Thorndale Wastewater Treatment Plant Expansion Environmental Study Report

Schedule C Municipal Class Environmental Assessment

November 2025

Prepared for:
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Executive Summary

The Municipality of Thames Centre has retained Stantec Consulting Ltd. (Stantec) to complete a Municipal Class Environmental Assessment (EA) to identify options for expansion of the Thorndale Wastewater Treatment Plant (WWTP).

The EA is being planned in accordance with the planning and design process for Schedule "C" projects as outlined in the *Municipal Class Environmental Assessment Document* (2000, as amended 2007, 2011, 2015, 2023), which is an approved process under Ontario's *Environmental Assessment Act*.

This Environmental Study Report (ESR) documents the problem and opportunity, existing conditions, and the decision-making process for developing the preferred design based on consultation with agencies, Indigenous communities, and the public.

The WWTP is located at 1135 - Ideal Drive within Thorndale, a community which is part of the Municipality of Thames Centre. The Study Area is shown in **Figure 1**. A problem and opportunity statement was developed as part of Phase 1 of the EA process. The statement identified that expansion alternatives will be developed for anticipated community growth in Thorndale.

Phase 2 of the EA consisted of an inventory of the natural, social, and economic environments, as well as the identification and evaluation of Alternative Solutions. The review was conducted for the Study Area with a focus on areas associated with the Thorndale WWTP. Alternatives considered included "Do Nothing" – no upgrades at the site, "Limit Future Growth", "Upgrades at the Existing Site", and "Upgrades at the Existing Site Requiring Site Expansion."

A preliminary screening was conducted to determine whether the alternatives had the potential to align with the problem and opportunity statement and the Master Plan Update (2019) against criteria for the Natural, Social, Cultural, and Technical Environments. The analysis identified that "Upgrades at the Existing Site of the Thorndale WWTP" is reconfirmed as the preferred alternative solution. As mentioned in Section 3, the existing WWTP site has enough space for expansion and there is open space available within the site footprint.

An evaluation was completed which determined that there is no significant natural features or wildlife habitat within the existing footprint of the project. Previous Stage 1 and 2 archaeology assessments were completed prior to the original construction of the Thorndale WWTP, and no further archaeology study was recommended on the existing property. A screening was conducted as part of the MCM built heritage and cultural heritage landscapes screening checklist which did not identify features that would be

affected by work within the existing project property. No further archaeology or built heritage or cultural heritage landscapes studies were recommended.

It was determined that the WWTP requires an expansion by 2032 to increase its rated capacity to 741 m^3/d (cubic metres per day) and peak design flow to 3,706 m^3/d to meet 20-year design average daily and peak hourly flows to accommodate growth in Thorndale.

In Phase 3, Alternative Designs were considered for on-site treatment options for the Thorndale WWTP. A long list of potential treatment options was considered and screened. It was determined that re-rating the plant would fail as an Alternative Design since it would provide insufficient flow/load for future expansions. Extended Aeration (EA) + filters for TP removal and Membrane Bioreactor (MBR) each received a failing grade due to their high construction cost and poor use of existing mechanical treatment plant infrastructure.

The short-list of Alternative Designs is shown below:

- Alternative 1 – WWTP Sequencing Batch Reactor (SBR) with Equalization Tank Upgrade; and
- Alternative 2 – WWTP SBR with Equalization Tank and Filtration Upgrade.

These alternatives were compared and evaluated to determine the preferred treatment type. The preferred Alternative Design was determined to be “Alternative 1 - An SBR with equalization (EQ) tank expansion.” This alternative involves providing additional capacity to accommodate growth using the same technology as existing within the treatment plant. Alternative 1 includes expanding the WWTP by adding a new SBR system to increase the plant’s secondary treatment capacity. This alternative seeks to maintain use of the existing processes, where practical. The alternative can also provide new infrastructure where necessary to increase treatment capacity to accommodate future growth. Furthermore, the layout of the sanitary collection system can be maintained with this WWTP expansion option.

Alternative 2 was similar to Alternative 1, however it included a Filtration Upgrade in addition to the SBR Reactor and Equalization Tank. A qualitative evaluation of Alternative Designs was completed, along with a lifecycle costing analysis. Through a life-cycle cost analysis, the addition of the Filtration Upgrade increased cost as a key comparative difference.

Alternative 1 - WWTP SBR was determined to have the follow key advantages:

- Optimizing use of existing infrastructure, including reusing of the existing SBRs with addition of equalization tanks to buffer peak flows to reach effluent limits.

- Ability to accommodate increased influent loadings.
- Ability to reach effluent limits for nutrients, organics, and solids.

The preferred Alternative Design (Alternative 1) includes all work within the boundaries of the existing Thorndale WWTP. The project also does not require upgrades to the nearby outlet from the plant.

This project included opportunities for public engagement, including a Notice of Study Commencement in December 2023 with newspaper advertising in January 2024, followed by two Public Information Centres on January 25, 2024 and September 26, 2024. Notices were published in the *St. Mary's Independent* and *The Signpost*, as well as on the Municipality of Thames Centre website (https://www.thamescentre.on.ca/). Notices were also sent to the project mailing list which included agencies, municipal staff, Indigenous communities, nearby residents and businesses, as well as others that requested to be added.

The plant will continue to operate under its existing permitted capacity from the Ministry of the Environment, Conservation and Parks (MECP) until such time as capacity limits are met and the project will proceed with the design and construction of the proposed expansion and will apply for a revised Environmental Compliance Approval for the capacity limit increase at that time. The plant is near 50% of its current capacity, and as such detailed design and construction of the Thorndale WWTP is anticipated to occur at a later date, as the plant approaches 80% capacity of the existing system, or as determined by the Municipality based on funding. It is anticipated that Phase 1 equalization storage works may be implemented on a timeline as prescribed by effluent quality as described in the special conditions of the amended ECA.

In summary, the preferred Alternative Design includes:

- Expansion of the Thorndale WWTP within the existing site to increase existing capacity from 674 m^3/d to 741 m^3/d
- Expansion will be achieved through installing a Sequencing Batch Reactor with Equalization Tank Upgrade on site within the existing site

The Notice of Completion will be issued **November 6, 2025** for the start of the 30-day comment period. The Notice of Completion and ESR will be made available on the Municipality of Thames Centre website from **November 6, 2025 to December 5, 2025.**

Following the 30-day Ministry of the Environment, Conservation and Parks (MECP) review period and 30-day public review period of the ESR, the Municipality is permitted to proceed to Detailed Design and implementation.



Figure 1: Study Area Map

1 Introduction

The Municipality of Thames Centre wastewater infrastructure will require expansion to accommodate planned growth to 2046. Stantec Consulting Ltd. (Stantec) was retained by the Municipality of Thames Centre to undertake a Schedule 'C' Municipal Class Environmental Assessment (MCEA) and to identify problems & opportunities, identify alternative solutions, and define implementation plans for the expansion of the municipality's wastewater treatment plant (WWTP). The Study Area is located within the Thorndale industrial business park in the west part of the community of Thorndale, Ontario as shown in Figure 1.

The Municipality of Thames Centre completed a *Water and Wastewater Master Plan Update* (2019). The preferred wastewater strategy was to:

- Expand the Thorndale Wastewater Treatment Plant Facility (WWTF) (also known as the Wastewater Treatment Plant) and Thorndale Sanitary Pumping Station (SPS) to service development within Peripheral Lands (lands as identified in the Master Plan),

  and

- Upgrade downstream sewers in areas of Thorndale WWTF buildout of Peripheral Lands at higher densities.

The key sanitary capital projects required to achieve this strategy were identified as an Upgrade of the Thorndale WWTF (referred to as a Wastewater Treatment Plant WWTP in this EA) and a Thorndale SPS. The document also proposed future growth sanitary sewers when planning servicing future development lands.

The current project is focused on the WWTP expansion. A new Thorndale SPS is not included in the scope of this study. This project is being undertaken as part of the Municipal Engineers Association (MEA) Class Environmental Assessment (Municipal Class EA) process, as updated in 2023, which was in effect at project initiation. The project fulfills the requirements of a Schedule 'C' Class EA.

The purpose of this Environmental Study Report (ESR) is to present and evaluate the feasible alternative designs to determine the preferred alternative to expand the WWTP on the existing site and further develop a strategy for implementation. The ESR also describes consultation with review agencies and the public that has occurred prior to confirmation of the preferred alternative design solution.

2 Environmental Assessment Process

2.1 Municipal Class EA Planning Process

All municipalities in Ontario are subject to the provisions of the *Environmental Assessment Act* (EA Act), which mandates the completion of an EA before constructing municipal infrastructure projects. The environments included under the EA Act encompass social, cultural, natural, and economic aspects of Ontario. The Ministry of the Environment, Conservation and Parks (MECP) is responsible for administration of the EA Act.

The Municipal Engineers Association (MEA) *Municipal Class Environmental Assessment* document (October 2000, as amended in 2007, 2011, 2015, and 2023), provides guidelines approved under the EA Act which protect the environment during the completion of municipal road, sewage and water infrastructure projects. The undertakings are considered pre-approved provided the mandatory environmental planning process as set out in the Class EA document is completed. The Municipal Class EA document provides municipalities with a five-phase planning process approved under the EA Act to plan and undertake all municipal infrastructure projects in a manner that protects the environment.

The Municipal Class EA document provides a framework by which projects are classified as Schedule A, A+, B, or C based on a variety of factors including the general complexity of the project, level of investigation required, and the potential impacts on the natural, social, cultural, and economic environments that may occur. Each schedule classification requires a different level of documentation and review to be compliant with the EA Act and satisfy the requirements of the Class EA. The proponent is responsible for identifying the appropriate schedule for any given project and reviewing the applicability of the schedule at multiple stages throughout the project.

Schedule A projects are limited in scale with minimal anticipated environmental impacts. They are pre-approved and may be implemented without undertaking public consultation or following the planning process as outlined in the Class EA. Examples of Schedule A projects include on-going maintenance activities, normal operation of sewage treatment plants, and increasing pumping station capacity by adding or replacing equipment where new equipment is located within an existing building or structure.

Schedule A+ projects are similarly pre-approved but require that proponents notify potentially affected parties prior to implementation. An example of a Schedule A+ project includes retiring a water infrastructure facility or retrofitting a facility for improvements.

Schedule B projects have the potential for some adverse environmental and social impacts. Proponents are thus required to undertake a screening process involving mandatory contact with potentially affected members of the public, Indigenous communities, and relevant review agencies to ensure that they are aware of the project and that their concerns are addressed. Schedule B projects require the completion of Phases 1 and 2 of the Class EA planning process, which is documented in a Project File and submitted for a mandatory 30-day comment period.

Schedule C projects have the potential for significant environmental impacts and must follow the full planning process specified in the Class EA document, including Phases 1 through 4. The project is documented in an Environmental Study Report (ESR), which is then filed for public, agency, and Indigenous community comment. Projects generally include the construction of new facilities, and major expansions to existing facilities.

2.2 Planning Process

Figure 2 illustrates the Class EA planning process and identifies the steps considered mandatory for compliance with the requirements of the EA Act. An overview of the five-phase planning process is provided in the previous section.

The Municipality of Thames Centre *Water and Wastewater Master Plan Update* (2019) was completed according to Approach 1 of the Master Plan process, which involves a broad scope and level of assessment. An Approach 1 Master Plan requires additional work which would be required to complete the MCEA process for the Schedule B or C projects (e.g., detailed inventory of the environment, impacts assessment and development of mitigation measures – all specific to a particular project).

For Schedule C projects such as an expansion of the capacity of a wastewater treatment plant, the proponent must complete the remaining components of MCEA Phases 1 through 4 and complete an ESR and make it available for a 30-day public review.

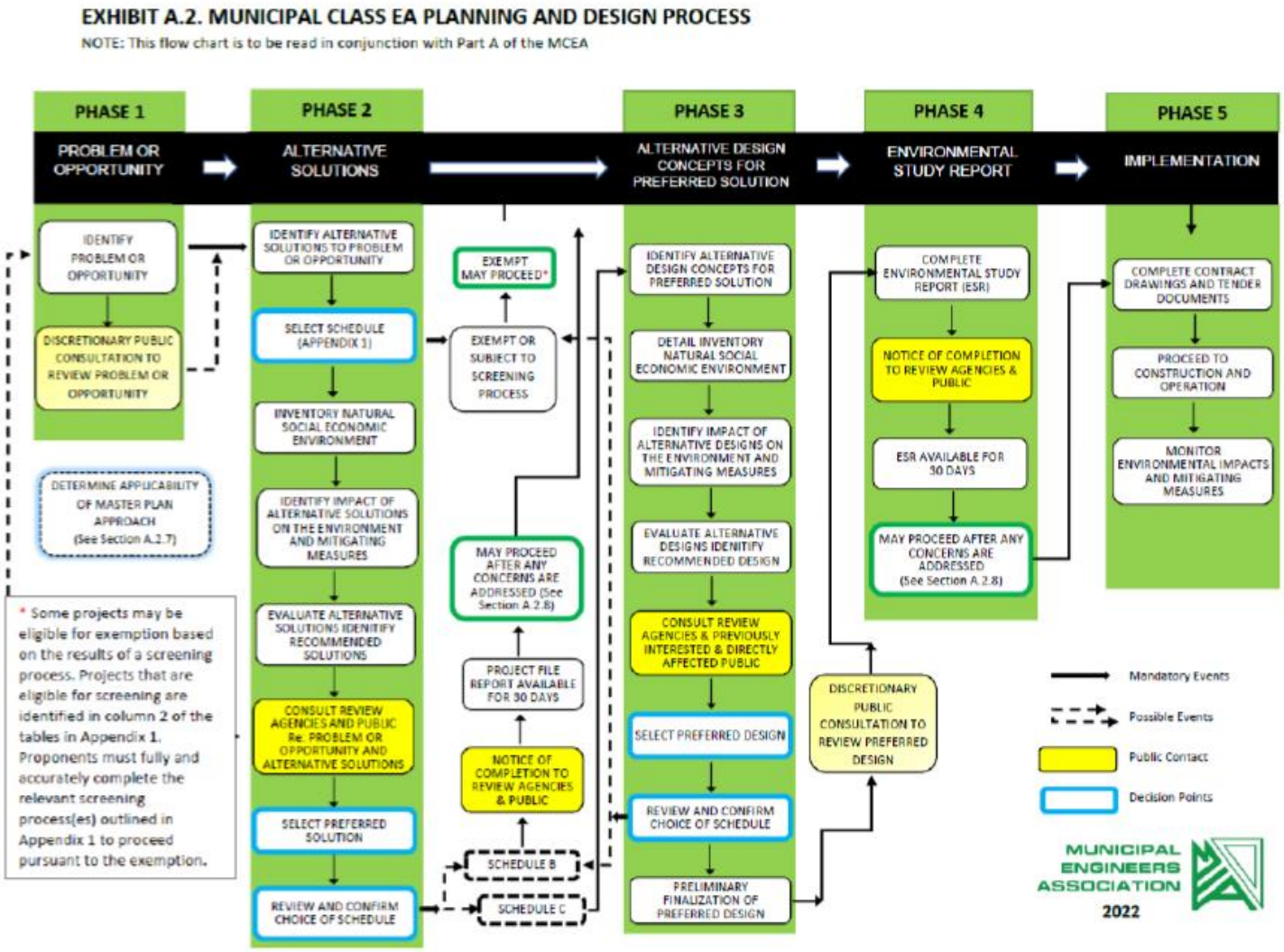


Figure 2: Municipal Class EA Planning and Design Process (2022 figure from the 2023 guide)

2.3 Section 16 Order Process

The Notice of Completion will be issued **November 6, 2025** for the start of the 30-day comment period. The Notice of Completion and ESR will be made available on the Municipality of Thames Centre website from **November 6, 2025 to December 5, 2025.**

Interested persons may provide written comments to the Municipality of Thames Centre for a response using the following contact information:

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

In addition, following the filing of the Notice of Completion a request may be made to the Minister of the Environment, Conservation and Parks under Section 16 of the *EA Act* requiring a higher level of study (i.e., requiring an individual/comprehensive EA approval before being able to proceed), or that conditions be imposed (e.g., require further studies), only on the grounds that the requested order may prevent, mitigate or remedy adverse impacts on constitutionally protected Aboriginal and treaty rights. Requests on other grounds will not be considered. Requests should include the requester contact information and full name for the ministry.

Requests should specify what kind of order is being requested (request for additional conditions or a request for an individual/comprehensive environmental assessment), how an order may prevent, mitigate or remedy those potential adverse impacts, and any information in support of the statements in the request. This will ensure that the ministry is able to efficiently begin reviewing the request.

The request should be sent in writing by mail or by email to:
Minister of the Environment, Conservation and Parks
Ministry of Environment, Conservation and Parks
777 Bay Street, 5th Floor
Toronto ON M7A 2J3
minister.mecp@ontario.ca

and

Director, Environmental Assessment Branch
Ministry of Environment, Conservation and Parks
135 St. Clair Ave. W, 1st Floor
Toronto ON, M4V 1P5
EABDirector@ontario.ca

Requests should also be sent to the Municipality of Thames Centre.

3 Consultation

Consultation is an integral part of the Class EA process. Active engagement with all potentially affected parties including government agencies, community members, special interest groups, and Indigenous communities ensures a transparent and responsible planning process. This project has benefited immensely from meaningful and engaging consultation with members of the community.

3.1 Project Contact List

A project contact list was created which includes government agencies and officials, local municipal staff, emergency service contacts, potentially interested Indigenous communities, members of the public, utility services, special interest groups, as well as local property owners within the Study Area. The list was regularly updated to include those who expressed interest in the study. A copy of the contact list is provided in **Appendix A**.

3.2 Study Notice and Public Information Centres

Notices were sent via mail or email (where requested) to property owners within the Study Area, the project contact list, and Indigenous communities. The notice was advertised in the *St. Mary's Independent* as well as Dorchester's newspaper *The Signpost*, as well as on the Municipality of Thames Centre website (https://www.thamescentre.on.ca/)

The study notifications are provided in **Appendix A**, including:

- Notice of Study Commencement
  - Published on the Municipal website on December 15, 2023. Published in the *St. Mary's Independent* on January 11, 2024, and *The Signpost* on January 3, 2024, and on the municipal website
  - Notified agencies and groups by email on December 21, 2023
  - MECP was provided with a copy of the notice as well as the Project Information Form (PIF) on December 21, 2023
  - Indigenous communities were sent a letter on Municipality of Thames Centre letterhead on December 21, 2023
  - The Ministry of the Environment, Conservation and Parks (MECP) responded on February 9, 2024 with the list of Indigenous communities to be engaged: Aamjiwnaang First Nation, Bkejwanong (Walpole Island), Caldwell First Nation,

Chippewas of Kettle and Stony Point First Nation, Chippewas of the Thames First Nation, and Oneida Nation of the Thames First Nation. All communities on the MECP list of Indigenous communities were sent the notice on December 21, 2023

- Notice of Public Information Centre 1
  - Published in *The Signpost* on January 3, 2024. The advertisement was also published on the Municipal website on January 12, 2024. (https://www.thamescentre.on.ca/articles/notice-public-information-centre-1-thorndale-wastewater-treatment-plant-expansion)
  - Notified agencies and groups by email on January 19, 2024, as well as individuals requested to be added to the mailing list
  - Indigenous communities were sent an email with the PIC details on January 19, 2024. All communities on the MECP list of Indigenous communities were sent the notice
  - An in-person PIC was held Thursday January 25, 2024, at the Thorndale Lions Community Centre – Meeting Room #1 265 Upper Queen Street, Thorndale, ON between 5:00 pm – 7:00 pm. A drop in format was used with display boards
- Notice of Public Information Centre 2
  - Published in *The Signpost* September 26, 2024 and the *St. Mary's* Independent on September 19, 2024. The advertisement was also published on the Municipal website on September 13, 2024. (https://www.thamescentre.on.ca/articles/notice-public-information-centre-2-thorndale-wwtp)
  - Notified agencies and groups by email on September 18, 2024, as well as individuals requested to be added to the mailing list
  - Indigenous communities were sent an email with the PIC details on September 18, 2024. All communities on the MECP list of Indigenous communities were sent the notice
  - An in-person PIC presentation on Thursday September 26, 2024, at the Thorndale Lions Community Centre – Meeting Room #1 265 upper Queen Street, Thorndale, ON between 5:00 pm – 7:00 pm. A drop in format was used with display boards.
- Notice of Study Completion
  - At the conclusion of the project, a Notice of Study Completion will be distributed to the project mailing list, including agencies, Indigenous communities, and members of the public that requested to be on the mailing list.

- The notice will indicate the start of the 30-day public comment period for the ESR, and how to provide comments.

3.3 Agency Consultation

Several ministries, agencies and authorities were contacted during project initiation and throughout the study to notify them of the project and to request information related to the Study Area and feedback pertaining to the study. Agency comments received are included in **Appendix C**.

Provincial Agencies • Ministry of Citizenship and Multiculturalism • Ministry of Environment, Conservation and Parks • Ministry of Natural Resources Local Interest Groups • Southwestern Ontario Student Transportation Services • I Love Thorndale Municipal Staff • Middlesex County • Municipality of Thames Centre Emergency Services • Ontario Provincial Police • Middlesex-London EMS Service • Thames Centre Fire Department School Boards • Thames Valley District School Board • London Catholic District School Board	Utilities • Hydro One Networks Inc. • Rogers Municipal Operations Centre Enbridge • Bell Canada • Execulink Conservation Authority • Upper Thames River Conservation Authority • Thames-Sydenham and Region Source Protection Region Businesses • Field Crest • Norquay Developments • Sifton • Progrow Farms Ltd. • Advanced Drainage System Inc. (ADS) Public • Individuals added to the mailing list based on comments received

Comments were received from agencies as summarized in **Table 1**.

Table 1: Agency Comments Received

Contact Information	Comment	Action Taken
Hydro One Networks Inc. **Secondary Land Use** Asset Optimization Strategy & Integrated Planning SecondaryLandUse@HydroOne.com	• **Comment received January 2, 2024** • Comment confirmed that there are no existing Hydro One Transmission assets in the subject area. This was based on a preliminary assessment. • Hydro One asked if plans for the undertaking change or the Study Area expands beyond what is shown, please contact Hydro One to assess impacts of existing or future planned electricity infrastructure. • Any future communications can be sent to Secondarylanduse@hydroone.com.	• Noted by the project team. No further action required as no Hydro One Networks infrastructure is present.

Monika Macki
Environmental Resource Planner/Assessment Coordinator
Environmental Assessment Branch
Ministry of the Environment, Conservation and Parks
monika.macki@ontario.ca
	• **Emails received January 16, 2024:**
	• Monika Macki is the new MECP contact for Southwest Region. Mark Badali requested to be removed from the mailing list. MECP requested to include the date of the notice on EA notices.
	• **Letter (February 9, 2024):**
	• MECP acknowledgement letter received, which included the updated (August 2022) “Areas of Interest” document to be reviewed by the proponent.
	• MECP is delegating the procedural aspects of rights-based consultation to the proponent
	• The following indigenous communities are to be engaged for the proposed project:
	  ○ Aamjiwnaang First Nation
	  ○ Bkejwanong (Walpole Island)
	  ○ Caldwell First Nation
	  ○ Chippewas of Kettle and Stony Point
	  ○ Chippewas of the Thames First Nation
	  ○ Oneida Nation of the Thames
	• MECP must be advised if Aboriginal or treaty rights impacts are identified to you by the communities;
	• You have reason to believe that your proposed project may adversely affect an Aboriginal or treaty right;
	• Consultation with Indigenous communities or other stakeholders has reached an impasse; or
	• A Section 16 Order request is expected based on impacts to Aboriginal or treaty rights
	• A draft copy of the report should be sent to MECP prior to filing the final report, allowing a minimum of 30 days for MECP technical reviewers to provide comments
	• Ensure that the final notice is sent to the Ministry’s Southwest Region EA notification account after the draft report is reviewed and finalized.
		• Contact list updated with the new MECP contact
		• EA notices can include the date issued.
		• MECP Areas of Interest information is noted by the project team.
		• MECP delegation of procedural Indigenous consultation is noted.
		• The Indigenous communities listed by MECP are included on the project mailing list.
		• Indigenous communities will be engaged for this project.
		• The draft report was sent to MECP May 14, 2025 prior to filing the final report, as requested.

