-lift pumping station;
- Mechanical screening and grit channels before entering a pre-react zone;
- Treatment using Sequencing Batch Reactors (SBRs), with alum used for phosphorus removal;
- Decanted effluent from the SBR is directed to the ultraviolet (UV) disinfection system; and
- Treated effluent moves to the effluent chamber prior to discharge of treated water to the Thames River.

Existing Conditions - Natural Environment

- There are no Areas of Natural and Scientific Interest (ANSIs), or Provincially Significant Wetlands (PSWs).
- Waterbodies are present in the study area.
- The study area is partially located within an Upper Thames River Conservation Authority (UTRCA) Regulated Area.
- There is potential for Species at Risk (SAR) and Species of Conservation Concern (SOCC) habitat based on the records review. This will be confirmed through field studies in Spring 2024.

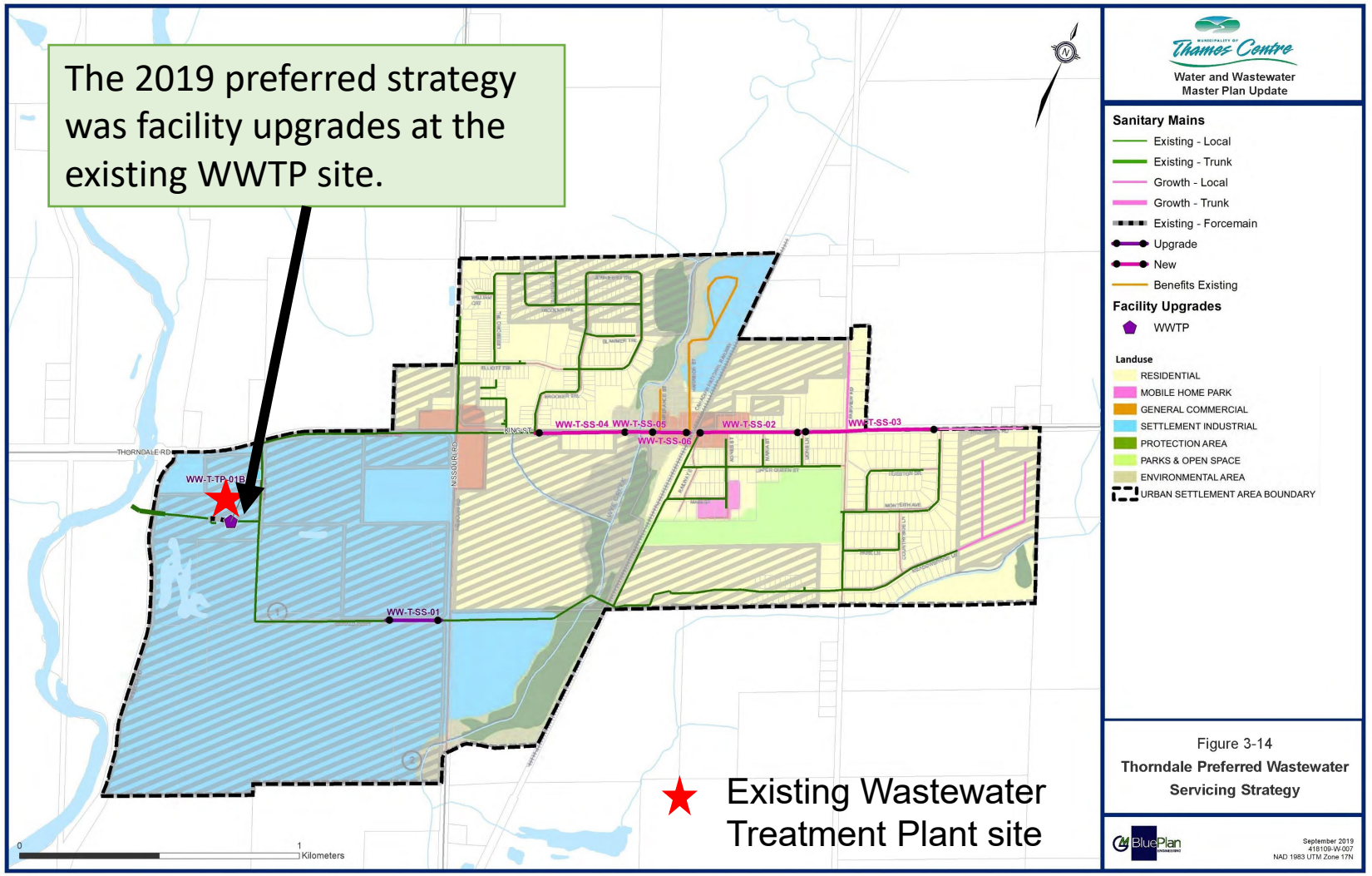


Natural Environment Existing Conditions

Growth Considerations

- The Municipality's *Water and Wastewater Master Plan Update* (2019) found that the facility has adequate capacity to treat existing flows.
- The *Master Plan Update* considered various growth scenarios for future flows to the WWTP for growth lands both within the limits of the settlement boundary as well as lands outside the settlement boundary. The study concluded that additional treatment capacity was required beyond the current rated capacity of the WWTP.
- **The preferred solution was to upgrade the Thorndale WWTP to treat future flows resulting from development growth.** Some sewer upgrades and upgrades to the sanitary pumping station would also be required to address future high growth.
- This project considers the required WWTP upgrades and the ability to service expected development needs in the near (10 year) to longer-term (20 year) horizon.

2019 Wastewater Treatment - Preferred Strategy for Thorndale



Thorndale Water and Wastewater Master Plan Update, 2019, GM Blue Plan

Problem and Opportunity Statement

Based on the existing and future conditions related to the community of Thorndale, the following problems and opportunities were identified:

- The WWTP is operating at an average daily raw flow of 300 m^3/d, representing approximately 45% of the annual average rated plant capacity. The plant was expected to reach 50% at the end of 2023 based on available data.

- Current average day flow is below plant capacity; however, the Municipality continues to experience growth from new residential, commercial and industrial development which will exceed the WWTP capacity in future years.

- Portions of the community of Thorndale are not currently connected to the WWTP and are expected to be connected in the future which will use up available capacity.

Problem and Opportunity Statement

The Municipality of Thames Centre is anticipating population and commercial/industrial growth and must ensure that wastewater treatment facilities are available to accommodate the desired growth. As a result, the Municipality is undertaking this Municipal Class EA to consider opportunities to expand wastewater capacity for the community that will meet long-term treatment capacity demands consistent with development projections.