Contact Information	Comment	Action Taken
	• **MECP response provided June 16, 2025:** • MECP indicated that since 2009, The Canada Ontario Lake Erie Action Plan (LEAP) has been developed with sections pertinent to the Thames River and to the performance capabilities of the Thorndale WWTP plant. These sections namely: 1) Section 1.4 – Establishing the Thames River as a Priority Watershed for Phosphorus reduction initiatives. And 2) recognition that plants with tertiary treatment can achieve 0.5 mg/l as established in Section 3.3.2. MECP indicated that a review of the legacy performance of the current Thorndale facility demonstrates that the plant can easily achieve a 0.5 mg/l TP limit as a monthly average. As such the Phosphorus monthly concentration limit will be amended from the current ECA limit of 0.65 mg/l to 0.5 mg/l in line with the Action Plan. All other current effluent limits in the current ECA can remain in place as per the 2009 assimilative study. • **MECP follow-up response July 11, 2025:** • MECP understands that the plant is already hitting 0.5 mg/l limits now. The municipality is proposing to add the same technology. MECP cannot defend allowing 0.65 mg/l while we hold the rest of the Thames to such high standards when the municipality proposes upgrades/expansion – especially with all the Federal Initiatives going on in the Thames now. It is to our understanding, that the municipality wants to spread out the timing, with installation of the equipment with the equalization tank going first. If understanding the Municipality's concern properly, the planned installation of the equalization tank and subsequent deferral of cost/installation of the third SBR will strain the existing 2 SBR's, so 0.5 mg/l may not be possible. Provided the municipality stay committed to moving towards a 0.5 mg/l in the near future (it is unclear when the third SBR would be going in), MECP could work out a condition that the 0.50 mg/l can be deferred until the third SBR actually goes in (may also involve MECP's approvals branch for conditions in the ECA). This would be contingent on when the SBR would be operational. Does the municipality have a timeline?	• **Email provided July 9, 2025** by the Municipality of Thames Centre identifying that the current plant does not included Tertiary Treatment, seeking clarification on the source of the recommendation that the plant should achieve 0.5 mg/L. • **Email response September 3, 2025 to MECP:** • Thanks for your comments. We have had a chance to discuss internally. As you are aware, we were looking to set up a meeting to discuss further but have been able to accomplish that discussion with off-line discussions with Hugh and Jarrod in the past couple of weeks which I can summarize below. o We understand that MECP is under a directive to reduce TP to 0.5 mg/l under the *Lake Erie Action Plan* (LEAP). We accept that, in spite of the fact that there was a previously accepted Assimilative Capacity Study, that the LEAP requirements take precedent and that the Thorndale WWTP will need to move to this requirement in future. After undertaking a subsequent review of the recommendations of the Class EA and with further discussion with Thames Centre, we feel that the technology proposed will be capable of meeting this limit and that the additional measures recommended (equalization storage and TP filters) can be implemented to further mitigate any exceedances. Notwithstanding our confidence in the technology and the ability of Thames Centre operations staff to stay below this limit, our concern has been how MECP would handle exceedances and the timeframe the Municipality would be allowed to enact remedial measures, particularly if those remedial measures involved construction of additional works. Based on discussions with Hugh, we are reassured that the Municipality would be afforded reasonable time to investigate and enact remedial measures as long as they continue to act in good faith. • Accordingly, we will revise the ESR to reflect the required TP limit, noting that this limit will come into effect when the plant is expanded and a new ECA application is put forward. Thanks for working through this with us and please feel free to reach out if you have any questions or concerns.
Ministry of Natural Resources (MNR) Matthew Shakespeare Regional Lands Intern (705) 772 9310 matthew.shakespeare@ontario.ca	• **Comment Received January 3, 2024** • MNR provided guidance on being aware of relevant federal or provincial legislation, municipal by-laws or other agency approvals. • Information was provided on utilizing MNR's natural heritage and natural resources GIS data layers the Ministry's Land Information Ontario (LIO) website, natural hazards guides, and using the "Make a Map" Tool. • MNR also provided guidance on how proponents can determine if legislation applies to their project, including for the *Petroleum Wells & Oil, Gas and Salt Resources Act, the Fish and Wildlife Conservation Act* (for the relocation of fish or wildlife), and the *Public Lands Act & Lakes and Rivers Improvement Act* (which applies to public lands).	• Legislation and resources were noted by the project team. • No fish relocations are required. No public lands are present in the study area. • MNR LIO mapping was consulted for this project. • There are no petroleum wells in the work areas. • The project team will continue to keep MNR informed if work changes.

Contact Information	Comment	Action Taken
	• Many of the authorizations under the *Lakes and Rivers Improvement Act* are administered by the local Conservation Authority. • MNR stated that after reviewing the information provided, if you have not identified any of MNR's interests stated above, there is no need to circulate any subsequent notices to our office. If you have identified any of MNR's interests and/or may require permit(s) or further technical advice, please direct your specific questions to matthew.shakespeare@ontario.ca **Email received January 19, 2024** • Email received for the PIC1 notice indicating that the email was forwarded to the Southern Region Planning team to better assist.	

Upper Thames River Conservation Authority
 	
Karen Winfield
Land Use Regulations Officer
winfieldk@thamesriver.on.ca
infoline@thamesriver.on.ca
	UTRCA Letter February 13, 2024
	• UTRCA provided a letter which included guidance on regulatory responsibilities, which is summarized below:
	  ○ General comments/ Conservation Authority Regulatory Areas/ Digital Mapping: Background information was provided about UTRCA's Regulatory Authority under Ontario Regulation 157/06 and regulatory mapping was sent.
	  ○ Comments specific to stormwater management: UTRCA identified that Thorndale business park needs to consider stormwater management.
	  ○ Geotechnical considerations: UTRCA identified that the outlet is located in a natural hazards area.
	  ○ Drinking water source protection: Source water protection should be considered in the project to identify potential hazards
	• Landowner Comments:
	  ○ General comments: UTRCA provided information about the outfall located on Conservation Authority lands.
	  ○ Potential Recreational Impacts: UTRCA identified that algae blooms are present in Fanshawe Lake. The organization recommended considering phosphorous loading from the existing WWTP and any proposed expansion. UTRCA also recommended considering impacts and potential mitigations for nitrate loading given the recreational use of the reservoir and that nitrate concentrations area concern for both aquatic and human health.
	• **Comment October 1, 2024 (following review of the PIC2 slides):**
	• Thank-you so much for providing the slide deck. From a cursory review I don't think we have any new comments
	• At this time but please reach out to us at the detail design stage. As previously mentioned, we have a concern with any new development or expansion of existing development until such time as legal stormwater outlet is provided for the lands in the vicinity of the WWTP and Industrial Subdivision. Currently stormwater
		Letter Response June 13, 2024:
		<u>A -Regulatory Comments</u>
		General Comments/ Conservation Authority Regulated Areas/Digital Mapping
		Thank you for the information on your status as a Regulatory Authority under Ontario Regulation 157/06 and for the regulatory mapping. The mapping is being reviewed, along with our review of natural features, sourcewater protection, and natural hazards. These features will be considered in the evaluation of Alternatives. Requirements for obtaining permits under Ontario Regulation 157/06 will be noted in the evaluation and final Environmental Study Report (ESR) if there are requirements for filling, grading, construction, alteration to a watercourse and/or interference with a wetland (including removal of wetland vegetation). Your status as a Regulatory Authority and status as a property owner at the current WWTP outlet is noted, along with its proximity to the Fanshawe Conservation Area.
		Stormwater Management This EA covers the proposed expansion of the existing Thorndale WWTP. The Municipality is currently undertaking a separate stormwater study in this industrial business park area which should address the stormwater outlet elements for the industrial lands. The EA will review whether there are any changes needed to the WWTP site outlet, however stormwater servicing for the industrial lands should be treated separately outside the EA. Comments related to stormwater management will be provided to the consultant completing that work to consider the issues raised.
		Geotechnical Considerations Thank you for the comment. The project work is anticipated to occur at the existing WWTP location. Work at the outfall within the erosion hazard limit beyond Rebecca Road is not anticipated at this time. If required, a geotechnical assessment may be recommended for detailed design.
		Drinking Water Source Protection Thank you for your comments on sourcewater protection. We are reviewing the sourcewater protection plan and will include information such as evaluation of alternatives in the ESR.
		<u>B -Landowner Comments</u>
		General Comments
		The mapping reveals that the existing site is on municipal property, subject to local government regulations. However, the outfall is within CA lands. Understanding and adhering to both sets of regulations is imperative to ensure compliance and secure any

Contact Information	Comment	Action Taken
	is being directed to existing aggregate pits that have no outlet. Which means water is likely going subsurface and heading under Rebecca Road towards the river... which is concurrent with a slope failure on the west side of the road in the vicinity of one of the aggregate pits.	required permits or approvals for activities within these respective areas. We currently have no plans to access the CA lands, but should the need arise, we will respectfully request permission to enter the area. The outlet size is being reviewed as part of the EA. Currently we are assessing the outlet size to ensure that it is compatible and can accommodate any changes on the site. The review will be incorporated into the evaluation. If modifications are required to the outlet, the project team can discuss further with the Conservation Authority. **Potential Recreational Impacts** Thank you for the information about the outlet opening ownership. No modifications to the outlet on Conservation Authority lands are anticipated at this time. We will continue to keep you informed if any modifications are planned to the outlet. The study has conducted a review of effluent water quality under existing flows and will be considering effluent water quality under the projected increased flows. This data is will then be compared to the MECP water quality criteria provided for this facility to ensure the effluent water quality under these conditions falls below these criteria. This work and our recommendations will be documented in the Environmental Study Report. **Next Steps** We will continue to consult with Upper Thames River Conservation Authority throughout the study processes as we work to select a preferred alternative. Your contact information has been added to our project mailing list and you will be notified of project updates and consultation opportunities as the study progresses. Please don't hesitate to contact me should you have any further comments or questions regarding the study. There will be an opportunity for further engagement with an additional PIC# 2 meeting anticipated in the fall 2024 and an Environmental Study Report (ESR) will be prepared for agency and public review at the end of the project. **Other Actions:** • The UTRCA email comment from October 1, 2024 is noted by the project team. • No modifications to the outlet on Conservation Authority lands are required. • The above response noted that no work was required at the outlet or beyond Rebecca Road.

Ministry of Citizenship and Multiculturalism
 	
Erika Leclerc on behalf of Heritage Planner, Heritage Planning Unit
416.305.0757
erika.leclerc2@ontario.ca
 	
Joseph Harvey
Heritage Planner
Joseph.harvey@ontario.ca
	• **Comment Received January 8, 2024**
	• Thank you for providing the Ministry of Citizenship and Multiculturalism (MCM) with the Notice of Study Commencement for the above-referenced project.
	• MCM's interest in this project relates to its mandate of conserving Ontario's cultural heritage, which includes:
	  ○ archaeological resources, including land and marine;
	  ○ built heritage resources, including bridges and monuments; and
	  ○ cultural heritage landscapes.
	• Under the Environmental Assessment (EA) process, the proponent is required to determine a project's potential impact on known (previously recognized) and potential cultural heritage resources.
		November 4, 2024 MCM response:
		• Thank you for your email following Public Information Centre #2 for the Thorndale Wastewater Treatment Plant project. Please see the attached Thorndale cultural heritage screening for your comments.
		• A Stage 1 archaeological assessment was completed in 2010 for the industrial park in Thorndale where the WWTP is currently situated. The Stage 1 assessment identified that a significant portion of the industrial park study area had been previously disturbed by aggregate activities and areas of previous disturbance have no potential for the recovery of intact archaeological deposits. The remaining areas (shaded on the attached map) not previously impacted by aggregate extraction required a Stage 2 archaeological assessment in advance of any additional ground disturbance. The area that would become the WWTP is not within the shaded area that required further archaeological assessment. As requested, the PIF numbers are provided.

Contact Information	Comment	Action Taken
	• **Comment Received October 1, 2024:** • MCM comment thanked the project team for the notice and indicated that the PIC presentation slides were reviewed. • MCM asked for information about the Stage 1 archaeological assessment has been undertaken within the study area. To assist us in tracking archaeological assessment reports, and to provide the Project Information Form (PIF) number(s) of any archaeological assessments prepared in support of this project. • MCM asked if the project was screened for impacts to known (previously recognized) or potential built heritage resources and cultural heritage landscapes using the Ministry checklist Criteria for Evaluating Potential for Built Heritage Resources and Cultural Heritage Landscapes. Please submit the completed checklist to MCM along with any supporting documentation. The completed checklist will help to determine if technical cultural heritage studies (e.g., Cultural Heritage Evaluation Reports, Heritage Impact Assessments etc.) are required. All technical cultural heritage studies should be sent for our review as part of the environmental assessment process. • **November 26, 2024:** • Thanks for providing us with this additional information. We will review the Heritage Memo and provide comments, as appropriate, by mid December. We can confirm that the Stage 1 archaeological assessment (AA – under Project Information Form number P001-634-2010) was entered into the Ontario Public Register of Archaeological Reports. The Stage 1 AA recommended Stage 2 assessment for parts of the study area, however this excludes the proposed location of the Thorndale Wastewater Treatment Plant project. Therefore, no further assessment is required for the proposed location of the treatment plant. • **December 20, 2024:** • Review comments provided on the cultural heritage memo. Comments included providing definitions, map suggestions to identify potential BHL/CHL, and to clarify the 50 m boundary and methodology, and to mention Indigenous engagement.	• STAGE 1 ARCHAEOLOGICAL ASSESSMENT: Proposed Thorndale Business Park Concession 2, Part of Lots 14 & 15 Former Township of West Nissouri Middlesex County, Ontario PIF Number: P001-634-2010 August 2010 • STAGE 2 ARCHAEOLOGICAL ASSESSMENT Proposed Thorndale Business Park Concession 2, Part of Lots 14 &15 Former Township of West Nissouri Middlesex County, Ontario PIF Number: P001-639-2010 • Should you have any questions regarding the heritage memo, please let our team know. **Other Actions:** • MCM memo comments – Recommendations were considered and edits were made within the memo and added to the ESR. Indigenous communication is included within the ESR.

3.4 Indigenous Engagement

The following Indigenous communities were engaged as part of this study:

- Six Nations of the Grand River Territory
- Haudenosaunee Confederacy Council
- Mississaugas of the Credit First Nation
- Chippewas of the Thames First Nation
- Oneida Nation of the Thames
- Munsee-Delaware Nation
- Bkejwanong Territory (Walpole Island)
- Caldwell First Nation
- Metis Nation of Ontario
- Aamjiwnaang First Nation

The Indigenous communities above were included on project notifications at key milestones of the project including the Notice of Study Commencement, PIC 1 and PIC 2, and the Notice of Completion.

In response to the Notice of PIC 1, the MECP response on February 9, 2024 confirmed the list of Indigenous communities to be engaged:

- Aamjiwnaang First Nation
- Bkejwanong (Walpole Island)
- Caldwell First Nation
- Chippewas of Kettle and Stony Point
- Chippewas of the Thames First Nation
- Oneida Nation of the Thames

Each of the Indigenous communities were included in the contact list, and existing communities were left on the mailing list should they have any questions about the project.

Table 2 summarizes correspondence and engagement completed for this project. Indigenous community correspondence is included in **Appendix C**.

Table 2: Indigenous Community Correspondence Engagement Log

Indigenous Community	Engagement Log	Responses/ Actions Taken
Chippewas of the Thames First Nation (COTTFN)	• **Notice of Study Commencement and PIC1:** • Project team sent introductory letter and Notice of Study Commencement (NationsConnect) – December 21, 2023 • Project team sent Notice of PIC 1 (NationsConnect) – January 19, 2024 • **COTTFN Letter received (January 26, 2024):** • COTTFN indicated the project is within the Huron Tract Territory and Big Bear Creek Additions to Reserve (ATR) land selection area within COTTFN traditional territory. The community has an interest in the health of Thames River water and as a source of sustenance. • COTTFN has indicated the project to be of moderate concern, and requests to be kept informed about any updates in regards to the project and to provide update documents through NationsConnect, or to request a meeting if significant updates occur. • COTTFN asked: - The capacity of this current plant is at 45%. What is the history of Bypass and Overflow events of this current plant? - As a reminder, if there is an Archaeology Assessment conducted for this expansion, we require notification and the opportunity to actively participate by sending First Nation Field Liaisons on behalf of this First Nation • COTTFN consultation protocol and invoice sent to the project team January 29, 2024 **Notice of PIC2:** • Project team sent Notice of PIC 2 letter and notice (NationsConnect) – September 18, 2024 Email and letter provided with the PIC notice and information on the location and time. The NationsConnect message also indicated that the PIC displays would be posted to the project website (www.thamescentre.on.ca) following the event if they were interested.	• **Response (May 9, 2024):** - Your question regarding the history of bypass and overflow events is noted by the project team. There have been no bypass events at the current plant. There have been two exceedances in storm mode for E.Coli because of high flows where the treatment cycle was shortened. In those cases, treated flows entered the river, but did not receive the full level of treatment. - The need for archaeological assessment will be determined based on the nature of the proposed improvements at the site. For example, if the work will occur within the existing footprint which has been previously studied, further archaeological assessment may not be required. The Municipality can contact you if there is an archaeology study required at the site involving fieldwork. - There are no reports to be reviewed at this time. An Environmental Study Report (ESR) will be prepared at the completion of the project which will include any related reports, such as for the natural environment or archaeology. - Any requests for compensation for report reviews or field liaisons should be addressed in discussion with the Municipality of Thames Centre project manager to clearly indicate the scope, nature and timing of the reviews. **Other:** • No archaeology study was required as the work will occur in areas previously assessed for archaeology and determined to not require further study. • No further comments or concerns were received. Notice of Completion with a link to the ESR to be sent to the community.
Caldwell First Nation	• **Notice of Study Commencement and PIC1:** • Project team sent introductory letter and Notice of Study Commencement as email and regular mail -December 21, 2023 • Project team sent Notice of PIC 1 (NationsConnect) – January 19, 2024 • **Notice of PIC1 response:** • Email received January 23, 2024 requested consultation to occur via a notice on the NationsConnect.ca platform • Email received and requested consultation on the consultwithcaldwell.ca platform. A fieldwork participation agreement and technical review agreement was sent.	• Notice of Study Commencement added to NationsConnect May 9, 2024. • The message on NationsConnect stated that need for an archaeological assessment will be determined based on the nature of the proposed improvements at the site, for example, if the work will occur within the footprint which has been previously studied, further archaeological assessment may not be required. The Municipality can contact the community if there is an archaeological study required at the site involving fieldwork. • There are no reports available to be reviewed at this time. AN ESR will be prepared at the completion of the project which will include any related reports such as for the natural environment or archaeology. Any requests for

Indigenous Community	Engagement Log	Responses/ Actions Taken
	• **Notice of PIC2:** • Project team sent Notice of PIC 2 letter and notice (NationsConnect) – September 18, 2024 Email and letter provided with the PIC notice and information on the location and time. The NationsConnect message also indicated that the PIC displays would be posted to the project website (www.thamescentre.on.ca) following the event if they were interested.	compensation for report reviews should be discussed with the Municipality of Thames Centre project manager to clearly indicate the scope and nature of the reviews. • The Notice of PIC2 was sent to the community on September 18, 2024 via Nations Connect which indicated that the PIC will **Other:** • No archaeology study was required as the work will occur in areas previously assessed for archaeology and determined to not require further study. • No further comments or concerns were received. Notice of Completion with a link to the ESR to be sent to the community.
Munsee-Delaware Nation	• Sent introductory letter and Notice of Study Commencement as email and letter - December 21, 2023 • Sent Notice of PIC 1 (email and regular mail) – January 19, 2024 • Sent Notice of PIC 2 (email) – September 18, 2024 • **Munsee-Delaware First Nation email received September 23, 2024.** • The email indicated the notification was received. The email provided new contact information for the Chief Roger Thomas and Nation Manager Rick Peters.	• New contact information was added to the mailing list • No comments or concerns were received. Notice of Completion with a link to the ESR to be sent to the community.
Mississaugas of the Credit First Nation	• **Notice of Study Commencement:** • Sent introductory letter and Notice of Study Commencement as email - December 21, 2023 • **Notice of PIC1:** • Sent Notice of PIC 1 (email) – January 19, 2024 • **Notice of PIC2:** • Sent Notice of PIC 2 (email) – September 18, 2024 • **MCFN Email:** • **September 18, 2024:** Email provided from the Mississaugas of the Credit First Nation administration indicating that they forwarded the message to the Consultation Staff. MCFN requested that it will not be necessary to include communciations@mmncfn.ca in emails moving forward. I kindly ask that you replace the contact information when you have a spare moment, as their DOCA.Admin@ address has been discontinued and replaced with the new account: (DOCA@mncfn.ca).	• New contact information was added to the mailing list • No comments or concerns were received. Notice of Completion with a link to the ESR to be sent to the community.
Aamjiwnaang First Nation	• **Notice of Study Commencement:** • Sent introductory letter and Notice of Study Commencement as email - December 21, 2023 • Email December 22, 2023 – Thanked the project team for the email, and asked to keep the community informed.	• Courtney Jackson, Consultation Worker, responded December 22, 2023 that the Notice of Study Commencement was received, and asked to continue to receive project notices. • No project-related comments or concerns were received. Notice of Completion with a link to the ESR to be sent to the community.

Indigenous Community	Engagement Log	Responses/ Actions Taken
	• **Notice of PIC1:** • Sent Notice of PIC 1 (email) – January 19, 2024 • **Notice of PIC2:** • Sent Notice of PIC 2 (email) – September 18, 2024 • Notice also sent September 18, 2024 to Lynn Rosales at Aamjiwnaang First Nation and J. Nahmabin as the original letter was undeliverable to Cathleen O'Brien who was no longer in the community administration.	
Metis Nation of Ontario	• **Notice of Study Commencement:** • Sent introductory letter and Notice of Study Commencement as email - December 21, 2023 • **Notice of PIC1:** • Sent Notice of PIC 1 (email) – January 19, 2024 • **Notice of PIC2:** • Sent Notice of PIC 2 (email) – September 18, 2024 • Notices sent by email only, as per previous requests from the organization for other projects	• No comments or concerns were received. Notice of Completion with a link to the ESR to be sent to the community.
Bkejwanong Territory (Walpole Island)	• **Notice of Study Commencement:** • Sent introductory letter and Notice of Study Commencement as email - December 21, 2023 • **Notice of PIC1:** • Sent Notice of PIC 1 (email) – January 19, 2024 • **Notice of PIC2:** • Sent Notice of PIC 2 (email) – September 18, 2024	• No comments or concerns were received. Notice of Completion with a link to the ESR to be sent to the community.
Six Nations of the Grand River Territory	• **Notice of Study Commencement:** • Sent introductory letter and Notice of Study Commencement as email - December 21, 2023 • **Notice of PIC1:** • Sent Notice of PIC 1 (email) – January 19, 2024 • **Notice of PIC2:** • Sent Notice of PIC 2 (email) – September 18, 2024	• No comments or concerns were received. Notice of Completion with a link to the ESR to be sent to the community.
Haudenosaunee Confederacy Council	• **Notice of Study Commencement:** • Sent introductory letter and Notice of Study Commencement as email - December 21, 2023 • **Notice of PIC1:** • Sent Notice of PIC 1 (email) – January 19, 2024 • **Notice of PIC2:** • Sent Notice of PIC 2 (email) – September 18, 2024	• No comments or concerns were received. Notice of Completion with a link to the ESR to be sent to the community.

Indigenous Community	Engagement Log	Responses/ Actions Taken
Oneida Nation of the Thames	• **Notice of Study Commencement:** • Sent introductory letter and Notice of Study Commencement as email - December 21, 2023 • **Notice of PIC1:** • Sent Notice of PIC 1 (email) – January 19, 2024 • **Notice of PIC2:** • Sent Notice of PIC 2 (email) – September 18, 2024	• No comments or concerns were received. Notice of Completion with a link to the ESR to be sent to the community.

3.5 Public Consultation

A key component of the MCEA process is public consultation. For this study, the main points of public consultation included:

- Notifying the public that the study was commencing;
- Receiving public input regarding the project including the evaluation criteria, environmental considerations, and evaluation of alternatives;
- Reviewing and receiving feedback on the preliminary preferred alternative including proposed mitigation measures; and
- Reviewing the ESR during the 30-day comment period.

3.5.1 Notice of Study Commencement

The Notice of Study Commencement was distributed on December 15, 2023 with a newspaper advertisement as described in **Section 3.2.**

3.5.2 Public Information Centre 1 Comments

An in-person Public Information Centre (PIC) was held on Thursday January 25, 2024, at the Thorndale Lions Community Centre – Meeting Room #1, 265 Upper Queen Street, Thorndale, Ontario between 5:00 pm – 7:00 pm. The purpose of PIC 1 was to provide an update on the project provide information about the assessment of alternative solutions and the recommended solution. Advertisement and notification for PIC 1 is described in **Section 3.2**.

The PIC was held using a drop-in format with PIC displays arranged around the room and members of the project team and municipal staff were available to discuss questions or comments with attendees. Individuals were encouraged to submit written comments for review by the project team.

Advertisement and notification for PIC 1 is described in **Section 3.2.** PIC displays are found in **Appendix B**.

No written comments from the public were submitted at PIC 1, however discussion topics and oral comments are documented below:

- Attendees included a local resident, two local sewage hauling business representatives, property developers, and the Mayor of Thames Centre
- A member of the Chippewas of the Thames First Nation (COTTFN) consultation department attended PIC 1. The member identified that the community has some

interest in projects near the Thames River. They were pleased to hear that that the existing plant is only a few years old and built to more modern specifications

- COTTFN asked about higher discharges to the Thames River during storm events and whether those have been a problem in the past. A written letter with this comment was submitted following the PIC, and a response was provided
- The two septic haulers mentioned currently bring their septage to London's Adelaide Pollution Control Plant for a fee. They would rather bring their septage local if it were to become an option and spend the money in their community
- One of the septic haulers mentioned the Oxford County system for receiving septic seems to work well – one of the sites has a "balancing tank" which runs with a pump and creates a slow flow for adding septic into the treatment system. A "grit pit" was also mentioned that can receive the sewage

Following the PIC, a written response was received by COTTFN, and a response was provided to the community.

The sewage hauler question about whether the project could support private septage from haulers was considered by the project team. Following PIC 1, it was determined that, receiving and treating private septage at the Thorndale WWTP was not feasible due to the size of the Thorndale WWTP. Septage has a much higher concentration of waste material as compared to normal sewer flows and thus requires sufficient dilution at the WWTP in order for it to be treated effectively. Without appropriate dilution, the system would experience high peaks of waste concentration which could not be properly managed.

3.5.3 Public Information Centre 2 Comments

An in-person PIC was held on Thursday September 26, 2024, at the Thorndale Lions Community Centre – Meeting Room #1, 265 Upper Queen Street, Thorndale, Ontario between 5:00 pm – 7:00 pm. The purpose of PIC 2 was to provide an update on the project, describe the evaluation of Alternative Designs, and the preferred Design Alternative for the project. Advertisement and notification for PIC 2 is described in **Section 3.2.**

PIC displays were arranged around the room and members of the project team and municipal staff were available to discuss questions or comments with attendees. Individuals were encouraged to submit written comments for review by the project team.

PIC 2 displays are found in **Appendix B**. No written comments from the public were submitted at PIC 2. A summary of oral discussions is included below:

- An individual who attended was a wastewater hauler. He asked whether the new plant expansion would allow hauled sewage

- It was explained that the project team reviewed the request since the last meeting and identified that the plant and expanded plant would not be able to take hauled sewage. Hauled sewage would spike levels within the plant which is not ideal in the small size of the plant such as Thorndale. Adding sewage further upstream would also not be acceptable due to odours from the highly concentrated sewage. The plant would need far more flows to take on septage. The plant also does not have staff on-site full time
- A nearby resident of the plant agreed with expanding within the plant boundaries to make efficient use of the property and land. The individual was also pleased that the less costly method was being used to be efficient with Municipal funds
- Another individual asked about the timeline for the plant. The Municipality mentioned were only at around 50% capacity, and the new plant wouldn't be designed until around 80% capacity. The individual was pleased that the technology is similar to the existing technology to keep things simple

3.5.4 Notice of Completion

At the completion of the project, the project mailing list will be notified by a Notice of Completion, including Indigenous communities on the MECP project list provided.

The Notice of Completion will be issued for the start of the 30-day comment period. The ESR will be made available on the website for public review.

Should any comments be received during the 30-day public review period, the project team and Municipality of Thames Centre will communicate directly with the individuals to discuss and seek to resolve the comments.

4 Inventory of the Natural, Social and Economic Environment

4.1 Technical Environment

4.1.1 Existing Wastewater Treatment Plant

The Municipality's wastewater is conveyed to the WWTP via a 450mm gravity sewer to the main pumping station which includes three (3) submersible sewage pumps (two duty, one standby), both duty pumps providing a firm pump station capacity of 28.2 L/s (litres per second) conveying raw sewage via a 200 mm diameter forcemain to the inlet works of the Thorndale Wastewater Treatment Plant.

The existing WWTP has a rated capacity of 674 m^3/d annual average flow and a peak design flow of 2,436 m^3/d. The plant has two (2) parallel Sequencing Batch Reactors (SBR) - Intermittent Cycle Extended Aeration System (ICEAS) basins where the decant is discharged to an effluent UV disinfection system.

4.1.1.1 Existing Assimilative Capacity Assessment

Discharge of treated effluent and applicable guidelines are governed by MECP. An Assimilative Capacity Assessment (ACS) (AECOM, 2009) was completed prior to the Thorndale WWTP site construction in 2009. An ACS outlines the treatment levels necessary for effluent to be permitted to discharge to a waterbody.

The ACS was based on a projected average daily flow (ADF) of 1,295 m^3/d which allows for a near doubling of current ADF capacity. In addition, the overall methodology of the ACS included consideration of the City of London's Pollution Control Plant (PCP) Discharge Strategy when setting effluent targets, which was recommended by the MECP at that time. As a result, an update to the ACS was not completed as part of this study, based on the understanding that a similar approach would remain acceptable to the Ministry.

As part of the 2011 Environmental Compliance Approval (ECA) which provides an approval necessary to operate the WWTP, MECP requested that they should be notified when the WWTP approaches 50% capacity to develop a Contingency Plan.

MECP correspondence in 2025 resulted in a modification to the proposed effluent limits presented in the AECOM 2009 report. The revised table and discussion is in **Section 8.1.**

4.1.1.2 MECP Engagement

Stantec issued a letter to MECP on February 23, 2024 to address the ECA condition above and to seek agreement on the effluent considerations for this project.

The Thames River is deemed a Policy 2 receiver with respect to phosphorus as the river 75th percentile phosphorus levels were above the Provincial Water Quality Objective (PWQO) of 0.03 mg/L at 0.09 mg/L. Policy 2 states that the "water quality which presently does not meet the PWQO shall not be degraded further and all practical measures shall be taken to upgrade the water quality to the objectives".

The WWTP requires expansion by 2032 to increase its rated capacity to 741 m^3/d and peak design flow to 3,706 m^3/d to meet 20-year design average daily and peak hourly flows. Effluent quality requirements are set by the Environmental Compliance Approval.

As stated in the MECP performance review letter, the total phosphorus (TP) effluent objective in the first stage of the WWTP with a rated capacity of 674 m^3/d was not projected to affect the Thames River TP concentration of 0.09 mg/L. The WWTP

effluent limits were based on the receiver maximum compliance criterion of 0.84 kg/d, which was used to outline a maximum future rated capacity of 1,294 m^3/d at the effluent limit of 0.65 mg/L of TP. The current effluent limit of 0.44 kg/d is based on the same effluent limit for the rated capacity of 0.65 mg/L.

The proposed capacity expansion from 674 m^3/day to 741 m^3/d remains below the future maximum rated capacity of 1,294 m^3/d and is still within the effluent limit for total phosphorous.

A review of historical operating and performance data (2018 to September 2023) was used to define the status of the overall plant and the individual unit processes. Overall, the plant is operating at an average daily raw flow of 300 m^3/d, representing approximately 45 percent of the annual average rated plant capacity.

As Thorndale WWTP approached the end of 2023 it reached 50.6% of its rated capacity, and the plant was determined to be operating very well. The loading and operating parameters for each unit process are adequate in comparison to the MECP Design Guideline values. Thorndale WWTP has consistently produced a high-quality effluent with average concentrations of 2.75 mg/L cBOD5, 3.92 mg/L TSS, 0.18 mg/L TP, and 1.12 mg/L TAN, respectively, over the 2018-2023 period.

4.1.1.3 Amended Environmental Compliance Approval

MECP issued an Amended Environmental Compliance Approval 3804-D6TL9K on September 25, 2024 based on the existing sanitary design capacity of 674 m^3/d. The existing rated capacity will continue to apply until such time as the new WWTP expansion is constructed and initiated. Special Conditions outlined for this facility are described below:

1. The Owner shall complete a detailed performance assessment of the Works to determine whether the Works will have to be upgraded in order to be able to meet the effluent objectives and effluent limits (Capacity of 674 m^3/d).

2. If any two (2) or more effluent non-compliance situations are encountered during any calendar year for any effluent parameter listed in Schedule C, the Owner shall investigate and implement whatever contingency measures are necessary to ensure consistent compliance by the Works in accordance with the effluent limits listed in Schedule C. The results of the investigation and implementation of contingency measures shall be documented in the performance report under Paragraph 4 of Condition 11.

3. The Owner shall, within 120 days of completion of the investigation or/and assessment, submit to the Director an application for an amendment of the Approval and a design brief for the proposed sewage works upgrade, including technical descriptions, design specifications, and design performance of the proposed

upgrade, if an upgrade of the Works is required based on the investigation or/and assessment.

4.1.2 Growth and Capacity Expansion Requirements

4.1.2.1 Population Growth Projection

The equivalent population projections from 2018 to 2046 are provided in **Table 3**. The 2018 equivalent population, which includes both residential population (persons) and employment population (jobs), is based on the GMBlue Master Plan and the 2018 DC background study. The 2018 population is derived from the serviced residential population (excluding the rural population that have been considered in the Master Plan) for the Thorndale Wastewater Treatment Plant. Population was calculated based on the number of serviced lots multiplied by the 2018 Person Per Unit (P.P.U), which is set at 2.673 according to the DC background study as mentioned in the Master Plan. However, the P.P.U changes for 2028, 2038, and buildout have been considered in this projection.

Employment population is estimated based on the ratio of urban jobs to residential population, similar to the Master Plan. Using this ratio, the serviced employment populations for 2028, 2038, and buildout were projected. In this projection lots not connected to sanitary servicing have been further classified into those available and unavailable for connection. The unconnected lots with available sanitary servicing have been included in the population projection in increments. Additionally, the projections take into account the anticipated growth in both residential and employment populations over the years. This includes the impact of new developments and expansions in urban areas serviced by the Thorndale Wastewater Treatment Plant.

Table 3: Existing and Future Serviced Population in Thorndale

Year	Population	New Growth Population
2018	1,915	-
2028	2,373	458
2038	2,838	465
Buildout	3,294	456

4.1.2.2 Capacity Expansion Requirements

The following is a summary of WWTP planning constraints and needs:

- The WWTP requires an expansion by 2032 (reaching its 85% of capacity) to increase its rated capacity to 741 m^3/d and peak design flow to 3,706 m^3/d to meet 20-year design average daily and peak hourly flows. 741 m^3/d is the ultimate capacity required based on the population projection at buildout. This capacity considers a residential flow of 225 L/cap/day for existing developments, based on the MOE guidelines, and 230 L/cap/day for new developments
- The influent design loads are anticipated to increase proportionally with service population and combined with the need for continuous nitrification, will require an increase in secondary treatment capacity
- The existing plant may experience high peak flows during the Spring and is believed to be influenced by inflow and infiltration (I/I). To meet future growth, it will require minor capacity increase for raw sewage pumping, headworks flow split modification, additional sludge holding tank volume, flow equalization and additional secondary treatment trains. An equalization volume of 1,000 m^3 was selected based on existing flows and determined that it would help to maintain the plant flows within the peak flow listed within the existing ECA
- Appropriate effluent limits and objectives for the upgraded WWTP facility shall be considered
  - It is expected that tertiary treatment (or filtration) will be required to meet any new non-compliance limits for Total Phosphorus (TP) and Total Ammonia Nitrogen (TAN). Existing limits are expected to be achieved with expanded secondary treatment on a monthly average basis
- The existing WWTP site has enough space for expansion
  - There is available land that is open space for WWTP expansion within the existing site footprint.

The 250-year flood elevation in June 2024 was checked and confirmed to be 271.8m and the 100-year flood elevation was 270 m. Plant effluent grade line is 274.175 at maximum which is well above the 250-year flood elevation of 271.8 m. The plant Effluent invert is 272.98 m.

These options seek to maintain use of the existing processes as much as possible, and where practical, while providing the necessary treatment capacity to accommodate future growth.

4.1.3 Transportation

The Thorndale WWTP is accessed from Ideal Drive in Thorndale. Ideal Drive terminates south of the project site.

4.1.4 Site Servicing and Utilities

The Thorndale WWTP is serviced with a 63 mm water service and hydro service with 150 kVa transformer and 200 kW standby generator.

4.2 Socio-Economic Environment

A summary of the existing land use, as well as the planning and policy context is provided below as it relates to the Thorndale WWTP study area. The summary will be considered during the identification of alternative solutions, evaluation and recommendations.

4.2.1 Federal Land Use Planning and Policy

There is no federal land within the study area where land use policies would apply.

The Thames River is a navigable waterway in some parts of its course, however there are many dams located within the system which would prevent full navigability. Downstream from the study area, the Fanshawe Lake dam is present. No work is anticipated to occur within the Thames River for this project, and no work would impede travel on the Thames River.

4.2.2 Provincial Land Use Planning and Policy

The Provincial Planning Statement *(PPS)* (2024), issued under Section 3 of the *Planning Act*, sets a policy foundation for regulating the development and use of land. It provides direction on matters of provincial interest and supports the enhancement of the quality of life for all citizens of Ontario, while still maintaining environmental integrity. In accordance with Section 3 of the *Planning Act*, decisions affecting planning matters shall have regard for the PPS. The PPS establishes a framework to build strong communities while ensuring development patterns are efficient and optimize the use of land, resources, and public investment in infrastructure.

Policies relevant to sewage, water and stormwater are under Chapter 3 of the PPS. The policies in Section 3.6 require that infrastructure accommodates forecasted growth in a timely manner to promote the efficient use and optimization of existing municipal sewer services and municipal water services. Policies are provided to ensure that the systems are sustained by the water resources upon which the services reply, are feasible and financially viable over their lifecycle. The policies identify the need to protect human

health and safety, and the natural environment, including the quality and quantity of water. Systems must also align with comprehensive municipal planning for these services, where applicable. Infrastructure should be planned in a coordinated, efficient, and cost-effective manner to ensure the systems are reliable, promote efficiency, and integrate land use considerations throughout the process.

This Class EA supports the policies of the PPS by maintaining a centralized Thorndale WWTP while considering expansion options that are efficient and cost-effective. The EA also considers natural and cultural environmental interactions to avoid adverse effects on significant features, and to identify mitigation measures where possible.

4.2.3 Municipal Land Use Planning and Policy

Thorndale is a community within the Municipality of Thames Centre predominately surrounded by agricultural and natural areas. The study area includes an area 120 m surrounding the existing WWTP on Ideal Drive, in Thorndale, Ontario.

The Middlesex County *Official Plan* (July 7, 2023) identifies Thorndale as a “Community Area” which is second in the growth management hierarchy behind urban areas. Community areas are defined as areas with the potential to accommodate future growth through population projections and must currently serve a community function…” (pg. 2-16, 2-17). The Official Plan also identifies a goal of future development within settlement areas on the basis of full municipal services. Other methods of servicing (partial services) may be permitted on an interim basis according to the policies provided in the plan (pg. 2-18). The Official Plan therefore promotes the growth of municipal servicing within settlement areas.

Schedule C identifies the Natural Heritage System for Middlesex County. Within Thames Centre, natural heritage system areas follow the Thames River valley west of the study area. The Official Plan Schedule D also identifies Natural Hazard areas, with the map layer identified as “Conservation Authority Regulatory Limits. These limits are shown within Upper Thames River Conservation Authority (UTRCA) mapping provided to the project team as part of this project, included in **Appendix D**.

The Municipality of Thames Centre *Official Plan* (2020 consolidation) provides local land use policies and designations. The study area is within the Thorndale Settlement Area Schedule “B-2”. Ideal Drive and the surrounding property is designated “Settlement Industrial” within the settlement area limits. The areas surrounding the Thorndale WWTP are a business park with some current industrial businesses in operation. Areas East of Nissouri Road are residential or commercial, while Wye Creek is the primary natural feature in central Thorndale.

Relevant Official Plan figures and sourcewater protection figures are included in **Appendix D**.

As identified in **Section 1**, The Municipality of Thames Centre completed a *Water and Wastewater Master Plan Update* (2019). The preferred wastewater strategy was to:

- Expand the Thorndale Wastewater Treatment Plant Facility (WWTF) (also known as the Wastewater Treatment Plant) and Thorndale Sanitary Pumping Station (SPS) to service development within Peripheral Lands (lands as identified in the Master Plan),

  and

- Upgrade downstream sewers in areas of Thorndale WWTF buildout of Peripheral Lands at higher densities.

This project aligns with the plan to expand the capacity of the Thorndale WWTF (referred to as the Thorndale WWTP in this project).

4.2.4 Sourcewater Protection

In accordance with Ontario's *Clean Water Act* (*CWA*), Middlesex County has created three *Source Protection Plans* (SPP); Thames-Sydenham and Region Source Protection Plan, Lake Erie Source Protection Plan and Ausable Bayfield Source Protection Plan. These Plans are enacted to protect groundwater sources within the County.

Thorndale is specifically within the Thames-Sydenham and Region Source Protection Plan (SPP) which came into effect December 31, 2015. The SPP policies work to reduce risk by regulating proposed and existing activities which have been identified as posing significant threats to drinking water safety. Depending on the hydrology and geology of an area, as well as potential risks posed by activities onsite, different policies under the SPP may apply to the Study Area. The SPP plan mapping identifies one Wellhead Protection Area (WHPA) located in the northeast of Thorndale associated with the municipal well. WHPA 10, followed by WHPA 6, WHPA 4, and WHPA 2 areas are shown. The municipal well and WHPA are not within the study area of this project.

UTRCA-Regulated lands are present, as described in **Section 4.3.1**. A review of the online Ontario Oil, Gas and Salt Resources Library does not identify any Oil and Gas wells within Thorndale. Relevant sourcewater protection figures are included in **Appendix D**.

4.2.5 Noise, Air Quality and Odour

The project included a consideration of potential sensitive receptors near the existing Thorndale WWTP site. The project site is located within an industrial park in Thorndale and is surrounded by vacant land or industrial buildings. Advanced Drainage Systems

(ADS) Inc. is located east of Ideal Drive which supplies irrigation and drainage equipment, while ProGrow Farms is immediately south of the site and consists of an individual building with no outdoor living area.

One residential property is located at 16615 Thorndale Road. The home is 135 m from the property line of the Thorndale WWTP site. There are no known noise or air quality complaints associated with this property.

4.3 Natural Environment

A Natural Heritage desktop-level screening was completed to identify environmental features within the Study Area including terrestrial and surface water features. The Study Area included the existing Thorndale WWTP, as well as a buffer of 120 m.

The review included natural environment features, including designated natural areas, watercourses, and potential Species at Risk (SAR) and Species of Conservation Concern (SOCC). Mapping was based on MNR Land Information Ontario sources, as well as OP mapping.

The Existing Conditions Natural Environment Assessment is included in **Appendix E**.

4.3.1 Vegetation and Designated Natural Environment Features

No Provincially Significant Wetlands, or Areas of Natural and Scientific Interest (ANSI), wetlands or wooded areas are present in the Study Area.

The Study Area does not contain any terrestrial Natural Heritage Systems, according to Schedule C of the *County of Middlesex Official Plan* (2023).

The Study Area is within the jurisdiction of the Upper Thames River Conservation Authority (UTRCA) and is subject to the provisions under Ontario Regulation (O. Reg.) 157/06 of the *Conservation Authorities Act*. UTRCA-Regulated lands are present on site which facilitate surface water drainage. Two areas within the Site and Study Area were identified as UTRCA Regulated Lands: Southwest of Ideal Drive, and East of Ideal Drive which are associated with drainage features.

The constructed waterbodies and ditch are associated with the UTRCA Regulated Areas (**Attachment 1, Existing Conditions Natural Environmental Assessment, Appendix E**).

4.3.2 Wildlife and Wildlife Habitat

Candidate Significant Wildlife Habitat (SWH) features are defined in the MNR *Significant Wildlife Habitat Technical Guide* (2000) and MNR Significant Wildlife Habitat

Criteria Schedules for Ecoregion 6E (2015). The Significant Wildlife Habitat Technical Guide organizes SWH into four categories:

- Habitats of Seasonal Concentrations of Animals,
- Rare Vegetation Communities or Specialized Habitats for Wildlife,
- Habitats of Species of Conservation Concern, and
- Animal Movement Corridors.

The Significant Wildlife Habitat Criteria Schedules provide descriptions of wildlife habitats and guidance on criteria for determining the presence of candidate and confirmed wildlife habitats. Targeted wildlife surveys are typically required to confirm habitat use and significance.

A SWH assessment was not completed as part of this natural heritage assessment due to the property context.

The subject property is fenced and contains the WWTP situated on manicured lawn. There are no trees or shrubs present on the site that would provide habitat, as shown in **Figure 3**. Outside of the fenced areas are meadow vegetation types, however there is no work proposed beyond the fenced limits.



Figure 3: Existing Thorndale Wastewater Treatment Plant (Google Streetview, 2023)

4.3.3 Species at Risk and Species of Conservation Concern

Species of Conservation Concern (SOCC) are defined as species that are classified as Special Concern provincially or federally or ranked as S1-S3 in the Ministry of Natural Resources and Forestry's (MNR) Natural Heritage Information Centre (NHIC) database. Other rankings are S4 (apparently secure, uncommon but not rare) and S5 (secure, common, widespread and abundant).

The background review identified 25 Species of Conservation Concern (SOCC) as occurring in the vicinity of the Study Area, based on NHIC 2023 records within 2 kilometers (km) of the Study Area and atlas records are from a 10 km x 10 km square overlapping the Study Area. Records do not provide the exact locations of SAR and are used as an indicator of potential occurrences in the Study Area.

This review was based on background sources identified in the Natural Heritage Study, although their presence or absence would need to be confirmed through future fieldwork at the site once the project footprint size and configuration is confirmed.

Species of Conservation Concern (SOCC) are those which are provincially rare (S1-S3 ranked species) or provincially designated special concern species. This category excludes species with a provincial status of threatened or endangered. Status rankings (S-ranks) for wildlife are based on the number of occurrences in Ontario and have the following rankings:

- S1: Critically imperiled; usually fewer than 5 occurrences
- S2: Imperiled; usually fewer than 20 occurrences
- S3: Vulnerable; usually fewer than 100 occurrences
- S4: Apparently secure; uncommon but not rare, usually more than 100 occurrences
- S5: Secure, common, widespread, and abundant
- An S-rank followed by a "?" indicates the rank is still uncertain.

Table 4 lists SOCC that were identified as having potential to be present in the Study Area, based on the records review:

Table 4: Species of Conservation Concern Records Review

SOCC Species	S-rank	SARO	Source
Reptiles			
Snapping Turtle (Chelydra serpentina)	S4	SC	NHIC, ORRA

SOCC Species	S-rank	SARO	Source
Midland Painted Turtle (Chrysemys picta marginata)	S4	-	NHIC, ORRA
Northern Map Turtle (Graptemys geographica)	S3	SC	NHIC, ORRA
Eastern Milksnake (Lampropeltis triangulum)	S4	NAR	NHIC, ORRA
Insects			
Spotted Apatelodes Moth (Apatelodes torrefacta)	S3	-	OIA
Hackberry Emperor (Asterocampa celtis)	S3	-	NHIC
Monarch (Danaus plexippus)	S4B, S2N	SC	OIA
Phyllira Tiger Moth (Grammia phyllira)	S3	-	OIA
Birds			
Eastern Wood-Pewee (Contopus virens)	S4B	SC	OBBA, ebird
Bald Eagle (Haliaeetus leucocephalus)	S4	SC	NHIC
Barn Swallow (Hirundo rustica)	S4B	SC	OBBA, ebird
Wood Thrush (Hylocichla mustelina)	S4B	SC	OBBA
Purple Martin (Progne subis)	S3B	-	OBBA
Blue-winged Teal (Spatula discors)	S3B, S3N	-	OBBA
Mammals			
Woodland Vole (Microtus pinetorum)	S3?	SC	OMA
Vascular Plants			
Narrow-leaved Mild Leek (Allium tricoccum var. burdickii)	S1?	-	NHIC
Hairy-fruited Sedge (Carex trichocarpal)	S3	-	NHIC
Large Toothwort (Cardamine maxima)	S3	-	NHIC

SOCC Species	S-rank	SARO	Source
Slim-flowered Muhly (Muhlenbergia tenuiflora)	S2	-	NHIC
Lizard's-tail (Saururus cernuus)	S3	-	NHIC
Striped Cream Violet (Viola striata)	S3	-	NHIC
Fish			
Greater Redhorse (Moxostoma valenciennesi)	S3	-	NHIC
Molluscs			
Elktoe (Alasmidonta marginata)	S3	-	NHIC
Pimpleback (Cyclonaias pustulosa)	S2	-	NHIC
Purple Wartyback (Cyclonaias tuberculate)	S2	-	NHIC

Legend: SARO definitions: END – Endangered, THR – Threatened, EXP – Extirpated, SC - Special Concern, NAR - Not at Risk, DD - Data Deficient, EXT - Extinct

Species at Risk (SAR) are those species identified as Endangered or Threatened under the provincial *Endangered Species Act*, 2007 (ESA). The ESA was created to protect SAR and their habitats in Ontario. Endangered, Threatened, and Extirpated species listed on the Species at Risk in Ontario (SARO) list (O. Reg. 230/08 under the ESA) automatically receive legal protection from harm or harassment under the ESA. In addition to species protection, the ESA prohibits damage or destruction of habitat for Endangered or Threatened species. Work on public or private land (excluding federal lands) that may harm or harass protected species (e.g., Threatened, or Endangered) or impact their habitat requires approval from the Ministry of Environment, Conservation, and Parks' (MECP) Species at Risk Branch.

Based on a review of background information, 19 SAR have been identified as occurring in the vicinity of the Study Area, as shown in the table below. NHIC (2023) records are from within 2 km of the Study Area and atlas records are from a 10 x 10 km square overlapping the Study Area. Records do not provide the exact locations of SAR and are used as an indicator of potential occurrences in the Study Area. **Table 5** lists SAR species that were identified, based on the records review.