Determining WWTP Requirements

There are 4 elements to consider to meet the needs of the community for wastewater servicing:

1. Reconfirm the Service Area (existing development, future development areas);
2. Determine how wastewater is being conveyed to the WWTP;
3. Confirm the best solution for the WWTP; and
4. Determine how and where the treated water ("effluent") will go ("receiver"). Due to the proximity of the Thames River and available Assimilative Capacity Study (ACS) data, an alternative receiver to the Thames River is not anticipated.

Identification of Alternative Solutions

- **Do Nothing –** No upgrades to the existing site. The site would continue to use the same capacity. Future growth may be impacted if capacity is not included at a future date.
- **Limit Future Growth –** Consider municipal policy changes to manage or slow future growth.
- **Upgrades at the Existing Site –** Consider possible site infrastructure upgrades to expand treatment capacity at the existing site.
- **Upgrades Requiring Site Expansion –** Potential for upgrades requiring a WWTP property expansion if additional infrastructure is necessary to address future growth that cannot be fully accommodated on the existing site.

Evaluation of Alternative Solutions will occur as part of Phase 2 of the Municipal Class EA and presented at the next PIC.

Evaluation Criteria

Social Environment

- Minimizes impacts on existing residences, businesses, community features, and other planned land uses
- Aligns with existing and future land use
- Minimizes land requirements
- Protects health and safety

Cultural Environment

- Protects archaeological and cultural heritage resources

Natural Environment

- Protects environmental features, wildlife, and species at risk
- Protects groundwater, streams, and rivers
- Considers climate change impacts

Technical

- Provides reliable service
- Meets municipal and Ministry standards, permits, and approvals
- Meets existing and future infrastructure needs
- Meets performance quality requirements
- Constructability/ System redundancy

Financial

- Provides low lifecycle costs
- Estimated capital cost
- Property acquisition cost
- Operation and maintenance costs

Next Steps

- Review and respond to comments received at PIC 1.
- Continue to engage Indigenous communities, the public and agencies.
- Complete the evaluation of Alternative Solutions and Alternative Designs.
- Present the evaluation of Alternative Solutions and Designs at the second PIC (Fall 2024).
- Prepare the Environmental Study Report for public review (Spring 2025).

We want to hear from you!

Watch the website for further updates or ask to join the mailing list!

www.thamescentre.on.ca/ThorndaleWWTPExpansion

Please provide comments by **Friday, February 2, 2024**, by submitting a comment form at the PIC or through one of the project team members listed below:

Jarrod Craven, Director of Public Works
Municipality of Thames Centre
4305 Hamilton Road
Dorchester, ON N0L 1G3
Phone: 519-268-7334 ext. 245
Email: Jcraven@thamescentre.on.ca

Jeff Paul P.Eng. Project Manager
Stantec Consulting Ltd.
400-1305 Riverbend Road
London, ON N6K 0J5
Phone: 519-675-6604
Email: Jeff.Paul@stantec.com