Table 5: Species at Risk Records Review

SAR Species	SARO	COSEWIC	Source
Reptiles			
Spiny Softshell (Apalone spinifera)	END	END	NHIC
Blanding's Turtle (Emydoidea blandingii)	THR	END	ORRA
Queensnake (Regina septemvittata)	END	END	ORRA
Birds			
Chimney Swift (Chaetura pelagica)	THR	THR	OBBA
Bobolink (Dolichonyx oryzivorus)	THR	THR	OBBA, ebird
Red-headed Woodpecker (Melanerpes erythrocephalus)	END	END	OBBA
Bank Swallow (Riparia riparia)	THR	THR	OBBA, ebird
Eastern Meadowlark (Sturnella magna)	THR	THR	NHIC, OBBA, ebird
Mammals			
Eastern Smallfooted Myotis (Myotis leibii)	END	-	OMA
Little Brown Bat (Myotis lucifugus)	END	END	OMA
Northern Myotis (Myotis septentrionalis)	END	END	OMA
Tricolored Bat Perimyotis subflavus)	END	END	OMA
American Badger [Southwestern Ontario population] (Taxidea taxus jacksoni)	END	END	OMA
Vascular Plants			
Blue Ash (Fraxinus quadrangulate)	THR	THR	NHIC

SAR Species	SARO	COSEWIC	Source
Wood-poppy (Stylophorum diphyllum)	END	END	NHIC
Fish			
Silver Shiner (Notropis photogenis)	THR	THR	NHIC
Black Redhorse (Moxostoma duquesnei)	THR	THR	NHIC
Molluscs			
Wavy-rayed Lampmussel (Lampsilis fasciola)	THR	SC	NHIC
Rayed Bean (Villosa fabalis)	END	END	NHIC

Legend: END = Endangered, THR = Threatened, SC = Special Concern, NHIC, OBBA, ebird = Sources of Information (see Terrestrial memo).

Of the 19 SAR listed, much of the Study Area does not provide suitable habitat for the SAR species. This is further described in **Table 6**. Potentially suitable habitat was identified within 120 m of the Thorndale WWTP for the following species: Blandings Turtle, SAR bats (i.e., Small-Footed Myotis, Little Brown Myotis, Northern Myotis, and Tri colored Bat), and SAR birds (i.e., Bobolink and Eastern Meadowlark). Further information on the impact assessment is included in **Section 8.6.1.4**.

Table 6: Potential for Species at Risk

SAR Species	SARO	COSEWIC	Source	Discussion
Reptiles				
Spiny Softshell (Apalone spinifera)	END	END	NHIC	Spiny Softshell require sandy beaches and riverbanks for nesting, shallow soft-bottomed water bodies to function as nurseries and refugia, basking areas, deep pools for thermoregulation, and riffle areas for foraging. Habitat features may occur over a large area, as long as the intervening habitat doesn't prevent the turtles from travelling between them (COSEWIC 2002). Two constructed waterbodies are present within the Study Area, however they are not connected and isolated by a terrestrial environment, inhibiting Spiny Softshell from accessing them. **Therefore, Spiny Softshell is considered absent from the Study Area.**
Blanding's Turtle (Emydoidea blandingii)	THR	END	ORRA	Blanding's Turtle inhabits shallow waterbodies with soft organic substrates and abundant submergent vegetation. Blanding's Turtles will nest in in loose soil (i.e., gravel or sand) above the waterline (Ontario Nature 2022). They can migrate several kilometers (km) between summer habitat, nesting sites, and overwintering habitat (MECP 2022). Two storm water waterbodies are present within the project site. Although unlikely, these waterbodies may provide habitat (e.g., summer) for the Blanding's Turtle. A gravel pile is located northeast of the Site, adjacent to Ideal Drive. This gravel pile may serve as potential nesting habitat for this species. **Therefore, there is a low potential that the Blanding's Turtle could be observed within the Study Area.**
Queensnake (Regina septemvittata)	END	END	ORRA	The Queensnake is an aquatic snake found in rocky, gravelly, or slate stream-bed substrates, with a swift to moderate current and woodland surroundings (COSEWIC 2010b). The habitat of this species is highly specialized and it is rarely found more than 3 metres from water. No suitable habitat for Queen Snake exists within the Study Area. **Therefore, this species is not expected to occur in the Study Area.**
Birds				
Chimney Swift (Chaetura pelagica)	THR	THR	OBBA	Chimney Swift use chimneys for roosting and breeding, as well as walls, rafters, or gables of buildings and, less frequently, natural structures such as hollow trees, tree cavities and cracks in cliffs (Cadman et al. 2007). Based on air photo interpretation and Google Streetview, no suitable nesting habitat for Chimney Swift is observed within the Study Area. **Therefore, this species is not expected to occur in the Study Area.**
Bobolink (Dolichonyx oryzivorus)	THR	THR	OBBA, ebird	The Bobolink is generally referred to as a "grassland species". It nests primarily in forage crops with a mixture of grasses and broad-leaved forbs, predominantly hayfields and pastures. Preferred ground cover species include grasses such as Timothy and Kentucky bluegrass and forbs such as clover and dandelion (COSEWIC 2010a). **Based on air photo interpretation and Google Streetview, the Study Area appears to be largely comprised of meadow communities of varying ages, which have the potential to provide nesting habitat for Bobolink.**

SAR Species	SARO	COSEWIC	Source	Discussion
Red-headed Woodpecker (Melanerpes erythrocephalus)	END	END	OBBA	The Red-headed Woodpecker occupies a variety of habitats including open areas for feeding, snags for roosting, and a secure food supply. This species requires multiple snags for nesting, roosting, and foraging. (N.A.S. 2012; Smith et al. 2000). **No wooded communities are present within the Study Area; and therefore Red-headed Woodpecker is not expected to occur in the Study Area.**
Bank Swallow (Riparia riparia)	THR	THR	OBBA, ebird	The Bank Swallow excavate nests in exposed earth banks along watercourses and lakeshores, roadsides, stockpiles of soil, and the sides of sand and gravel pits. Adjacent grasslands and watercourses are used for foraging habitat (Cadman et al., 2007). Based on air photo interpretation and Google Streetview no suitable habitat for Bank Swallow is observed in the Study Area. **Therefore, this species is not expected to occur in the Study Area.**
Eastern Meadowlark (Sturnella magna)	THR	THR	NHIC, OBBA, ebird	As a grassland species the Eastern Meadowlark typically occurs in meadows, hayfields and pastures. However, it will utilize a wider range of habitat than most grassland species, including mown lawn (e.g. golf course, parks), wooded city ravines, young conifer plantations and orchards (Peck and James 1983). **Based on air photo interpretations and Google Streetview the Study Area is largely comprised of meadow communities of varying ages, which have the potential to provide nesting habitat for Eastern Meadowlark.**
Mammals				
Eastern Smallfooted Myotis (Myotis leibii)	END	-	OMA	These bat species share similar habitat preferences during their active season and are described together. These species will use trees as small as 10 cm diameter at breast height (DBH) with cavities, loose bark, and leaves to nest and day roost as well as for maternity roosting purposes, usually >10 m high on trees exhibiting early stages of decay (COSEWIC 2013, ECCC 2018). While the majority of the Study Area is open, there are a few mature deciduous trees that could potentially provide suitable maternity roost habitat for SAR bats. **Therefore, there is a low potential for SAR bats to occur within the Study Area. There are no overwintering features (e.g., caves, abandoned mines) for SAR bats observed within the Study Area.**
Little Brown Bat (Myotis lucifugus)	END	END	OMA	
Northern Myotis (Myotis septentrionalis)	END	END	OMA	
Tricolored Bat (Perimyotis subflavus)	END	END	OMA	
American Badger [Southwestern Ontario population] (Taxidea taxus jacksoni)	END	END	OMA	American Badger is found in open grasslands, agricultural areas and open parklands (Eder 2002). **While meadows communities are present in the Study Area, they are likely too small to support this species; therefore, American Badger is not anticipated to occur in the Study Area.**

SAR Species	SARO	COSEWIC	Source	Discussion
Vascular Plants				
Blue Ash (Fraxinus quadrangulate)	THR	THR	NHIC	Occurs as a scattered tree, mixed with white ash, black ash, chinquapin oak, black walnut and other southern broadleaf trees; found on floodplains, well-drained sand and on limestone outcrops (Farrar 1995). **No suitable habitat is present within the Study Area; therefore, Blue Ash is not anticipated to occur in the Study Area.**
Wood-poppy Stylophorum diphyllum)	END	END	NHIC	Wood-poppy is found in rich mixed deciduous woodlands, forested ravines and slopes, and along wooded streams (COSEWIC 2007). **No wooded communities are present within the Study Area; therefore, Wood-poppy is not anticipated to occur in the Study Area.**
Fish				
Silver Shiner (Notropis photogenis)	THR	THR	NHIC	Preferred habitat for the Silver Shiner is moderately fast-flowing sections of larger streams. This species is restricted to the tributaries of Lakes St. Clair (Thames River), Erie (Grand River) and Ontario (Bronte Creek) in Southwestern Ontario (COSSARO 2011). **No watercourses were identified within the Study Area (MNR 2023b); therefore, this species is not expected to occur in the Study Area.**
Black Redhorse (Moxostoma duquesnei)	THR	THR	NHIC	Black Redhorse generally inhabits moderately sized, cool, clear streams, preferring pool areas in the summer and overwintering in deep pools (COSEWIC 2005). **No watercourses were identified within the Study Area (MNR 2023b); therefore, this species is not expected to occur in the Study Area.**
Molluscs				
Wavy-rayed Lampmussel (Lampsilis fasciola)	THR	SC	NHIC	The Wavy-rayed Lampmussel is most abundant in small to medium-sized streams and rivers with steady flows in gravel or sand substrates (COSEWIC 2010d). **No watercourses were identified within the Study Area (MNR 2023b). Therefore, this species is not expected to occur in the Study Area.**
Rayed Bean (Villosa fabalis)	END	END	NHIC	The Rayed Bean is usually found deeply buried in the gravel and sand substrates in rivers that are fast flowing (COSEWIC 2010c). **No watercourses were identified within the Study Area (MNR 2023b) and therefore, this species is not expected to occur in the Study Area.**

The impact assessment and mitigation measures for these species are included in **Section 8.6.1.4**.

4.3.4 Fish and Fish Habitat

The site Study Area does not overlap with MNR mapped watercourses or waterbodies. There are two constructed waterbodies within the Study Area, and the southwest waterbody has a connected unmapped ditch parallel to the Site. UTRCA-Regulated lands are present on site which facilitate surface water drainage.

The Thames River is the effluent receiver for the Thorndale WWTP, and it is located outside of the Study Area to the west of the existing site. There are no changes proposed to the existing outlet to the Thames River which would require direct impacts to the river. Fish and fish habitat study investigations were not completed for this project.

Species of Conservation Concern and Species at Risk records were identified in **Section 4.3.3**.

4.4 Cultural Environment

The MCEA Manual considers cultural heritage, including built heritage resources and cultural heritage landscapes as well as archaeological resources, as one in a series of environmental factors to be considered when undertaking an MCEA, particularly when describing existing and future conditions, development alternatives, and determination of the preferred alternative. The MCEA Manual further suggests that cultural heritage resources that retain heritage attributes should be identified early in the EA process and avoided where possible. Where avoidance is not possible, potential effects should be identified and minimized. Adverse impacts should be mitigated according to provincial and municipal guidelines.

4.4.1 Potential Built Heritage Resources and Cultural Heritage Landscapes

A Cultural Heritage Screening was completed which includes a community input program and a desktop review of available mapping, digital databases, and aerial photography. Stantec built heritage specialists completed a review of the two alternatives to assess the potential for direct and indirect impacts using the Ministry of Citizenship and Multiculturalism (MCM) *Criteria for Evaluating Potential for Built Heritage Resources and Cultural Heritage Landscapes: A Checklist for the Non-Specialist* (2022; the MCM Checklist). The checklist provides a tool to identify known or recognized built heritage resources and cultural heritage landscapes in the project area from desktop sources, as well as commemorative plaques, cemeteries, Canadian Heritage River watersheds, properties with buildings 40 or more years old, or potential cultural heritage landscapes. Under the *Ontario Heritage Act*, built heritage resources and cultural heritage landscapes are linked to property.



The Study Area is part of Lot 15, Concession 2 in the former Township of Nissouri, now the Municipality of Thames Centre in the County of Middlesex. The Study Area for the Cultural Heritage Screening included the Site Boundary plus a 50 m buffer. The two alternatives are both located in the Study Area of the existing fenced site boundary at 1135 Ideal Drive in the Municipality of Thames Centre.

The review identified structures located at 16615 Thorndale Road are more than 50 m from the Study Area and no direct or indirect impacts are anticipated due to Alternative 1 and 2. The Study Area is also located within the Thames River Watershed, which has been identified as a Canadian Heritage River System (CHRS). No upgrades to the existing outfall to the Thames River are required as part of the Project and construction will be limited to within the existing Site Boundary.

Results of the review for each of the Alternatives are included below:

- Alternative 1: The Study Area meets two indicators of CHVI: it contains one potential built heritage resource over 40 years of age and is located next to a CHRS. However, the construction activities associated with Alternative 1 are located more than 50 m from the potential built heritage resource and no upgrades to the existing outfall to the Thames River are required as part of the Project. Therefore, no direct or indirect impacts are anticipated as a result of Alternative 1 and no further cultural heritage studies are recommended.
- Alternative 2: The Study Area meets two indicators of CHVI: it contains one potential built heritage resource over 40 years of age and is located next to a CHRS. However, the construction activities associated with Alternative 2 are located more than 50 m from the potential built heritage resource and no upgrades to the existing outfall to the Thames River are required as part of the Project. Therefore, no direct or indirect impacts are anticipated as a result of Alternative 2 and no further cultural heritage studies are recommended.

No further cultural heritage studies were recommended. The cultural heritage screening memorandum is included in **Appendix E** with the MCM Checklist results.

4.4.2 Previous Archaeology Assessments

A Stage 1 archaeological assessment was completed in 2010 for the industrial park in Thorndale where the WWTP is currently situated. The Stage 1 assessment identified that a significant portion of the industrial park Study Area had been previously disturbed by aggregate activities and areas of previous disturbance have no potential for the recovery of intact archaeological deposits. The remaining areas not previously impacted by aggregate extraction required a Stage 2 archaeological assessment in advance of any additional ground disturbance.

The area that would become the WWTP was not within the shaded area indicated in the report that required further archaeological assessment. The PIF numbers are provided below.

STAGE 1 ARCHAEOLOGICAL ASSESSMENT
Proposed Thorndale Business Park
Concession 2, Part of Lots 14 & 15
Former Township of West Nissouri
Middlesex County, Ontario
PIF Number: P001-634-2010
August 2010

STAGE 2 ARCHAEOLOGICAL ASSESSMENT
Proposed Thorndale Business Park
Concession 2, Part of Lots 14 &15
Former Township of West Nissouri
Middlesex County, Ontario
PIF Number: P001-639-2010

The previous archaeology reports completed by others are available at the Municipality of Thames Centre and can be made available upon request.

5 Problem and Opportunity Statement

The Municipality of Thames Centre wastewater infrastructure will require expansion to accommodate planned growth to 2046.

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.

The Problem and Opportunity Statement is the following:

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.

6 Evaluation of Alternative Solutions

6.1 Development of Alternative Solutions

Phase 2 of the Municipal Class EA process includes an inventory of the Natural, Social, Cultural and Economic Environments, and the identification and evaluation of Alternative Solutions to address the Problem and Opportunity Statement.

The following Alternative Solutions were identified:

- **Do Nothing –** No upgrades to the existing site. The site would continue to use the same capacity. Future growth would be impacted
- **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 at the Existing Site Requiring Site Expansion –**Consider possible site infrastructure that may require site expansion.

A preliminary screening was completed to determine whether the alternatives had the potential to align with the Problem and Opportunity Statement and the Master Plan Update (2019). The preliminary screening is provided in **Table 7**.

Table 7: Screening of Alternative Solutions

Alternative Solution	Discussion	Result
Do Nothing	• Do nothing would involve no upgrades to the existing facility, however it would also lead to no increases in capacity. • This alternative cannot address the Problem and Opportunity Statement as there are no capacity increases to meet demand growth to 2046. • This alternative does not align with the Provincial Planning Statement which encourages growth and efficient planning and operation of municipal wastewater systems	Not carried forward
Limit Future Growth	• Thorndale is indicated as a Growth area within the Municipality of Thames Centre Official Plan. • Limiting growth would not align with the Official Plan and would not avoid the future need to expand the plant beyond its current rated capacity. • This alternative does not align with the Provincial Planning Statement which encourages growth and efficient planning and operation of municipal wastewater systems	Not carried forward
Upgrades at the Existing Site	• This alternative has the potential to address the Problem and Opportunity Statement to address capacity requirements. • This alternative aligns with the Master Plan Update (2019) to address capacity increase needs. • Requirements for site size would be addressed in the Alternative Designs phase.	Carried forward
Upgrades Requiring Site Expansion	• This alternative has the potential to address the Problem and Opportunity Statement to address capacity requirements should additional land be available. • The existing WWTP site has enough space for expansion and there is open space available within the site footprint.	Carried forward

Upgrades at the Existing Site and Upgrades Requiring Site Expansion were carried forward for the evaluation of Alternative Solutions.

6.2 Evaluation Criteria

A qualitative analysis was completed, which included the following Evaluation Criteria. The criteria are shown in **Table 8.**

Table 8: Alternative Evaluation Criteria

Category	Criteria
Natural Environment	**Aquatic Environment** • Potential to impact fish and fish habitat • Potential to impact surface water quality and quantity
	Terrestrial Environment • Potential to impact wildlife/habitat (i.e., Species-at-Risk, spawning areas, significant ecological areas, etc.) • Potential to affect vegetation (i.e., wooded areas, wetlands, conservation areas, etc.) • Potential to impact individual trees or landscaped features
Cultural Environment	**Archaeological Resources** • Potential to impact undisturbed lands
	Built Heritage Resources / Cultural Landscape • Potential to impact known built heritage resources or cultural landscapes/features
Socio-Economic Environment	**Noise/Vibration & Air Quality** • Potential to impact noise sensitive areas (i.e., residential dwellings, daycares, etc.) during construction • Potential to affect local air quality during construction. • Potential to affect local air quality during operational phase.
	Property Requirements • Requires acquisition of private property
	Aesthetics • Potential to impact visual aesthetics of Study Area
	Land Use • Potential to impact existing and future designated land use and/or community use
	Consistency with Planning Objectives and Existing/Proposed Development • Satisfies the goals and objectives of the Town's Official Plan

Category	Criteria
	• Consistency with municipal/County/ Provincial Planning Statement policies • Potential to support existing and future development within the area
	Health & Safety • Potential to impact health and safety of residents • Potential to impact health and safety of employees • Potential impacts to groundwater quality (i.e., wells, effect Source Water Protection area, etc.) • Potential to encounter contaminated subsurface conditions
	Community Access • Disruption to existing traffic, private property, and business access during construction • Disruption to existing traffic, private property, and business access during operation
Technical Environment	**Functionality/Reliability of Wastewater Treatment** • Treated effluent quality • Reliability of the treatment process • Potential for risk of sewage backups and impacts to collection system
	Monitoring Requirements & Efficiencies • Impacts to operational monitoring requirements and efficiency
	Cost • Relative capital, operational and maintenance costs ($)
	Utilities • Potential to impact existing utilities
	Constructability & Feasibility • Potential to disrupt existing traffic, property access or functionality of existing facilities during construction • Location, depth of excavation, soil conditions, rock removal, groundwater control, in-water works, workable construction area, construction duration
	Expandability • Potential to be expanded or flexible to meet future population needs
	Climate Change • Ability to increase resilience to climate change (i.e., severe weather events) within the Study Area • Impacts to known climate change contributors (i.e., GHG emissions)

6.3 Evaluation of Alternatives

An evaluation of Alternative Solutions was completed and is shown in **Table 9**.

6.4 Preferred Alternative Solution

The analysis in **Table 9** identified that Upgrades at the Existing Site of the Thorndale WWTP is reconfirmed as the preferred alternative solution. As mentioned in **Section 3**, the existing WWTP site has sufficient space for expansion and there is open space available within the site footprint.

Table 9: Evaluation of Alternative Solutions

Category	Upgrades at the Existing Site	Upgrades Requiring Site Expansion
Social-Economic Environment	• No nearby industrial park land required. Best preserves industrial land for future economic use by the municipality. • Same level of impact due to construction related impacts (noise, vibration, dust/air quality) • Operational noise, vibration and dust/ air quality is anticipated to be the same as existing conditions based. The existing site is in an industrial zoned land use area. • There are no significant sensitive receptors. Most properties are industrial/commercial or vacant. • There are no significant sensitive receptors near the property. A residential property is approximately 135 m from the existing site. There is no change to the site footprint. • No change required to future land use. Utilizing the existing plant as the site for upgrades can make use of existing infrastructure to the extent possible. • Site would continue to protect health and safety through site regulatory requirements	• **Minor removal of nearby land from the industrial park.** • **Obtaining additional land for the site expansion would potentially increase the proximity of the site to the closest non-industrial receptor (135 m from the closes corner of the fenced property)** • Same level of impact due to construction related impacts (noise, vibration, dust/ air quality) • Site would continue to protect health and safety through site regulatory requirements
	Preferred	**Not Preferred**
Cultural Environment	• Archaeological investigation already completed for the site and no further archaeological assessment was required. • No cultural heritage resources within the project footprint • No difference between the alternatives.	• Archaeological investigation already completed for the site and no further archaeological assessment was required. • No cultural heritage resources are within 50 m of the project footprint. • No difference between alternatives.
	Preferred	**Preferred**
Natural Environment	• Least natural environment impacts as work would occur onsite where no significant natural features are present. • Both alternatives discharge treated effluent using an existing outfall to the Thames River. • A UTRCA regulatory area (drainage swale) is present on the South portion of the site which may require additional permitting if project elements are within this boundary. • Limited potential additional investigations as work are within the Thorndale WWTP site.	• Limited natural features are in the area within 120 m of the site boundaries (meadow with potential for migratory birds). Mitigation measures are available including use of timing windows. • Both alternatives discharge treated effluent using an existing outfall to the Thames River. • A UTRCA regulatory area is present (drainage swale) on the South portion of the site which may require additional permitting if project elements are within this boundary. • Additional investigations would be required in detailed design based on the final site footprint, if selected.
	Preferred	**Not Preferred**
Technical	• Same technical requirements as the expansion would address and meet municipal and Ministry requirements. • Best use of existing infrastructure, and space is available for treatment options for capacity expansion. • Least construction complexity as work is contained on-site. • Process improvements on site can address capacity and enhance system redundancy.	• Same technical requirements as the expansion would address and meet municipal and Ministry requirements. • Preliminary investigations indicate that treatment options are available that do not require additional property. • **Increases construction complexity as work is outside of the existing footprint and additional subsurface and environmental investigations would be required for site.** • Process improvements on site can address capacity and enhance system redundancy.
	Preferred	**Not Preferred**

Category	Upgrades at the Existing Site	Upgrades Requiring Site Expansion
Financial	• Lower life cycle costs compared to acquisition of additional property. • No property acquisition cost • Similar operation and maintenance costs	• **Higher life cycle costs** due to property acquisition and infrastructure if larger storage tanks are required • **Higher estimated capital cost** if alternatives are to be considered with higher storage tank requirements. • **Higher property acquisition costs** than work on the existing site.
	Preferred	**Not preferred**
Overall	**Most Preferred**	**Least Preferred**

6.4.1 Confirmation of the Municipal Class EA Schedule

The Municipal Class EA document (2000, as amended 2023) identifies that the following wastewater categories may apply under the Sewage Treatment Facilities under Table B: Municipal Water and Wastewater Projects.

- **29c** Construct new sewage treatment plant or expand existing sewage treatment plant beyond existing rated capacity including outfall to receiving water body – Schedule C project
- **30a** Establish sewage flow equalization tankage for influent and/or effluent control within existing sewer system or at existing sewage treatment plants, or at existing pumping stations where no property acquisition is required - Schedule B project with eligibility for Archaeology Screening
- **31c** Establish new lagoons or expand existing lagoons or install new or additional sewage storage tanks which will increase beyond existing rated capacity – Schedule C.

The project was established as a Schedule C project due to the potential for increases to the WWTP capacity and addition of equalization tankage. The project will discharge to a receiving waterbody using the existing outfall sewer.

Process changes to meet this capacity increase are described as part of the Alternative Designs evaluation in subsequent sections. Therefore, a Schedule C project (Phases 1-4) is confirmed as the appropriate Schedule to follow.

7 Phase 3 Evaluation of Alternative Designs

Alternative Designs are developed as part of Phase 3 of the Municipal Class EA process to describe the methods of implementing the preferred Alternative Solution(s). For this project, the alternative design evaluation considered a major item of identification of alternative treatment options to address work on the existing Thorndale WWTP site.

7.1 Long List Screening of Alternative Designs

A long list of wastewater treatment options (**Table 10**) potentially suited to expand the existing WWTP was developed, including the following treatment types:

Table 10: Long List of Wastewater Treatment Options

Treatment	Process Description
Re-rate the existing Sequencing Batch Reactors (SBRs)	• Re-rating the existing two (2) available SBRs for small flow increment increase. • The duration of the phases, dissolved oxygen concentration, and mixing conditions shall be changed in accordance with the particular requirements of the treatment plant.
Sequencing Batch Reactors (SBR)+ EQ tank	• Biological treatment and solids/liquid separation are achieved in a single vessel by sequencing the “react”, “settle”, and “decant” operations. • 1 or 2 SBR reactors shall be added based on the vendor recommendation. • An equalization tank is required to cover the observed peak flows.
Sequencing Batch Reactors (SBR) + EQ tank+ filters for TP removal	• Biological treatment and solids/liquid separation are achieved in a single vessel by sequencing the “react”, “settle”, and “decant” operations. • Biological treatment and filtration are achieved in a 2-step process involving sequencing batch reactor for biological treatment and solids/liquid separation, followed by sand or cloth media filtration for particulates filtration. • An equalization tank is required to cover the observed peak flows. • TP removal is usually achieved by adding a coagulant such as alum or ferric solutions. Nitrification may need to be encouraged by adding a caustic in low alkalinity wastewater.
Extended Aeration (EA) + filters for TP removal	• Biological treatment and filtration are achieved in a process involving extended aeration for biological treatment, secondary clarifier for solids/liquid separation, followed by filtration for particulates filtration.
Membrane bioreactor (MBR)	• Biological treatment and filtration are achieved in a 1-step process involving aeration tanks for biological treatment and ultra-filtration membranes for solids/liquid separation and particulates filtration.

The long list of alternative design options was also screened against a series of critical “YES / NO” type questions to screen the various expansion options described to help

identify a short-list of treatment process options for further evaluation. The questions selected for screening the options are as follows:

- Is there sufficient space for a new process?
- Potential for MECP to approve the new process and issue an Environmental Compliance Approval
- Are there other proven installations in Ontario?
- Are there suitable sludge management options available?
- Does the process maximize and optimize the use of existing infrastructure?
- Will the process provide capacity to service growth and allow for expansion beyond the 20-year planning horizon?
- Does the solution support the Strategic Needs and Official Plan direction of the Municipality?

It was determined that re-rating the plant would fail as it would provide insufficient flow/load for future expansions. Extended Aeration (EA) + filters for TP removal and Membrane Bioreactor (MBR) also received a failing grade due to their high construction cost, and poor use of existing mechanical treatment plant infrastructure. The existing plant utilizes SBR technology and converting the plant process to EA or MBR technology would not make good use of re-usable existing plant equipment. Conversion to EA or MBR would require rebuilding much of the existing plant.

The short-list of Alternative Designs identified based on the results of the screening assessment are:

- **Alternative 1** – WWTP Sequencing Batch Reactor with Equalization Tank Upgrade; and
- **Alternative 2** – WWTP Sequencing Batch Reactor with Equalization Tank and Filtration Upgrade.

These alternatives will be further explored and evaluated in the following sections.

7.2 Short List Description of Alternative Designs

7.2.1 Alternative 1 – WWTP Sequencing Batch Reactor with Equalization Tank Upgrade

A SBR with equalization (EQ) tank expansion involves providing additional capacity to accommodate growth using the same technology as existing within the treatment plant.

The inclusion of a 1000 m³ equalization tank with specified holding times for different flow scenarios ensures that the system can handle both average and peak flows effectively. The equalization tank helps manage variations in the influent flow rate, ensuring a consistent flow to the SBR. This is crucial for maintaining optimal biological treatment conditions and preventing shock loads that could disrupt the treatment process. The addition of a 1000 m³ equalization tank provides a 72-hour holding time for the current average flows to the plant (332 m³/d).

If the buildout average flow of 741 m³/d is reached, the holding tank will provide approximately 32 hours of holding time. In the event of reaching the ultimate peak flow, a 6-hour holding time is provided, allowing the SBR to operate within its storm flow range by trimming down the flow to the reactors. These times are minimums as the actual stored volume would depend on the flow trimmed in excess of the peak SBR flow. The storage volume is intended to bridge the gap between the existing peak SBR flow and the observed peak flows during recorded wet weather events.

Alternative 1 includes expanding the WWTP by adding a new SBR system to increase the plant's secondary treatment capacity. As described in **Table 11** this alternative seeks to maintain use of the existing processes, where practical. The alternative also can provide new infrastructure where necessary to increase treatment capacity to accommodate future growth. Furthermore, the layout of the sanitary collection system can be maintained with this WWTP expansion option.

Table 11: Alternative 1 Upgrades by Unit Process

Unit Process	Description of Upgrades
Raw Sewage Pumping	• Reusing or making minor modifications to the raw sewage pumps in the existing control building (meet the 2046 peak flow of 3,706 m^3/d). • Reusing forcemain from raw sewage pumping to headworks building and adding a twin 200 mm forcemain to the headworks for additional conveyance. • Addition of ~1000 m^3 equalization tank to equalize the SBR influent flow rates and reduce the size/cost of downstream processes such as disinfection. Installation of necessary pump(s) valves, piping & mixer for equalization tank.
Preliminary Treatment (Screening and Grit Removal)	• Reusing the existing screening and grit removal equipment (meet the 2046 peak flow of 3,706 m^3/d). • Installing odour control measures for the equalization tank and other necessary processes.
Secondary Treatment	• Re-use of the existing two (2) parallel Sequencing Batch Reactors (SBR) - Intermittent Cycle Extended Aeration System (ICEAS) basins.

Unit Process	Description of Upgrades
	• Installing one (1) new Sequencing Batch Reactors (SBR) - Intermittent Cycle Extended Aeration System (ICEAS) basins to meet effluent requirements for the upgraded plant. • Installing new blower equipment and building to service the old & new plants.
Chemical Treatment (phosphorus removal system)	• Reuse of the existing chemical storage tanks with new pump installations to service the new SBRs.
Disinfection, and Effluent Pumping	• Re-use of the existing disinfection, and effluent pumping building to accommodate improved effluent quality and 2046 peak flow of 3,706 m^3/d.
Solids Management	• Reusing the available sludge holding tank and installing an additional sludge storage tank to increase on-site storage capacity. • Reserving space on site for potential future WAS thickening and dewatering to suit year-round solids management strategies that maximize beneficial nutrient re-use and minimize cost.

Confirmation of site layout will occur in Detailed Design. **Table 12** provides a summary of the advantages and disadvantages of a SBR expansion.

Table 12: Summary of Advantages and Disadvantages of Alternative 1- WWTP SBR Treatment Upgrade

Advantages	Disadvantages
• Proven technology • Well-understood capital and long-term operations and maintenance requirements	• Larger footprint to accommodate expanded capacity. • Some opportunities available through equipment selection, controls, anoxic selectors, etc. • Added complexity of operating the new secondary treatment processes in conjunction with the existing plant. • May not be able to achieve low TP as low as 0.15 mg/L monthly non-compliance limit. • MECP approvals challenges regarding the effluent TP concentrations.

The following **Figure 4** and **Figure 5** indicate the potential footprint and process flow diagram for Alternative 1, respectively.

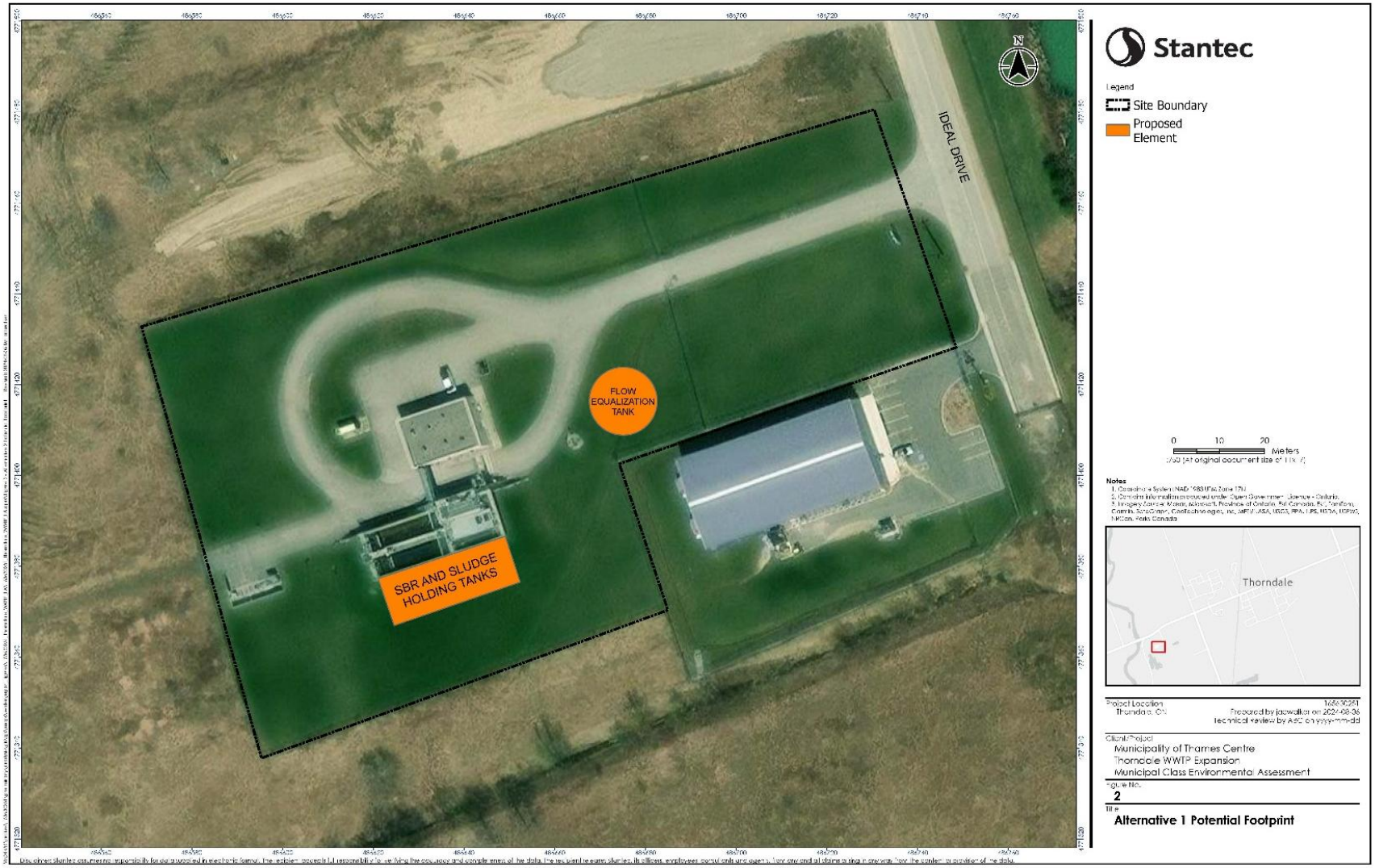


Figure 4: Alternative 1 Potential Footprint

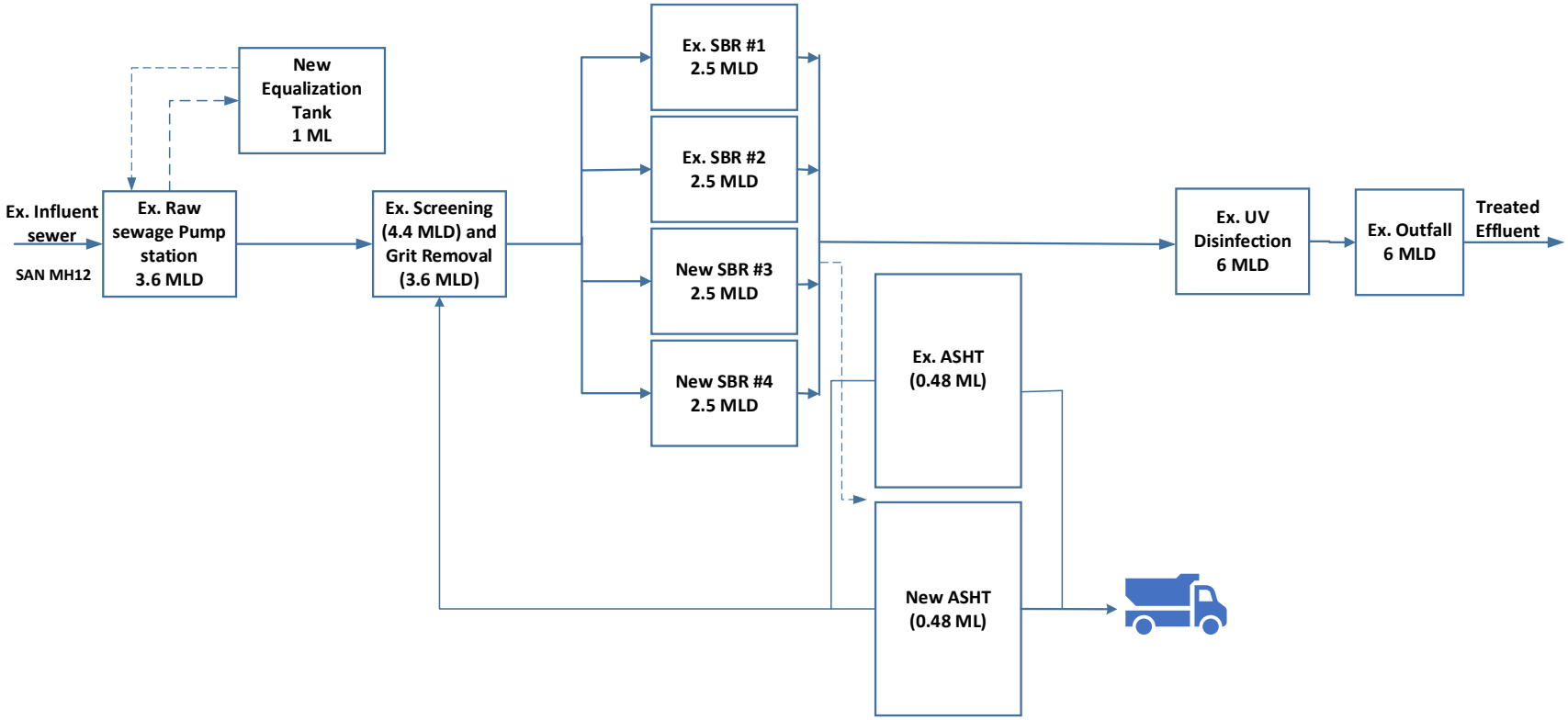


Figure 5: Alternative 1 Process Flow Diagram

7.2.2 Alternative 2 – WWTP Sequencing Batch Reactor with Equalization Tank and Filtration Upgrade

A SBR with EQ tank and filtration system expansion involves providing additional capacity and treatment to accommodate growth using the same technology as existing within the treatment plant. Alternative 2 includes expanding the WWTP by adding a new SBR system (one (1) reactor based on vendor proposal will be added) to increase the plant's secondary treatment capacity and addition of filtration system to support higher influent/raw wastewater concentrations and meet future effluent requirements. This alternative seeks to maintain use of the existing processes, where practical, while providing new infrastructure where necessary to increase treatment capacity to accommodate future growth. Furthermore, the layout of the sanitary collection system can be maintained with this WWTP expansion option.

Alternative 2 includes expanding the WWTP by reusing the existing secondary treatment system and adding capacity by adding SBRs and filtration to provide clarification and improve effluent quality to tertiary treatment level. Existing WWTP infrastructure will be reused in conjunction with new tanks and buildings required for Alternative 2, as described in **Table 13**. Furthermore, the layout of the sanitary collection system can be maintained with this WWTP expansion option.

Table 13: Alternative 2 Upgrade by Unit Process

Unit Process	Description of Upgrades
Raw Sewage Pumping	• Reusing or making minor modifications to the raw sewage pumps in the existing control building (meet the 2046 peak flow of 3,706 m^3/d). • Reusing forcemain from raw sewage pumping to headworks building and adding a twin 200mm forcemain to the headworks for additional conveyance. • Addition of ~1000m^3 equalization tank to equalize the SBR influent flow rates and reduce the size/cost of downstream processes such as disinfection. Installation of necessary pump(s) valves, piping & mixer for equalization tank.
Preliminary Treatment (Screening and Grit Removal)	• Reusing the existing screening and grit removal equipment (meet the 2046 peak flow of 3,706 m^3/d). • Installing odour control measures for the equalization tank and other necessary processes.

Unit Process	Description of Upgrades
Secondary Treatment	• Re-use of the existing two (2) parallel Sequencing Batch Reactors (SBR) - Intermittent Cycle Extended Aeration System (ICEAS) basins. • Installing one (1) new Sequencing Batch Reactors (SBR) - Intermittent Cycle Extended Aeration System (ICEAS) basins to meet effluent requirements for the upgraded plant. • Installing new blower equipment and building to service the old & new plants.
Chemical Treatment (phosphorus removal system)	• Reuse of the existing chemical storage tanks with new pump installations to service the new SBRs.
Tertiary Treatment, Disinfection	• Construction of a new Filtration with the re-use of existing disinfection, and effluent pumping building to accommodate improved effluent quality and 2046 peak flow of 3,706 m^3/d.
Solids Management	• Reusing the available sludge holding tank and installing an additional sludge storage tank to increase on-site storage capacity. • Reserving space on site for potential future WAS thickening and dewatering to suit year-round solids management strategies that maximize beneficial nutrient re-use and minimize cost. • Reserving space on site for potential future WAS thickening and dewatering to suit year-round solids management strategies that maximize beneficial nutrient re-use and minimize cost.

Similar to Alternative 1, a portion of the existing land will be required to provide adequate space for new infrastructure. However, new infrastructure required for Alternative 2, including filtration, has a bigger proposed footprint than Alternative 1 but it is not constrained by the existing plant's footprint.

Table 14 provides a summary of the advantages and disadvantages of an SBR+ filtration expansion.

Table 14: Summary of Advantages and Disadvantages of Alternative 2- WWTP SBR+ Filtration Treatment Upgrade

Advantages	Disadvantages
• Proven technology – used at facilities in Ontario and North America. • Well-understood capital and long-term operation and maintenance requirements. • Simplified MECP approvals due to higher process efficiency and resiliency. • Ability to achieve very low TP (<0.1 mg/L as monthly non-compliance limit). • Lower capital cost.	• Larger footprint to accommodate expanded capacity. • Some opportunities available through equipment selection, controls, anoxic selectors, etc. • Added complexity of operating the new secondary treatment processes in conjunction with the existing plant. • Higher initial cost.

The following **Figure 6** and **Figure 7** indicate the potential footprint and process flow diagram for Alternative 2, respectively.

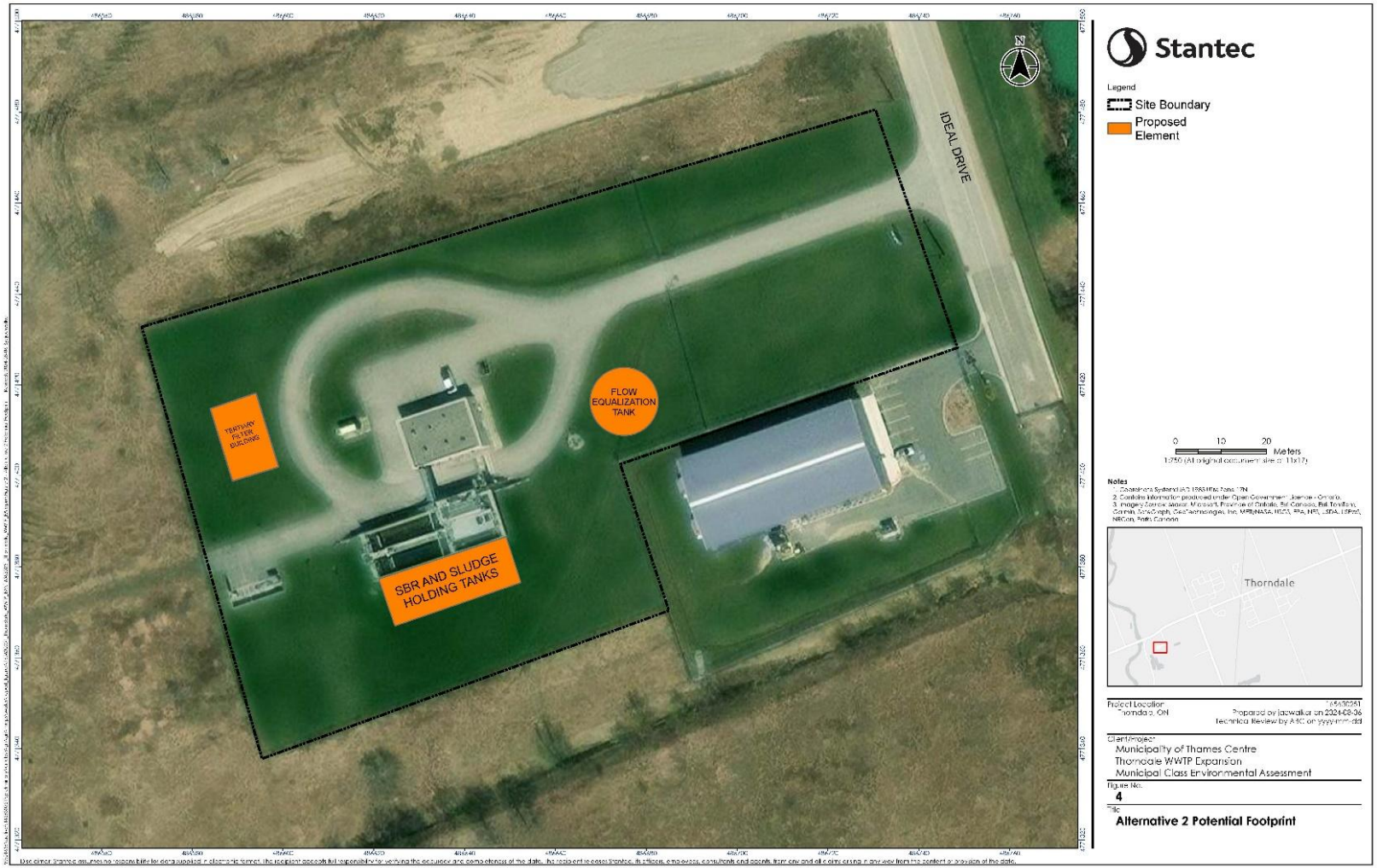


Figure 6: Alternative 2 Potential Footprint

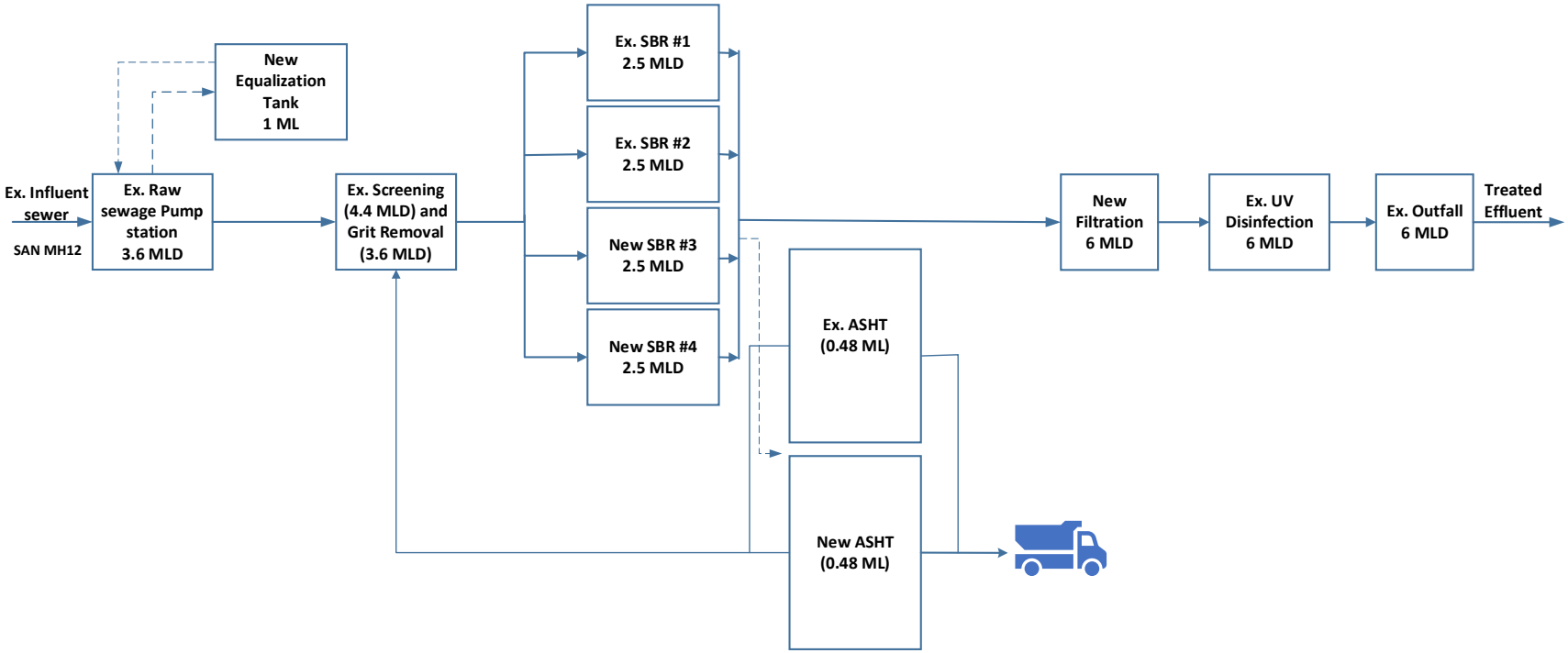


Figure 7: Alternative 2 Process Flow Diagram

7.3 Evaluation of Alternatives

Table 15 shows the evaluation of the alternatives for the WWTP expansion.

7.4 Preferred Alternative Design Concept

The preferred alternative for WWTP expansion based on the detailed evaluation is: **Alternative 1 - WWTP SBR** with the following key advantages:

- Optimizes the use of existing infrastructure, including reusing of the existing SBRs with addition of equalization tanks to buffer peak flows to reach effluent limits.
- Ability to accommodate increased influent loadings.
- Ability to reach effluent limits regarding nutrients, organics, and solids.

It is recommended that the Municipality inspect the existing infrastructure that is proposed to be reused, to confirm the condition is adequate for future use.

Table 15: Evaluation Summary for WWTP Expansion

Evaluation Criteria		Alternative Design Solutions	
Factors	**Measures**	**Alternative 1: WWTP Sequencing Batch Reactor with Equalization Tank Upgrade**	**Alternative 2: WWTP Sequencing Batch Reactor with Equalization Tank and Filtration Upgrade**
Natural Environment			
Aquatic Environment	• Potential to impact fish and fish habitat. • Potential to impact water quality and quantity.	• Low potential to impact fish and fish habitat since the capacity expansion will not require a new effluent outfall pipe into Thames River. However, minor impacts from increased effluent loadings. • Low potential to impact water quality and quantity during construction. Sediment and erosion controls should be implemented through design and construction management measures. • Some improvement to effluent quality compared to the existing WWTP, although less than Alternative 2. Alternative 1 will still operate within MECP guidelines, however Alternative 2 uses filters for higher effluent quality.	• Low potential to impact fish and fish habitat as expansion will not require new effluent outfall pipe into Thames River. However, minor impacts from increased effluent loadings. • Low potential to impact water quality and quantity during construction. Sediment and erosion controls should be implemented through design and construction management measures. • Most improvement to effluent quality compared to Alternative 1. Although both Alternatives would still operate within MECP guidelines.
Terrestrial Environment	• Potential to impact wildlife/habitat (i.e., Species-at-Risk, spawning areas, significant ecological areas, etc.). • Potential to affect vegetation (i.e., wooded areas, wetlands, conservation areas, etc.). • Potential to impact individual trees or landscaped features.	• Low potential to impact wildlife/habitat, including bird nesting and bat habitat, as the construction of the new SBR reactors and EQ and sludge tanks would not extend past existing site into surrounding land. • Low vegetation removals required where expansion is required. • Low potential to impact individual trees that would require removal to accommodate expansion due to additional SBR reactors, EQ, and sludge tanks.	• Low potential to impact wildlife/habitat, including bird nesting and bat habitat, as the construction of the new SBR reactors and EQ and sludge tanks and Tertiary/Disinfection Building would not extend past existing site into surrounding land. • Low vegetation removals required where expansion is required. • Low potential to impact individual trees that would require removal to accommodate expansion due to additional SBR reactors, EQ and sludge tanks and tertiary/disinfection Building.
Natural Environment Summary		**Least preferred**	**Most Preferred**

Evaluation Criteria		Alternative Design Solutions	
Factors	**Measures**	**Alternative 1: WWTP Sequencing Batch Reactor with Equalization Tank Upgrade**	**Alternative 2: WWTP Sequencing Batch Reactor with Equalization Tank and Filtration Upgrade**
Cultural Environment			
Potential Archaeological Resources	• Potential to impact artifacts.	• Low potential to impact undisturbed lands since the expansion would take place within the existing developed site. • The business park in which the WWTP is situated underwent Stage 1 & 2 archaeological assessments (PIF: P001-639-2010 & P001-634-2010) identified that the site was previously disturbed (former gravel pit) and no further archaeological investigation was required.	
Potential Built Heritage Resources / Cultural Heritage Landscapes	• Potential to impact known built heritage resources or cultural heritage landscapes/features.	• No direct or indirect impacts are anticipated to built heritage or cultural landscapes/features of Alternative 1 or 2. There are no potential built heritage structures or within 50 m of the existing structure. • The Study Area meets two indicators of CHVI: it contains one potential built heritage resource over 40 years of age (16615 Thorndale Road) and is located next to a CHRS (the Thames River). However, the construction activities associated with Alternative 1 &2 will be limited to the existing Site Boundary and are located more than 50 metres from the potential built heritage resource. No upgrades to the existing outfall to the Thames River are required as part of the Project. Therefore, no direct or indirect impacts are anticipated due to Alternative 1 and no further cultural heritage studies are recommended.	
Cultural Environment Summary		**Most Preferred (No difference between alternatives)**	
Socio-Economic Environment			
Noise/Vibration & Air Quality	• Potential to impact noise sensitive areas (i.e., residential dwellings, daycares, etc.) during construction. • Potential to affect local air quality during construction. • Potential to affect local air quality during operational phase.	• The site is primarily surrounded by commercial/industrial land in a business park. The business park has been operational for the duration of the time the existing WWTP has been operational. • There are no sensitive receptors nearby, such as hospitals, daycares or other community facilities. One residential receptor is 135 m from the closest corner of the fenced site. • Moderate potential for temporary noise impacts caused by construction vehicles. There is no difference from the types of construction equipment present for each alternative, and mitigation is available since the Contractor would be required to abide by the municipal noise control by-law and ensure that all construction equipment is kept in good working order to limit additional noise. The contractor shall also ensure that the idling of construction equipment is kept to a minimum. • Moderate potential for temporary impacts to local air quality due to construction equipment exhaust/dust. There is no difference between alternatives for dust or construction exhaust. Construction of either alternative will apply best management practices to mitigate any air quality impacts caused by construction dust (such as using non-chloride dust suppressants on-site). • Low potential for adverse impacts to local air quality during operation phase due to occasional odours. The new infrastructure uses similar to existing technology already in operation to manage treatment. Both alternatives include installing odour control measures for the equalization tank and other necessary processes. There is no anticipated change. Either alternative would include logging and investigating complaints received during operations in accordance with industry standards.	
Property Requirements	• Requires acquisition of private property.	• No impact to private property.	
Aesthetics	• Potential to impact visual aesthetics of Study Area	• Low potential to impact visual aesthetics of the Study Area since the site is already used as a WWTP.	

Evaluation Criteria		Alternative Design Solutions	
Factors	**Measures**	**Alternative 1: WWTP Sequencing Batch Reactor with Equalization Tank Upgrade**	**Alternative 2: WWTP Sequencing Batch Reactor with Equalization Tank and Filtration Upgrade**
Land Use	• Potential to impact existing and future designated land use and/or community use	• No impact to existing or designated land use. Community use will not be impacted since the public does not use the WWTP grounds.	
Consistency with Municipal Planning Objectives & Future Development within the Area	• Satisfies the goals and objectives of the Town's Official Plan • Consistency with municipal/County/ Provincial Planning Statement policies	• Satisfies the goals of the Municipality of Thames Centre 's Water and Wastewater Master Plan Update to support future projected population growth. The project addresses growth within the 20-year planning horizon (to 2046). • Consistent with municipal/County and Provincial Planning Statement policies related to servicing existing and future population in an environmentally responsible manner and account for the health and safety of residents. Each alternative can increase capacity within the system to maintain and enhance municipal servicing within the Thorndale settlement area.	
Health & Safety	• Potential to impact health and safety of residents • Potential to impact health and safety of employees • Potential impacts to groundwater quality (i.e., wells, effect Source Water Protection area, etc.) • Potential to encounter contaminated subsurface conditions	• Low potential to impact the health and safety of Town residents. • Improves health and safety of employees through design of new buildings and processes with improved safety features. • Low potential to impact groundwater quality including private wells. • Low potential to encounter contaminated subsurface conditions.	
Community Access	• Disruption to existing traffic, private property, and business access during construction. • Disruption to existing traffic, private property, and business access during operation.	• Low potential to impact traffic during construction since the WWTP is on a local road with one other property south of the WWTP. Access will be maintained during construction. • Decreases impact of traffic due to potential to improve sludge storage and dewatering and reducing frequency of visits by solids disposal trucks.	
Socio-Economic Environment Summary		**Most Preferred (No difference between alternatives)**	
Technical			
Functionality/Reliability of Wastewater Treatment	• Treated effluent quality. • Reliability of the treatment process. • Potential for risk of sewage backups and impacts to collection system.	• Improves effluent quality, but less than Alternative 2. Maintains treated effluent quality and can operate within MECP guidelines. • Improves reliability of treatment processes. • Low potential risk for sewage backups and impacts to the collection system.	• Most improves and maintains treated effluent quality and can operate within MECP guidelines. • Improves reliability of treatment processes. • Low potential risk for sewage backups and impacts to the collection system.

Evaluation Criteria		Alternative Design Solutions	
Factors	**Measures**	**Alternative 1: WWTP Sequencing Batch Reactor with Equalization Tank Upgrade**	**Alternative 2: WWTP Sequencing Batch Reactor with Equalization Tank and Filtration Upgrade**
Monitoring Requirements & Efficiencies	• Impacts to operational monitoring requirements and efficiency.	• Moderate impact to operational monitoring requirements as the addition of SBR/secondary treatment process will add sampling points that require compliance monitoring and reporting. • High improvement in efficiency of treatment, although less compared to Alternative 2.	• Moderate impact to operational monitoring requirements as the addition of SBR/secondary treatment process will add sampling points that require compliance monitoring and reporting. • Higher improvement in efficiency of treatment with addition of filtration/tertiary treatment, relative to Alternative 1.
Cost	• Relative capital, operational and maintenance costs ($)	• Moderate 20-year lifecycle cost. Lower construction cost and O&M cost than Alternative 2.	• High 20-year lifecycle cost. Higher construction cost and O&M cost than Alternative 1.
Utilities	• Potential to impact existing utilities	• Positive impact to the sewer system by reducing surcharge and flooding frequency. • Low impact to other existing utilities. Upgraded hydro connection may be required to be confirmed in detailed design.	• Positive impact to the sewer system by reducing surcharge and flooding frequency. • Low impact to other existing utilities. Upgraded hydro connection may be required to be confirmed in detailed design.
Constructability & Feasibility	• Potential to disrupt existing traffic, property access or functionality of existing facilities during construction. • Location, depth of excavation, soil conditions, rock removal, groundwater control, in-water works, workable construction area, construction duration	• Low impact to existing traffic, property access or functionality of existing facilities during construction. Tie-ins of new infrastructure to existing plant may require short shutdowns or temporary treatment processes.	• Low impact to existing traffic, property access or functionality of existing facilities during construction. Tie-ins of new infrastructure to existing plant may require short shutdowns or temporary treatment processes.
Expandability	• Potential to be expanded or flexible to meet future population needs	• High potential for expansion opportunities beyond the projected 20-year population horizon.	• High potential for expansion opportunities beyond the projected 20-year population horizon.
Climate Change	• Ability to increase resilience to climate change (i.e., severe weather events) within the Study Area. • Impacts to known climate change contributors (i.e., GHG emissions)	• Moderate improvement in resiliency to climate change due to accommodation of 2041 projection peak flows. • High potential to increase known climate change contributors through construction of several concrete tanks and increased energy consumption, although there are opportunities to implement more energy efficient processes.	• Moderate improvement in resiliency to climate change due to accommodation of 2041 projection peak flows. • High potential to increase known climate change contributors through construction of several concrete tanks and increased energy consumption, although there are opportunities to implement more energy efficient processes.
Technical Summary		**Most Preferred**	**Least Preferred**
OVERALL CONCLUSION		**Most Preferred**	

LEGEND

Most Preferred

Least Preferred

8 Project Description

8.1 Description of Work

8.1.1 Preferred Approach – Phase 1

The preferred alternative for WWTP expansion based on the detailed evaluation is: ***Alternative 1 - WWTP SBR.*** The description of upgrades was included in **Table 11**, *and included again below:*

Table 16: Description of Work Preferred Plan

Unit Process	Description of Upgrades
Raw Sewage Pumping	• Reusing or making minor modifications to the raw sewage pumps in the existing control building (meet the 2046 peak flow of 3,706 m^3/d). • Reusing forcemain from raw sewage pumping to headworks building and adding a twin 200 mm forcemain to the headworks for additional conveyance. • Addition of ~1000^3 equalization tank to equalize the SBR influent flow rates and reduce the size/cost of downstream processes such as disinfection. Installation of necessary pump(s) valves, piping & mixer for equalization tank.
Preliminary Treatment (Screening and Grit Removal)	• Reusing the existing screening and grit removal equipment (meet the 2046 peak flow of 3,706 m^3/d). • Installing odour control measures for the equalization tank and other necessary processes.
Secondary Treatment	• Re-use of the existing two (2) parallel Sequencing Batch Reactors (SBR) - Intermittent Cycle Extended Aeration System (ICEAS) basins. • Installing one (1) new Sequencing Batch Reactors (SBR) - Intermittent Cycle Extended Aeration System (ICEAS) basins to meet effluent requirements for the upgraded plant. • Installing new blower equipment and building to service the old & new plants.

Unit Process	Description of Upgrades
Chemical Treatment (phosphorus removal system)	• Reuse of the existing chemical storage tanks with new pump installations to service the new SBRs.
Disinfection, and Effluent Pumping	• Re-use of the existing disinfection, and effluent pumping building to accommodate improved effluent quality and 2046 peak flow of 3,706 m^3/d.
Solids Management	• Reusing the available sludge holding tank and installing an additional sludge storage tank to increase on-site storage capacity. • Reserving space on site for potential future WAS thickening and dewatering to suit year-round solids management strategies that maximize beneficial nutrient re-use and minimize cost.

Reviewing the plant data from 2018 to 2023, it is evident that the plant has consistently maintained effluent TP levels below the average concentration limit of 0.65 mg/L, as specified in the ECA. There were only two consecutive exceedances in December 2020 and January 2021, which were attributed to a rainfall event. The rain event took place in December 2020, and the plant took the following month to recover and subsequently achieved TP levels below 0.65 mg/L.

Given this performance, the EA study proposes that for the time being the plant continues operating without tertiary filtration, while maintaining continuous monitoring of TP levels.

8.1.2 Phase 1 Effluent Levels Discussion

MECP correspondence received June 16, 2025 indicated that since 2009, The *Canada Ontario Lake Erie Action Plan* (LEAP) has been developed with sections pertinent to the Thames River and to the performance capabilities of the Thorndale WWTP plant. These sections namely: 1) Section 1.4 – Establishing the Thames River as a Priority Watershed for Phosphorus reduction initiatives. And 2) recognition that plants with tertiary treatment can achieve 0.5 mg/l as established in Section 3.3.2.

MECP indicated that a review of the legacy performance of the current Thorndale facility demonstrates that the plant can easily achieve a 0.5 mg/l TP limit as a monthly average. As such the Phosphorus monthly concentration limit will be amended from the current ECA limit of 0.65 mg/l to 0.5 mg/l in line with the Action Plan. All other current effluent limits in the current ECA can remain in place as per the 2009 assimilative study. MECP noted that this plant does not currently have tertiary treatment.

The project team understands that MECP is under a directive to reduce TP to 0.5 mg/l under the *Lake Erie Action Plan* (LEAP). It is accepted that, although there was a previously accepted Assimilative Capacity Study, that the LEAP requirements take precedence and that the Thorndale WWTP will need to move to this requirement in future.

After undertaking a subsequent review of the recommendations of the Class EA and with further discussion with Thames Centre, the technology proposed will be capable of meeting this TP limit and that the additional measures recommended (equalization storage and TP filters) can be implemented to further mitigate any exceedances.

Notwithstanding the confidence in the technology and the ability of Thames Centre operations staff to stay below this limit, the concern has been how MECP would handle exceedances and the timeframe the Municipality would be allowed to enact remedial measures, particularly if those remedial measures involved construction of additional works. Based on discussions with MECP staff, the project team is reassured that the Municipality would be afforded reasonable time to investigate and enact remedial measures as long as they continue to act in good faith.

Accordingly, the ESR has been updated to reflect the required TP limit (0.5 mg/l), noting that this limit will come into effect when the plant is expanded and a new ECA application is put forward.

The Thorndale WWTP is not yet at capacity for the facility. Timing of implementation of upgrades should be planned for once the storage equalization is deemed necessary to maintain peak flows below the storm mode threshold of the ICEAS SBR system to avoid effluent exceedances, at which time the Municipality will need to implement the equalization storage phase of the expansion. The Expansion of the SBR ICEAS, sludge holding tanks and associated equipment would be implemented as a second phase of the works to increase the capacity of the SBR ICEAS system with a third train to maintain effluent limits below the prescribed values by increasing the treatment volume while maintaining the effluent flow within the treatment capacity of other unit processes. The sludge holding tank volume should be considered with regard to the new wastewater strength that was observed in the collection system after the initial plant construction. It was estimated that although the plant capacity has not doubled, the solids loading may have increased in the raw wastewater and as such, a sludge holding tank of similar size as the initial plant would serve well to manage the solids loading of the third train of the SBR.

Effluent Criteria were proposed for the Thorndale WWTP in the 2009 AECOM ACS Report. The objectives for Total Phosphorus have been revised based on 2025 MECP correspondence, which sought to bring the Design Criteria from 0.65 mg/L to the new revised limit of 0.5 mg/L. The Design Objective has correspondingly been revised to 0.4 m/L to be lower than the Design Criteria. The revised table is included in **Table 17**.

Table 17 Proposed Effluent Criteria for the Thorndale WWTP (based on 2009 AECOM study, as revised with MECP 2025 input)

Parameter for Concentrations	Design Objective (mg/L)	Design Criteria (mg/L)	Design Basis	Annual Loading Criteria (kg/d)
Biological Oxygen Demand (BOD)	5.0	10.0	Monthly Average	12.5
Total Suspended Solids (TSS)	5.0	10.0	Monthly Average	12.5
Total Phosphorous (TP)	0.40	0.5	Monthly Average	0.81
Total Ammonia-Nitrogen	7.0	8.6	Monthly Average	10.7
November to April	3.2	4.1	Monthly Average	5.2
May to October				
Chlorine Residual	Absent	<0.002	-	-
E. Coli	200 organisms/100 mL	-	Monthly geometric	-

8.1.3 Future Tertiary Treatment (Future Phase 2 – beyond 10+ years)

Should the control of effluent quality parameters continue to persist beyond the implementation of the works prescribed above and the nature of the exceedances are deemed unrelated to wet weather capacity, the study suggests that tertiary filters can be added if needed in the future, beyond the expansion process and beyond the 10 year effective period of this EA. Therefore, although the plant has demonstrated its ability to meet these levels without tertiary filtration thus far, these filters would ensure compliance with stringent regulations for nutrient and suspended solids discharge into water bodies.

It is recommended that the Municipality inspect the existing infrastructure that is proposed to be reused, to confirm the condition is adequate for future use.

Work areas will be located within the existing Thorndale WWTP property.

8.2 Construction Staging and Access

Access to the property will continue to be from Ideal Drive during and following construction. The staging of the additional works can be accommodated at the front of the site within the property boundaries along the driveway and at the back of the site. Placement and construction of the equalization storage tank and foundation may require careful consideration of the neighbouring property while the construction of the tank is completed. Shoring may be required to prevent impact to the neighboring property.

8.3 Property

No additional property is required for this project. The layout of the sanitary collection system can be maintained with this WWTP expansion option. All works will be constructed within property owned by the Municipality.

8.4 Utilities

Existing utility connections will be utilized to the extent possible. Should any utility relocations be required, these will be completed in detailed design.

8.5 Capital Costs

The preferred plan (Alternative 1 – WWTP with SBR+ EQ tank) probable cost identified a subtotal cost of $3,960,000.00, contingency (30%) of $1,190,000.00 for a total construction cost estimate of $5,150,000.00.

This was far lower cost than the Alternative 2 comparable total construction cost of $9,340,000.00. Estimated values are class 4 level estimates with error margins -30% +50% at this preliminary stage.

The life cycle cost analysis is included in the Technical Memorandum in **Appendix F.**

8.6 Environmental Impacts and Mitigation Measures

8.6.1 Natural Environment

There is limited natural habitat within the Study Area. The existing Thorndale WWTP is within a fenced area that has a manicured lawn. Habitat features and potential suitability are described in **Table 6** based on a preliminary desktop screening from air photo interpretation and Google Street View.

Potentially suitable habitat was identified within 120 m of the Thorndale WWTP for the following species: Blandings Turtle, SAR bats (i.e., Small-Footed Myotis, Little Brown Myotis, Northern Myotis, and Tri colored Bat), and SAR birds (i.e., Bobolink and Eastern Meadowlark).

The project evaluation of Alternative Solutions confirmed that a site outside of the existing fenced site is not preferred. Two alternatives were considered in the evaluation of Alternative Designs. Both Alternative 1 and 2 involve the construction of process infrastructure and tanks within the defined boundaries of the existing site. No work is required to expand or change the outlet pipe for conveying treated effluent to the Thames River.

Since all construction activities are proposed to occur within the fenced, managed lawn areas of the existing Thorndale WWTP, direct impacts to natural heritage features are not anticipated.

There are several features adjacent to the Thorndale WWTP outside the fenced boundaries such as the constructed ponds, however these can be mitigated through standard erosion and sediment control measures during construction. Other standard mitigation measures are provided for trees and vegetation, migratory birds, general wildlife protection, and protection of SAR. The Thorndale Existing Conditions Natural Environment Assessment is included in **Appendix E**.

The Municipality of Thames Centre does not have current plans to proceed with detailed design or construction at this time until capacity reaches a higher capacity expected near 80% WWTP or if they were otherwise required to meet special conditions of the ECA should two or more effluent non-compliance situations be encountered during any calendar year for any effluent parameter listed in Schedule C of the ECA. A site visit to confirm SAR or migratory bird nesting would have limited applicability at this time, as the date and final layout of construction is unknown.

An impact assessment is recommended closer to the proposed construction date in detailed design once further details and construction plans are confirmed to support design and permitting efforts. The site investigation should include a review of project plans to identify the presence or absence of migratory birds, as well as SAR habitat or observations.

The following sections provide general vegetation and wildlife mitigation measures.

8.6.1.1 Trees and Vegetation

Where adjacent trees and naturalized areas are to be retained, the following best management practices should be followed when construction activities occur near retained trees:

- Vegetation removal should avoid sensitive timing windows when possible (e.g., migratory breeding bird period (March 31 – August 27)).
- Erect a fence 1.2 m high around the critical root zone (CRZ) of trees
- Do not attach any signs, notices, or posters to any tree
- Do not damage the root system, trunk, or branches of any tree
- Do not place any material or equipment within the CRZ of the tree
- Do not raise or lower the existing grade within the CRZ
- Do not direct exhaust fumes from equipment towards any tree's canopy
- Do not tunnel or bore when digging within the CRZ of any tree

8.6.1.2 General Wildlife Protection

The following environmental mitigation and protective measures for wildlife and wildlife habitat are recommended:

- If vegetation removal cannot avoid sensitive timing windows (March 31 – August 27), they must follow appropriate mitigation measures to protect wildlife in the area (e.g., bird nest search).
- Site clearing (i.e., vegetation removal) should proceed in phases with the most disturbed part of the site being cleared first and the least disturbed last.
- Construction equipment and vehicles are to yield to wildlife.
- Inform construction personnel to not threaten, harass or injure wildlife.

- If wildlife species are encountered during construction, personnel are required to move away from the animal and wait for the animal to move off the construction site.

8.6.1.3 Protection Of Migratory Birds

There is proposed vegetation removal and/or impacts at the Site (e.g., temporary workspaces), and therefore there is a potential to negatively impact birds which are protected under the *Migratory Birds Convention Act, 1994* (MBCA). The MBCA provides legal protection of migratory birds and their active nests in Canada.

The loss of migratory bird nests, eggs and or nesting due to tree cutting or other vegetation impacts can be avoided by limiting impacts to vegetation to occur outside of the general nesting period nesting migratory birds in the region (C2) as identified by Environment and Climate Change Canada (ECCC) (i.e., between March 31 – August 27) (ECCC, 2021).

If work must be performed within this window, a pre-clearing survey for active nests or breeding activity must be conducted by a qualified biologist before work commences and additional mitigation measure (e.g., implementation of avoidance distance during construction) implemented, as required. Stantec considers a nest search to expire after five (5) days due to the potential for birds to establish a nest after the survey. It is further recommended that a nest search occur within 48 hours of the start of planned construction activities within the migratory bird nesting period.

8.6.1.4 Protection of Species at Risk

The Study Area has potential habitat for SAR herptiles (i.e., Blanding's Turtle), SAR bats (i.e., Small-Footed Myotis, Little Brown Myotis, Northern Myotis, and Tri-colored Bat) and SAR birds (i.e., Bobolink and Eastern Meadowlark). Prior to any construction the following general mitigation measures are recommended to protect SAR:

- Implement a worker awareness program for construction staff that includes SAR identification and habitat characteristics.
- Conduct a daily pre-construction search of the work area to identify presence of SAR.
- If threatened or endangered species are seen in or near the work area, stop work immediately.
- Take photographs if possible, but do not interact with the animal.

Through correspondence with MECP (July 2025), MECP indicated that Bank Swallow (threatened) may occur in the general area of the project. Bank Swallow excavate nests in exposed earth banks along watercourses and lakeshores, roadsides, stockpiles of

soil, and the sides of sand and gravel pits. Adjacent grasslands and watercourses are used for foraging habitat (Cadman et al., 2007).

However, as identified in **Table 6**, Based on air photo interpretation and Google Streetview, no suitable habitat for Bank Swallow was observed in the Study Area. Therefore, this species is not expected to occur in the Study Area.

To further reduce the potential to interact with this species, MNR's *Best Management Practices for the Protection, Creation, and Maintenance of Bank Swallow Habitat in Ontario* (MNR, 2017) should be followed during construction activities. Such measures are identified below.

To reduce the risk of Bank Swallows nesting in these locations, construction activities should occur outside of the primary nesting period (April 1 – August 31). If construction activities are unavoidable during this window, the following management practices should be implemented to reduce and avoid impacts to Bank Swallows and their nests:

- Vertical faces of soil piles should be eliminated by reducing the slope to 70 degrees or less. Reducing the slope may be achieved by bulldozing; piling material on the face, or/and using an excavator to create the desired slopes (MNR, 2017).
- Geotextile, plastic covers, tarping, or yellow strips of fabric may be placed over exposed faces or soil piles to prevent nesting. These barriers should be well-secured to prevent access to Bank Swallows (MNR, 2017).
- One or more plastic Great Horned Owls may be installed near soil piles and exposed faces. The owl deterrent should be moved regularly to reduce the likelihood of swallows becoming habituated (MNR, 2017).

Any deterrents or exclusion measures must be installed prior to the breeding season (i.e., before April) and should remain present until the end of the breeding period (i.e., August 31). If deterrents are not installed prior to the breeding season or are ineffective at excluding Bank Swallows, construction activities must stop immediately; destroying Bank Swallow nests will require a permit and may require mitigation measures to be applied.

8.6.1.5 Erosion and Sedimentation Control

An erosion and sediment control (ESC) plan should be developed and employed during construction to reduce the risk of erosion and the entry of sediment into surface water and other natural features. Mitigation included in the plan should include the following measures:

- Implement project-specific temporary ESC measures prior to starting work (e.g., silt fence and/or sediment logs).
- Keep additional ESC materials available on site to provide a contingency supply in the event of an emergency.

- Monitor and maintain erosion and sediment controls, as required. Controls are to be removed only after the soils of the construction area have stabilized and vegetation cover has re-established.
- Stabilize materials requiring stockpiling (fill, topsoil, etc.) and keep a safe distance (> 30 m) from watercourses.

8.6.1.6 Fish and Fish Habitat

Stantec reviewed the existing capacity for the outfall pipe from the Thorndale WWTP to the Thames River. No upgrades were required to the existing outfall to the Thames River as part of the Project and construction will be limited to within the existing site boundary. No direct impacts are required to the Thames River, and no in-water work will be required.

The WWTP requires expansion by 2032 to increase its rated capacity to 741 m^3/d and peak design flow to 3,706 m^3/d to meet 20-year design average daily and peak hourly flows. Effluent quality requirements are set by the Environmental Compliance Approval. As described **in Section 4.1.1.2**, the proposed capacity expansion from 674 m^3/d to 741 m^3/d remains below the future maximum rated capacity of 1,294 m^3/d, and still within the effluent limit for total phosphorous.

The Site does not overlap with MNR mapped watercourses or waterbodies. There are two constructed waterbodies within the Study Area, and the southwest waterbody has a connected unmapped ditch parallel to the Site. There are no impacts anticipated to these constructed features since work will occur in the western portion of the fenced project area. Mitigation measures are available to prevent entry of sediment into the ditch.

Fish and fish habitat impacts are not anticipated and will be avoided through Erosion and Sedimentation Control to avoid sedimentation of watercourses.

8.6.1.7 Drainage

Site drainage and the need for local construction de-watering requirements will be determined in detailed design. Potential impacts to the UTRCA regulated areas are to be mitigated during construction will be mitigated through on-site control measures, such as previously mentioned ESC measures, and measures to prevent the entry of substances and debris into the water.

Drainage plans will be developed during Detailed Design and will be shared with UTRCA as part of the permitting process under Ontario Regulation 157/06 (Development, Interference with Wetlands and Alterations to Shorelines and Watercourses) under the *Conservation Authorities Act*).

An Environmental Activity and Sector Registry (EASR) may be required for a determination of for construction dewatering if that is greater than 50,000 L/day. No construction de-watering is required in the Thames River.

The Ontario Government through MECP is in the process of making changes to the de-watering permit process for construction in 2025. The Contractor must adhere to UTRCA sourcewater protection policies and MECP de-watering policies if dewatering is required during construction.

8.6.2 Cultural Environment

8.6.2.1 Built Heritage and Cultural Heritage Landscapes

The preferred plan includes all infrastructure constructed within the existing fenced site. As identified in **Section 4.4.1**, no additional built heritage or cultural heritage landscapes study was recommended. No direct or indirect impacts are anticipated due to Alternative 1 and 2 and no further cultural heritage studies were recommended. The cultural heritage screening memorandum is included in **Appendix E** with the MCM Checklist results.

8.6.2.2 Archaeology

As identified in **Section 4.4.2**, no further archaeological assessment was required for this project as the property was previously assessed prior to the construction of the Thorndale WWTP under Stage 1 PIF P001-634-2010 and Stage 2 Archaeology Assessment PIF P001-639-2010, by others.

Should previously undocumented archaeological resources be discovered, they may be a new archaeological site and therefore subject to Section 48(1) of the *Ontario Heritage Act*. The proponent or person discovering the archaeological resources must cease alteration of the site immediately and engage a licensed consultant archaeologist to carry out archaeological fieldwork, in compliance with Section 48(1) of the *Ontario Heritage Act*.

The *Funeral, Burial and Cremation Services Act*, 2002, S.O. 2002, c.33, requires that any person discovering or having knowledge of a burial site shall immediately notify the police or coroner. It is recommended that the Registrar of Cemeteries at the Ministry of Government and Consumer Services is also immediately notified.

Archaeological sites recommended for further archaeological fieldwork or protection remain subject to Section 48 (1) of the *Ontario Heritage Act* and may not be altered, or have artifacts removed from them, except by a person holding an archaeological license.

8.6.3 Social-Economic Environment

8.6.3.1 Land Use and Property

No additional property is required as part of the proposed work. There is no change in land use required for this project.

8.6.3.2 Construction Noise

The construction operations of either alternative would involve the use of standard construction equipment to assemble the new site infrastructure. There is no significant difference between the alternatives with respect to operational noise as both alternatives included a SBR and EQ tank.

The preferred alternative uses treatment processes that are similar to those already being used on-site, such that there will be no significant change to operational noise from this project.

The contractor will be required to abide by the municipal noise control by-laws and ensure that all construction equipment is kept in good working order to limit additional noise. The contractor shall also ensure that the idling of construction equipment is kept to a minimum. Construction equipment will be confirmed during detailed design. Additional noise control measures will be addressed during detailed design and included in the construction contract.

8.6.3.3 Air Quality and Dust

The construction of either alternative would involve the use of standard construction equipment to assemble the new site infrastructure. There is no significant difference between the alternatives with respect to air quality as no specialized equipment is used, and standard mitigation would be applied for dust.

During construction, best management practices will be applied to mitigate any air quality impacts caused by construction dust (non-chloride dust suppressants).

Any complaints received should be logged and investigated to attempt to resolve where possible during operations in accordance with industry standards.

8.6.3.4 Excess Soil and Waste

During construction, the Contractor will be required to adhere to regulations with respect to the use and management of Excess Soil, including a regulation under the *Environmental Protection Act*, titled *On-Site and Excess Soil Management (O. Reg. 406/19)* to support improved management of excess construction soil.

Activities involving the management of excess soil should be completed in accordance with O. Reg. 406/19 and the MECP's current guidance document *titled "Management of Excess Soil – A Guide for Best Management Practices"* (2014) and *"Rules for Soil Management and Excess Soil Quality Standards"* (2022). All waste generated during construction must be disposed of in accordance with ministry requirements.

8.6.3.5 Climate Change

The MECP's guide, *Consideration of Climate Change in the Environmental Assessment Process*, outlines two approaches for consideration and addressing climate change in project planning including:

- Reducing a project's impact on climate change (climate change mitigation).
- Increasing the project and local ecosystem's resilience to climate change (climate change adaptation).

The proposed project makes use of the existing site for the Thorndale WWTP. This approach makes efficient use of existing resources and reduces the need for loss of nearby meadow. Process upgrades at the site also improve the treatment options for Thorndale residents and will enable new growth to use centralized treatment rather than individual septic systems where possible to do so. The result is more efficient effluent collection and management.

9 Further Considerations

9.1 Permits and Approvals

Permit requirements will be confirmed during Detailed Design. A summary of permits and approvals required for the project is provided below:

9.1.1 Conservation Authorities Act (UTRCA)

O. Reg. 157/06 (Development, Interference with Wetlands and Alterations to Shorelines and Watercourses) under the *Conservation Authorities Act (CAA)* requires prior permission from UTRCA for any development or alteration within a floodplain, valleyland, wetland, or other hazardous land. As noted above, there are two UTRCA Regulated Areas within the Site and Study Area which overlap with the constructed waterbodies. As such, any development within these areas is anticipated to require approval from the UTRCA under O. Reg. 157/06.

Development and site alteration within 30 m of a non-Provincially Significant Wetland (PSW) or development within 120 m from a PSW would require a permit under the CAA. There are no PSWs or wetlands present within the work areas.

Due to the future nature of this project, the Municipality should facilitate further consultation with UTRCA regarding design plans once prepared, and complete regulatory permit submissions for the necessary permit(s) during Detailed Design.

9.1.2 Endangered Species Act, 2007

The *Endangered Species Act* (ESA) was created to protect SAR and their habitats in Ontario. Endangered, threatened, and extirpated species listed on the Species at Risk in Ontario (SARO) list (O. Reg. 230/08 under the ESA) automatically receive legal protection from harm or harassment under the ESA. In addition to species protection, the ESA prohibits damage or destruction of habitat for endangered or threatened species. Work on public or private land (excluding federal lands) that may harm or harass protected species (e.g., threatened, or endangered) or impact their habitat requires approval from the Ministry of Environment, Conservation, and Parks' (MECP) Species at Risk Branch.

Agency consultation has moved to a proponent driven process for both the federal and provincial agencies responsible for SAR (e.g., DFO, MECP) and proponents are directed to review the background documentation and related information sources outlined above. As such, specific information request packages were not submitted for provincially designated natural heritage features, SOCC, and/or SAR.

Based on the project activities, which includes work within the existing fenced footprint of the Thorndale WWTP the following is provided with respect to SAR species an adherence to the ESA:

- **SAR Bats:** There is potential for SAR Bats to be encountered within the Study Area (i.e., mature trees). As specific habitat features (e.g., maternity roosts, hibernacula) supporting these species are not anticipated to be impacted, as such, further consultation with the MECP, through an Information Gathering Form submission, is not recommended to solicit formal review and comment on ESA requirements associated with the Project.
- **SAR Birds:** There is potential for SAR Birds (Eastern Meadowlark and Bobolink) to be encountered within the Study Area (i.e., meadow communities). However, direct interactions with these species are not anticipated during project implementation. Work is not occurring in the meadow habitat outside the fenced areas, and mitigation measures (i.e. migratory bird timing windows) are available and will be implemented. As such further review by the responsible agency under the ESA and/ or SARA is not recommended, and subsequent permitting is not anticipated.

- **SAR Turtles:** There is potential for Blanding's Turtle to be encountered within the Study Area (i.e., constructed waterbodies or/and the gravel pile). However, interactions with this species are not anticipated during project implementation. As such further review by the responsible agency under the ESA and/ or SARA is not recommended, and subsequent permitting is not anticipated.

9.1.3 Fish and Wildlife Conservation Act, 1997 (FWCA)

MNR manages Ontario's natural resources and wildlife on behalf of Ontarians. The Ministry administers the *Fish and Wildlife Conservation Act*, 1997 (FWCA) and supporting regulations. In part, the FWCA regulates the relocation of fish and wildlife. Accordingly, should the project require:

- The relocation of fish outside of the work area, a Licence to Collect Fish for Scientific Purposes will be required
- The relocation of wildlife outside of the work area (including amphibians, reptiles, and small mammals), a Wildlife Collector's Authorization will be required

Licences are issued to the individuals that will be conducting the work and expire on the expiry date provided on each FWCA authorization. Additionally, should the removal of a raptor nest be necessary for the project, a FWCA permit will be required.

This project does not anticipate work that will require relocation of fish or wildlife, and a permit or licence is not anticipated.

9.1.4 Public Lands Act

The MNR oversees the administration of Crown land, otherwise known as public lands in Ontario. Public land includes the beds of most lakes and rivers. Some activities on shore lands (both public and private) are also regulated by the MNR.

No work is required on Crown land for this project, and therefore no Crown Land Work Permit will be required.

9.1.5 Fisheries Act

In-water work is not anticipated for the project since there is no alteration required to the outlet at the Thames River. All construction work will occur within the existing Thorndale WWTP fenced area.

If plans are revised during Detailed Design and the need for in-water work is identified (such as in-water work in Thames River), design details and construction methods are recommended to be submitted to DFO through a Request for Review form for review of the Project under the *Fisheries Act*. Although not anticipated, if the need for in-water

work is identified, further aquatic investigations may be required, including screening for SAR with MECP.

9.1.6 Other Ministry of the Environment, Conservation and Parks Approvals

Based on the anticipated scope of work, the following permits and approvals from the MECP are anticipated:

- MECP Environmental Compliance Approval (ECA) with the design and implementation of any works under the Class EA.

This project may include minor excavation on-site to construct the foundations for the proposed infrastructure, however no significant de-watering is anticipated for this project. There is no de-watering required at the Thames River. Further review of the potential extent of groundwater dewatering and the potential need for an Environmental Activity and Sector Registry (EASR) should be reviewed as part of detailed design.

9.2 Commitments for Detailed Design

Table 18 provides a summary of the commitments for detailed design, which should be read in conjunction with the above impact assessment for further details.

Table 18: Commitments to Carry-Forward to Detailed Design

Category	Mitigation
Traffic, Noise, Air Quality	• Reduce or avoid construction-related impacts through standard mitigation, such as maintaining access to properties, adhering to noise by-laws, and reducing dust • Any complaints received should be logged and investigated to attempt to resolve where possible during operations in accordance with industry standards.
Drainage	• Obtain UTRCA permit under Ontario Regulation 157/06 (Development, Interference with Wetlands and Alterations to Shorelines and Watercourses) under the *Conservation Authorities Act*). - A UTRCA regulatory area is present within the site, although proposed work is not anticipated to require an impact to this feature. - UTRCA requires prior permission through a permit for any development or alteration within a floodplain, valleyland, wetland, or other hazardous land.

Category	Mitigation
	• Site shall consider local drainage and comply with UTRCA permits or approvals. Site drainage requirements to be determined in detailed design. • Municipality to work with UTRCA to consider local drainage requirements for the industrial park – separate from the current EA • No construction de-watering is required in the Thames River. • The Contractor must adhere to UTRCA sourcewater protection policies and MECP de-watering policies if on-site construction dewatering is required to determine the need for an EASR. • Further review of the potential extent of groundwater dewatering and the potential need for an Environmental Activity and Sector Registry (EASR) should be reviewed as part of detailed design.
Wildlife and Fish Habitat	• Avoid vegetation removal during typical bird nesting seasons (i.e., April 1 to August 31, inclusive of migratory birds and Bank Swallows). • Conduct future site-specific natural environment investigations in detailed design in areas impacted to avoid wildlife impacts, including for SAR or SOCC if present • Consult with the MECP if SAR is present • Bank Swallow may nest in exposed soils associated with soil piles, eroding banks, and/or in exposed faces as part of work in the Study Area. MNR's *Best Management Practices for the Protection, Creation, and Maintenance of Bank Swallow Habitat in Ontario* (MNR, 2017) should be followed during construction activities. Such measures are identified below • To reduce the risk of Bank Swallows nesting in these locations, construction activities should occur outside of the primary nesting period (April 1 – August 31). • If construction activities are unavoidable during this window for bank swallows, the following management practices should be implemented to reduce and avoid impacts to Bank Swallows and their nests: - Vertical faces of soil piles should be eliminated by reducing the slope to 70 degrees or less. Reducing the slope may be achieved by bulldozing; piling material on the face, or/and using an excavator to create the desired slopes (MNR, 2017). - Geotextile, plastic covers, tarping, or yellow strips of fabric may be placed over exposed faces or soil piles to prevent

Category	Mitigation
	nesting. These barriers should be well-secured to prevent access to Bank Swallows (MNR, 2017). - One or more plastic Great Horned Owls may be installed near soil piles and exposed faces. The owl deterrent should be moved regularly to reduce the likelihood of swallows becoming habituated (MNR, 2017). • Any deterrents or exclusion measures must be installed prior to the breeding season (i.e., before April 1) and should remain present until the end of the breeding period (i.e., August 31). If deterrents are not installed prior to the breeding season or are ineffective at excluding Bank Swallows, construction activities must stop immediately; destroying Bank Swallow nests will require a permit and may require mitigation measures to be applied. • No-in-water work is anticipated, and no work is required at the Thames River. Although not anticipated, if there are changes requiring in-water work or to the outlet at the Thames River, impacts to aquatic habitat or SAR should be considered and in-water work activities may be subject to a DFO Request for Review
Archaeology and Built Heritage	• No further assessments are required for this project.
Excess Soils	• The Contractor must adhere to requirements for excess soils, including but not limited to the regulation under the *Environmental Protection Act* titled “On Site and Excess Soil Management (O.Reg. 406/19), and the MECP’s current guidance document titled “*Management of Excess Soil – A Guide for Best Management Practices*” (2014) and “*Rules for Soil Management and Excess Soil Quality Standards*” (2022). • All waste generated during construction must be disposed of in accordance with MECP requirements

10 EA Documentation Filing

This *Environmental Study Report* (ESR) fulfills the documentation requirements for the Schedule C Class EA planning process. The Class EA study process has involved consultation with directly affected members of the public, Indigenous communities, stakeholders, and review agencies to ensure that they were aware of the project and that their concerns have been addressed.

The filing of this report represents the conclusion of Phases 1 through 4 of the Class EA planning process. Provided that no Section 16 Order requests are received, the Municipality may proceed with the Detailed Design and implementation (Phase 5) 30 days following the completion of the public review period.

The ESR will be available for review online, on the Municipality of Thames Centre website: https://www.thamescentre.on.ca/

APPENDICES

Appendix A Notification Materials

Thorndale Wastewater Treatment Plant Expansion
Municipal Class Environmental Assessment
Agency Contact List

First	Last	Title	Agency	Branch	Address1	Address2	City	Prov	Postal_Code	Phone	Email
Provincial/Federal Ministries and Agencies											
Sir/Madam		District Planner	Ministry of Natural Resources and Forestry	Aylmer District	615 John Street North		Aylmer	ON	N5H 2S8	TBD	MNRF.Ayl@ontario.ca
Sir/Madam			Ministry of the Environment, Conservation and Parks								eanotification.swregion@ontario.ca
Mark	Badali	Regional Environmental Planner	Ministry of the Environment, Conservation and Parks		135 St. Clair Avenue W, 1st Floor		Toronto	ON	M4V 1P5	(416) 314-8001	mark.badali1@ontario.ca
Karla	Barboza	Team Lead- Heritage, Heritage Program Unit	Ministry of Citizenship and Multiculturalism	Heritage Branch	400 University Avenue, 5th Floor		Toronto	ON	M7A 2E7	(416) 314-7120	karla.barboza@ontario.ca
Joseph	Harvey	Heritage Planner	Ministry of Citizenship and Multiculturalism	Heritage Branch	400 University Avenue, 5th Floor		Toronto	ON	M7A 2E7	(613) 242-3743	joseph.harvey@ontario.ca
Municipal Contacts											
Marci	Ivanic	County Clerk	Middlesex County		399 Ridout Street North		London	ON	N6A 2P1	(519) 434-7321 Ext 2250	mivanic@middlesex.ca
Chris	Traini	County Engineer	Middlesex County		399 Ridout Street North		London	ON	N6A 2P1	519-434-7321 ext 2264	
Sharron	McMillan	Mayor	Municipality of Thames Centre		4305 Hamilton Road		Dorchester	ON	N0L 1G3	(519) 709-8372	smcmillan@thamescentre.on.ca
Michelle	Simbert	Deputy Mayor	Municipality of Thames Centre		4305 Hamilton Road		Dorchester	ON	N0L 1G3	519-719-2166	msmibert@thamescentre.on.ca
Tena	Michiels	Clerk	Municipality of Thames Centre		4305 Hamilton Road		Dorchester	ON	N0L 1G3	(519) 268-7334 ext. 222	tmichiels@thamescentre.on.ca
Jake	McKillop	Transportation Superintendent	Municipality of Thames Centre		4305 Hamilton Road		Dorchester	ON	N0L 1G3	(519) 268-7334 ext. 251	jmckillop@thamescentre.on.ca
Jarrod	Craven	Director of Public Works	Municipality of Thames Centre		4305 Hamilton Road		Dorchester	ON	N0L 1G3	519-268-7334 ext. 245	jcraven@thamescentre.on.ca
Kevin	Willson	Environmental Superintendent	Municipality of Thames Centre		4305 Hamilton Road		Dorchester	ON	N0L 1G3	(519) 268-7334 ext. 745	kwillson@thamescentre.on.ca
Conservation Authority											
Karen	Winfield	Land Use Regulations Officer	Upper Thames River Conservation Authority		1424 Clarke Road		London	ON	N5V 5B9	(519) 451-2800 ext. 237	winfieldk@thamesriver.on.ca
Jenn	Allain	Manager Environmental Planning and Regulations	Upper Thames River Conservation Authority		1424 Clarke Road		London	ON	N5V 5B9	519-451-2800 ext. 223	allainJ@thamesriver.on.ca
Ben	Dafoe	Land Use Regulations Officer	Upper Thames River Conservation Authority		1424 Clarke Road		London	ON	N5V 5B9	519-451-2800 ext. 316	dafoeb@thamesriver.on.ca
Julie	Wekler	Source Protection Coordinator	Thames-Sydenham and Region Source Protection Region		1424 Clarke Road		London	ON	N5V 5B9	519-451-2800 ext. 255	welkerj@thamesriver.on.ca
Emergency Services											
Neal	Roberts	Chief of Emergency Medical Services	Middlesex-London EMS Service	Paramedic Service	340 Waterloo Street		London	ON	N6B 2N6	(519) 679-5466 ext. 1107	abennett@mlems.ca
Nick	Dorken	Director of Fire and Emergecny Services/ Fire Chief	Thames Centre Fire Department	Fire Chief's Office	2066 Dorchester Rod		Dorchester	ON		(519) 268-7334 ext 720	ndorken@thamescentre.on.ca
		Detachment Commander	Ontario Provincial Police	Middlesex (London)	823 Exeter Road		London	ON	N6E 1W1	(519) 681-0300	OPP.Middlesex@opp.ca
Local Agencies and Interest Groups											
Ben	Puzanov	Planner	Thames Valley District School Board		1250 Dundas Street		London	ON	N5W 5P2	(519) 452-2000	b.puzanov@tvdsb.ca
Rebecca	McLean	Planner	London Catholic District School Board		5200 Wellington Road South		London	On	N6E 3X8	(519) 663-2088	rmclean@ldcsb.ca
Sir/Madam			Southwestern Ontario Study Transportation Services	My Big Yellow School Bus	201-557 Southdale Rd E.		London	ON	N6E 1A2	(519) 649-1160	crossi@mybigyellowbus.ca
Sir/Madam			Progrow Farms Ltd.		1147 Ideal Drive		Thorndale	ON	N0M 2P0	519-461-1900	info@progrowfarms.com
Sir/Madam			Advanced Drainage Systems Inc. (ADS)		1100 Ideal Drive		Thorndale	ON	N0M 2P0	519-670-0564; 519-473-2669	andrew.okolisan@ads-pipe.com
Sir/Madam			I Love Thorndale				Thorndale	ON			info@ilovethorndale.ca
Utilities											
Sir/Madam		Secondary Land Use	Hydro One	Asset Optimization, Strategy & Integrated Planning	483 Bay Street		Toronto	ON	M5G 1P5		SecondaryLandUse@HydroOne.com
Richard	Bolliger	Rogers Cable	Rogers Cable	Outside Plant Engineering	P.O. Box 488, 85 Grand Crest Place		Kitchener	ON	N2G 4A8		richard.bolliger@rci.rogers.com
Sir/Madam			Rogers Municipal Operations Centre		800 York Street		London	ON	N5W 2S9		rogers.moc@telecon.ca
Sir/Madam			Enbridge	Markup Requests	500 Consumers Road		North York	ON	M2J 1P8		markups@enbridge.com

Jim	Goodchild	Bell Canada	Bell Canada	Project Coordinator	1149 Goyeau Street, 1st floor		Windsor		N9A 1H9		james.goodchild@bell.ca
Sir/Madam		Bell Canada	Bell Canada		5025 Creekbank Road		Mississauga		L4W 0B6		pucc.circulations.GT@bell.ca
Jeff	Soetemans	Operations Supervisor	Execulink		1127 Ridgeway Road, P.O. Box 33		Woodstock		N4V 1E3		jeff.soetemans@execulink.com
Local Developers											
Pat and Jane	Elliott	Developers	Developers				Thorndale	ON			jane@fieldcrest.biz pat@fieldcrest.biz
Craig	Linton	Developers	Developers				Thorndale	ON			clinton@ndev.ca
Phil	Masschelein	Developers - Sifton	Developers - Sifton				Thorndale	ON			phil.masschelein@sifton.com
Matt	Robertson	Developers - Sifton	Developers - Sifton				Thorndale	ON			matt.robertson@sifton.com

Thorndale Wastewater Treatment Plant Expansion
Municipal Class Environmental Assessment
Indigenous Communities Contact List

Title	First	Last	Title	Agency	Branch	Address1	City	Prov	Postal_Code	Phone	Email
Indigenous Communities											
Metis Nation of Ontario (MNO)			Head Office	Metis Consultation Unit							consultations@metisnation.org
Six Nations of the Grand River Territory	Sherri-Lyn	Hill		Chief		1695 Chiefswood Road, PO Box 5000	Ohsweken	ON	N0A 1M0	Cell: 519-732-2905	
Six Nations of the Grand River Territory	Robbin	VanStone		Consultation Supervisor, Lands and Resources Department		1695 Chiefswood Road, PO Box 5000	Ohsweken	ON	N0A 1M0	519-753-0665, ext. 5433	rvanstone@sixnations.ca
Haudenosaunee Confederacy Council	Leroy	Hill		Secretary		16 Sunrise Court, P.O. Box 714, Suite 600	Ohsweken	ON	N0A1M0		communications@hdi.land, info@hdi.land
Mississaugas of the Credit First Nation	R. Stacey	LaForme		Chief		2789 Mississauga Road, RR # 6	Hagersville	ON	N0A 1H0	905-768-1133	Stacey.Laforme@mncfn.ca; communications@mncfn.ca
Mississaugas of the Credit First Nation	Mark	LaForme	Department of Consultation and Accommodation	Consultation Manager		4065 Hwy 6	Hagersville	ON	N0A 1H0	905-768-4260	mark.laforme@mncfn.ca; doca.admin@mncfn.ca
Chippewas of the Thames First Nation	Joe	Miskokomon		Chief		320 Chippewa Road RR1	Muncey	ON	N0L 1Y0	519-289-5555	via NationsConnect
Chippewas of the Thames First Nation	Rochelle	Smith	Lands and Resources	Consultation Coordinator		320 Chippewa Road RR1	Muncey	ON	N0L 1Y1	519.289.2662 ext 213	via NationsConnect
Chippewas of the Thames First Nation	Fallon	Burch		Consultation Coordinator		320 Chippewa Road RR1	Muncey	ON	N0L 1Y1	519.289.5555 ext. 251	via NationsConnect
Oneida Nation of the Thames	J.Todd	Cornelius		Chief		2212 Elm Avenue	Southwold	ON	N0L 2G0	519-652-6161	todd.cornelius@oneida.on.ca
Oneida Nation of the Thames	Cherilyn	Hill		Political Office Manager		2212 Elm Avenue	Southwold	ON	N0L 2G0	519-652-6161	cherilyn.hill@oneida.on.ca
Munsee-Delaware Nation	Mark	Peters		Chief		289 Jubilee Road	Muncey	ON	N0L 1Y0	519-289-5396 Ext. 226	chief.peters@munsee.ca
Munsee-Delaware Nation	Glenn	Forrest		Band Manager		289 Jubilee Road	Muncey	ON	N0L 1Y0	519-289-5396 Ext. 222	glenn@munsee.ca
Delaware Nation	Justin	Logan		Chief		14760 School House Line RR #3	Thamesville	ON	N0P 2K0	519-692-3936	justin.logan@delawarenation.on.ca
Bkejwanong Territory (Walpole Island)	Charles	Sampson		Chief		117 Tahgahoning Road RR #3	Wallaceburg	ON	N8A 4K9	519-627-1481	charles.sampson@wifn.org
Bkejwanong Territory (Walpole Island)	Janet	Macbeth		Project Review Coordinator		117 Tahgahoning Road RR #3	Wallaceburg	ON	N8A 4K9	519-627-1475 Ext.108	janet.macbeth@wifn.org
Bkejwanong Territory (Walpole Island)	Dean	Jacobs		Consultation Manager		117 Tahgahoning Road RR #3	Wallaceburg	ON	N8A 4K9	519-627-1475 Ext. 104	dean.jacobs@wifn.org
Caldwell First Nation	Mary	Duckworth		Chief		14 Orange Street, PO Box 388	Leamington	ON	N8H 1P5	519-322-1766	ChiefMaryDuckworth@caldwellfirstnation.ca; info@caldwellfirstnation.ca
Caldwell First Nation	Jenna	Smids	Employment/Training/ Environmental & Consultation Coordinator			14 Orange Street, PO Box 388	Leamington	ON	N8H 1P5	519-322-1766	etow@caldwellfirstnation.ca
Caldwell First Nation	Michelle	McCormack	Consultation Coordinator			14 Orange Street, PO Box 388	Leamington	ON	N8H 1P5	519-322-1766	ecc@caldwellfirstnation.ca
Chippewas of Kettle and Stony Point First Nation	Kimberly	Bressette		Chief		6247 Indian Lane RR#2	Lambton Shores	ON	N0N 1J0	519-786-2125	consultation@kettlepoint.org
Aamjiwnaang First Nation	Chris	Plain		Chief		978 Tashmoo Avenue	Sarnia	ON	N7T 7H5	519-336-8410	chief.plain@aamjiwnaang.ca
Aamjiwnaang First Nation	Cathleen	O'Brien		Environment Coordinator		978 Tashmoo Avenue	Sarnia	ON	N7T 7H5	519-336-8410 ext. 245	cobrien@aamjiwnaang.ca

Project No. 165630251

Thorndale Wastewater Treatment Plant Expansion
Municipal Class Environmental Assessment
Public Contact List

Public Contact List		
Owner/Occupant	16615 Thorndale Road	Lives near the WWTP

NOTICE OF STUDY COMMENCEMENT

Thorndale Wastewater Treatment Plant Expansion
Schedule C Municipal Class Environmental Assessment Study

THE STUDY

The Municipality of Thames Centre (Municipality) has retained Stantec Consulting Ltd. to complete a Municipal Class Environmental Assessment (EA) to identify options for expansion of the Thorndale Wastewater Treatment Plant (WWTP), located at 1135 Ideal Drive. The study area for the WWTP is shown on the key map.



The Thorndale WWTP provides municipal wastewater treatment to Thorndale. Expansion alternatives will be developed to address current needs and consider anticipated community growth.

THE PROCESS

The project will be undertaken in accordance with the Municipal Engineers Association (MEA) Municipal Class EA document (as amended in 2007, 2011, 2015 and 2023) and will address the requirements of a Schedule 'C' EA.

PUBLIC INVOLVEMENT

Details regarding opportunities for engagement as the study progresses, including Public Information Centres (PICs), will be advertised in a local newspaper and on the municipal website: www.thamescentre.on.ca/ThorndaleWWTPExpansion. Upon completion of the study, an Environmental Study Report (ESR) will be prepared and placed on the public record for a minimum 30-day review period.

If you wish to provide comments, have your name added to the study mailing list, or if you have questions about this project, please contact 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

If you have any accessibility requirements in order to participate in this project, please contact one of the Project Team members listed above. Comments and information are being collected to assist with meeting the requirements of the *Ontario Environmental Assessment Act*. Information collected will be used in accordance with the *Municipal Freedom of Information and Protection of Privacy Act* and *Access to Information Act*. With the exception of personal information, all comments will become part of the public record.

From: Kielstra, David
Sent: Thursday, December 21, 2023 12:02 PM
To: eanotification.swregion@ontario.ca; mark.badali1@ontario.ca
Cc: Paul, Jeff; Jarrod Craven
Subject: Thorndale Wastewater Treatment Plant (WWTP) Expansion, Schedule C Municipal Class EA, Municipality of Thames Centre, Middlesex County
Attachments: Notice_Thorndale_Wastewater_Treatment_Plant_Expansion_Class_EA_dec2023.pdf; MECP_Thorndale WWTP_MCEA_Thorndale, Thames Centre_Middlesex County_PIF.pdf; MECP_Thorndale WWTP_MCEA_Thorndale, Thames Centre_Middlesex County_PIF.xlsx

Hello Mark,

Please see the attached Notice of Study Commencement and MECP Project Information Form (PIF) for the Thorndale Wastewater Treatment Plant (WWTP) Expansion project, on behalf of the Municipality of Thames Centre. The project is being undertaken as a Schedule 'C' project in accordance with the Municipal Engineers Association (MEA) Municipal Class Environmental Assessment (as amended in 2023).

Should you have any questions, please let me know or send comments to the individuals identified on the Notice.

Thank you,

David Kielstra MA, EP, MCIP, RPP
Environmental Planner

Direct: 905 381-3247
Fax: 905 385-3534
David.Kielstra@stantec.com

Stantec
200-835 Paramount Drive
Stoney Creek ON L8J 0B4

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Please consider the environment before printing this email.

What to do:
Step 1: Look for the type of EA project in column B that applies to you.
Step 2: Complete columns C to J for that project.
Step 3: Send this form in Excel format to the MECP regional office email address where the project is located.
MECP regional office email addresses are listed at www.ontario.ca/page/preparing-environmental-assessments

	Class EA/Streamlined EA	Proponent Name	Proponent Contact	Project Name	Project Schedule	Project Type	Project Location	MOECC Region	Project Initiation Date
1	CO - Remedial flood and erosion control projects								
2	GO Transit - Class EA								
3	Hydro One - Minor transmission facilities								
4	MEA - Class EA for municipal infrastructure projects	County of Middlesex	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	Thorndale Wastewater Treatment Plant Expansion Schedule C Municipal Class Environmental Assessment Study	Schedule C	Municipal water and wastewater projects	Thames Centre, Municipality of	Southwestern	12/21/2023
5	Ministry of Infrastructure - Public work								
6	MNDM - Activities of the Ministry of Northern Development and Mines under the Mining Act								
7	MNRF - Provincial parks and conservation reserves								
8	MNRF - Resource stewardship and facility development projects								
9	MTO - Provincial transportation facilities								
10	O. Reg. 101/07 - Waste management projects								
11	O. Reg. 116/01 - Electricity projects								
12	OWA - Waterpower projects								
		Enter the proponent's name.	Enter the name and email address of the person who the MECP should contact about your project. This should be the same contact person who is listed on the notice.	Enter the project name as it appears on the notice.	Select the project schedule from the drop-down menu.	Select the project type from the drop-down menu.	Select the name of the municipality or unorganized/unsurveyed area where your project is located from the drop-down menu.	Select the MECP region from the drop-down menu. Read the "MECP regions" worksheet to find the MECP region where your project is located.	Enter the date that the streamlined EA process was initiated (e.g. notice of commencement). This date may be when the project notice was first published.

COMMUNITY

Rock the Rink on Friday night at the PRC



Join the St. Marys Lincolns on Friday, January 12 for Rock the Rink at the PRC. This is a celebration of all things Hockey in the Stonetown. Laying a strong foundation for OWHA hockey in St. Marys were the Dixies. Pictured here at their summer reunion, you might just find some of them in the Blue Line Club Friday Night!

NOTICE OF STUDY COMMENCEMENT
Thorndale Wastewater Treatment Plant Expansion
Schedule C Municipal Class Environmental Assessment Study

Municipality of Thames Centre

THE STUDY

The Municipality of Thames Centre (Municipality) has retained Stantec Consulting Ltd. to complete a Municipal Class Environmental Assessment (EA) to identify options for expansion of the Thorndale Wastewater Treatment Plant (WWTP), located at 1135 Ideal Drive. The study area for the WWTP is shown on the key map.

The Thorndale WWTP provides municipal wastewater treatment to Thorndale. Expansion alternatives will be developed to address current needs and consider anticipated community growth.



THE PROCESS

The project will be undertaken in accordance with the Municipal Engineers Association (MEA) Municipal Class EA document (as amended in 2007, 2011, 2015 and 2023) and will address the requirements of a Schedule 'C' EA.

PUBLIC INVOLVEMENT

Details regarding opportunities for engagement as the study progresses, including Public Information Centres (PICs), will be advertised in a local newspaper and on the municipal website: www.thamescentre.on.ca/ThorndaleWWTPExpansion. Upon completion of the study, an Environmental Study Report (ESR) will be prepared and placed on the public record for a minimum 30-day review period.

If you wish to provide comments, have your name added to the study mailing list, or if you have questions about this project, please contact 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

If you have any accessibility requirements in order to participate in this project, please contact one of the Project Team members listed above. Comments and information are being collected to assist with meeting the requirements of the *Ontario Environmental Assessment Act*. Information collected will be used in accordance with the *Municipal Freedom of Information and Protection of Privacy Act* and *Access to Information Act*. With the exception of personal information, all comments will become part of the public record.

Ask the Arborist



By Joel Hackett | 519 272 5742 | jtsquote@gmail.com

Dear Arborist,

My tree is bleeding, see picture. I have a large Maple tree, and the tree is bleeding black stuff from a giant crack between both big branches what should I do? Majorly concerned here.

Dear Majorly Concerned,

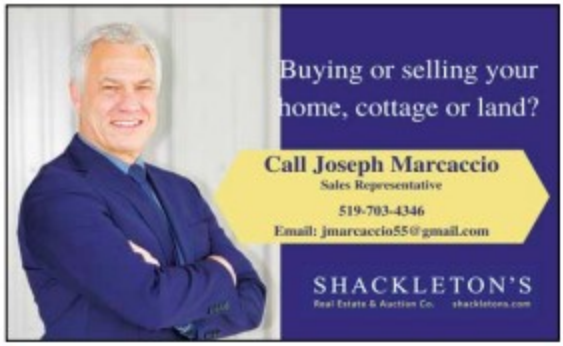
Your Maple tree has co-dominate stems, or leaders. When they are younger, it appears as if they are growing together, however they are actually competing. As they grow larger in diameter, the competing leaders push against each other. Eventually, the weaker of the leaders will fail and fall over. Since there is a space, or a crack, water and other debris are entering this area; this will eventually cause rot.

Don't give up hope. Thankfully, there are options. For example, you can normally cable or bolt the tree extending the life for many years.

Sincerely

The Arborist

Joel Hackett is a certified Arborist residing in the St. Marys area. Currently, he spends most of the year running Joel's Tree Service. For contact call 519 272 5742 or email jtsquote@gmail.com



When social media blocks your access to the news, turn to your local newspaper.

Year in Review – Part 2 continued

(Continued from page 9)
another Friday, but I guess it was bigger than that."

December

The Oxford Renaissance Festival is picking up its swords and going to Thorndale for 2024. A mainstay at Dorchester Fairgrounds, organizer Greg Schuurman said the Thorndale Fairgrounds offers more space and more options for new events.

"We had really great attendance last year, so we were a little nervous going forward to this year's event and then we ended up surpassing our numbers. It's more about land usage. Obviously, the numbers are big factor in it because the more people you get, the more vendors you get – we had more than 100 vendors this year – so when you get to spacing, you have to start downsizing things you don't want to have to downsize."

Schuurman said he has had to turn down interested attractions because there was no extra room for them.

"It was a very difficult decision, but we've outgrown Dorchester Fairgrounds," he said.

Thames Centre council unveiled its visionary roadmap, the 2024-2027 Strategic Plan on November 28, marking a pivotal step towards shaping the future of the community. Passed by council at their regular council meeting, this plan captures the aspirations, needs and values of our diverse communities.

The process towards this goal began last June and it included extensive documentation review, online surveys, interviews, open houses, a council workshop session, and three council meetings.

The 2024 Ontario Men's and Women's' Curling Championships open in less than three weeks, but the excitement is already gaining steam. Organizers hope to draw as many as 18,000 curling fans to the FlightExec Centre when the event, labelled The Clash on the Thames, kicks off January 22.

Officially hosted by the Ingersoll Curling Club, the playdowns will be housed at the FlightExec Centre with title sponsor the Dairy Farmers of Ontario earning the naming rights. Other sponsors include the Municipality of Thames Centre, the Town of Ingersoll, Amplifon Canada, McFarlan Rowlands Insurance, Giant Tiger and more.

Traffic, noise, privacy, and drainage were among the chief concerns expressed by residents of Eva and Ida streets in Dorchester at an open house inside council chambers. Both streets are currently quiet cul-de-sacs, but a proposed development of 105 townhouse units just to the west of the streets ignited discussions between residents and developers.

The open house was well attended and much of the discussions appeared to be a fair exchange of questions and answers, some remained apprehensive.



Signpost file photo

DECEMBER: Some of Dorchester's finest firefighters spend a December Saturday collecting food and donations outside Foodland for the Dorchester Foodbank. From left: Tim Churchill, Clayton Silver, Food Bank co-ordinator Jean Davis, Mike Handley, Rick Sager, Mike Blue and Kevin Wallace.

Property for Sale



Vince Mitchell
Broker
519-630-5763
vince@LHO.me



For Rent: 2 bedroom entire home with laundry and storage in basement. Parking newer appliances and freshly painted. Flexible move-in date. $1650/month and all utilities included in rent. London East.

ROYAL LEPAGE Triland Realty Brokerage
INDEPENDENTLY OWNED & OPERATED
CountryHomeOwners.ca

Services Offered



OFFICIANT AVAILABLE FOR BOOKINGS – Weddings, funerals, celebration of life events, etc. Call, text or email Wendy Spence at Life's Beautiful Journeys, 519-719-6547, lifesbeautifuljourneys@yahoo.com for availability and pricing.

DEVEAU ACCOUNTING & INCOME TAX
• Personal and Corporate Income Tax Preparation
• Bookkeeping services and Government filings
• Small Business & Farm Bookkeeping
• Approved E-Filer by Revenue Canada
• NEW Clients Welcome
519-268-2516

ARBONNE INDEPENDENT CONSULTANT

FEEL LIKE TREATING YOURSELF TO A SPA NIGHT

Without even leaving the house. I am an Arbonne Independent Consultant that offers spa-like theme events.

Contact me for further information:
Chris 519-670-0098

LAMMERS TREE SERVICE – removal and trimming. Call Stan 519-268-3320.

BAIGENT EXCAVATING – specializing in all excavating and drainage work. Licensed and insured septic bed installer and repairs. 519-808-2177.

HANSFORD TREE SERVICE Licensed/insured, complete tree removal. Trimming, chipping, stump removal. Asphalt sealing 519-485-6481 or 519-852-4099.

Last Week's Answers

M	A	R	S		P	I	C	A	S		S	C	A	L	A		B	E	L	L
A	N	A	T		O	V	U	L	E		M	O	D	E	M		A	L	E	E
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R	I	P	S		E	A	S	E	D		T	A	T	A	R		R	A	N	T

7	4	8	2	5	9	3	1	6
3	5	9	7	1	6	8	2	4
6	1	2	4	3	8	9	5	7
5	7	6	3	8	2	4	9	1
2	8	1	9	4	7	6	3	5
4	9	3	5	6	1	2	7	8
9	6	5	8	7	3	1	4	2
1	3	4	6	2	5	7	8	9
8	2	7	1	9	4	5	6	3

CRYPTO ANSWERS: *A. blizzard B. chilly C. drift D. snow*

Notice

NOTICE OF STUDY COMMENCEMENT

Thorndale Wastewater Treatment Plant Expansion
Schedule C Municipal Class Environmental Assessment Study

MUNICIPALITY OF Thames Centre

THE STUDY

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THE PROCESS

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PUBLIC INVOLVEMENT

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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

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From:	Kielstra, David
Cc:	Paul, Jeff; Jarrod Craven
Bcc:	MNRF.Ayl@ontario.ca; karla.barboza@ontario.ca; joseph.harvey@ontario.ca; mivanic@middlesex.ca; ctraini@middlesex.ca; smcmillan@thamescentre.on.ca; msmibert@thamescentre.on.ca; tmichiels@thamescentre.on.ca; jmckillop@thamescentre.on.ca; jcraven@thamescentre.on.ca; kwillson@thamescentre.on.ca; winfieldk@thamesriver.on.ca; allainJ@thamesriver.on.ca; dafoeb@thamesriver.on.ca; welkerj@thamesriver.on.ca; abennett@mlems.ca; ndorken@thamescentre.on.ca; OPP.Middlesex@opp.ca; b.puzanov@tvdsb.ca; rmclean@ldcsb.ca; crossi@mybigyellowbus.ca; info@progrowfarms.com; andrew.okolisan@ads-pipe.com; info@ilovethorndale.ca; SecondaryLandUse@HydroOne.com; richard.bolliger@rci.rogers.com; rogers.moc@telecon.ca; markups@enbridge.com; james.goodchild@bell.ca; pucc.circulations.GT@bell.ca; jeff.soetemans@execulink.com
Subject:	Thorndale Wastewater Treatment Plant (WWTP) Expansion, Schedule C Municipal Class EA, Municipality of Thames Centre
Date:	Thursday, December 21, 2023 11:58:00 AM
Attachments:	Notice_Thorndale_Wastewater_Treatment_Plant_Expansion_Class_EA_dec2023.pdf

Hello,

Please see the attached Notice of Study Commencement for the Thorndale Wastewater Treatment Plant (WWTP) Expansion project, on behalf of the Municipality of Thames Centre. The project is being undertaken as a Schedule 'C' project in accordance with the Municipal Engineers Association (MEA) Municipal Class Environmental Assessment (as amended in 2023).

Should you have any questions, please let me know or send comments to the individuals identified on the Notice.

Thank you,

David Kielstra MA, EP, MCIP, RPP
Environmental Planner

Direct: 905 381-3247
Fax: 905 385-3534
David.Kielstra@stantec.com

Stantec
200-835 Paramount Drive
Stoney Creek ON L8J 0B4

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Please consider the environment before printing this email.

Chippewas of the Thames First Nation

COTTFN – Notice of Study Commencement December 2023 - Submitted to NationsConnect December 2023, submitted by NationsConnect January, 2024

ThorndaleWWTP: **Municipality of Thames Centre: Thorndale WWTP Expansion**

Report generated on February 27, 2025 by David Kielstra



Details

Distributed: January 5, 2024

Project description

Expansion of the existing Thorndale Wastewater Treatment Plant

Information

Consulting organization	Primary contacts
Stantec	David Kielstra
Region	**Consultation stream**
Ontario	Water
Project type	**Consultation identifiers**
Sanitary & storm waste water	Project ID: ThorndaleWWTP
Project access requirements	**Requested response date**
Uses existing access	2023-01-30
Planned project start date	**Planned project end date**
2025-05-01	2026-11-01
Project area	**Area of new cut (disturbance)**
2.61 hectares	2.61 hectares

Location description

Thorndale - existing WWTP. Proposed expansion of the WWTP within the existing site or adjacent property.

Supplemental organizations

Municipality of Thames Centre (Contacts: Jarrod Craven)

Documentation

Project web page links

Thorndale WWTP: https://www.thamescentre.on.ca/ThorndaleWWTPExpansion

Spatial files	Attachments
Thorndale WWTP.kmz	Notice_Thorndale_Wastewater_Treatment_Plant_Expansion_Class_EA_dec2023.pdf

Attachments for Chippewas of the Thames First Nation

let_ind_comm_0251_nosc_COTTFN_nationsconnect.pdf

Project/File: 165630251

Joe Miskokomon, Chief
Chippewas of the Thames First Nation
320 Chippewa Road, RR1
Muncey ON N0L 1Y0

Hello Chief Miskokomon,

Reference: Thorndale Wastewater Treatment Plant (WWTP) Expansion
Municipal Class Environmental Assessment
Notice of Study Commencement

The Municipality of Thames Centre (Municipality) has retained Stantec Consulting Ltd. to complete a Municipal Class Environmental Assessment (EA) to identify options for expansion of the Thorndale Wastewater Treatment Plant (WWTP), located at 1135 Ideal Drive. The study area for the WWTP is shown on the key map.

The purpose of this letter is to introduce you to the study, request your consultation, and provide you with some background information. A copy of the Notice of Study Commencement is provided.

Nature of the Proposed Activity

The Thorndale WWTP provides municipal wastewater treatment to the community of Thorndale. Expansion alternatives will be developed to address current needs and consider anticipated community growth.

The project will be undertaken in accordance with the Municipal Engineers Association (MEA) Municipal Class EA document (as amended in 2007, 2011, 2015 and 2023) and will address the requirements of a Schedule 'C' EA. A Schedule 'C' project includes the consideration of the natural, social and cultural environments when developing a recommended plan for the expansion of wastewater treatment capacity. Alternative Solutions will be identified to identify the preferred approach for the expansion, followed by the identification and evaluation of Alternative Designs to implement the preferred plan.

The need for more detailed investigations will be determined in subsequent stages of this study, based on recommended locations for infrastructure.

Reference: Thorndale Wastewater Treatment Plant (WWTP) Expansion

Details regarding opportunities for engagement as the study progresses, including Public Information Centres (PICs), will be advertised in a local newspaper and on the municipal website: www.thamescentre.on.ca/ThorndaleWWTPExpansion. Upon completion of the study, an Environmental Study Report (ESR) will be prepared and placed on the public record for a minimum 30-day review period.

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Should you have any questions, comments or interests regarding this Municipal Class EA Study, or if you would like to schedule a meeting to discuss this project further, please do not hesitate to contact the undersigned.

Sincerely,

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

CC: Jeff Paul, David Kielstra, Stantec Consulting Ltd.;

Rochelle Smith and Fallon Burch, COTTFN

Attachment: Notice of Study Commencement, Key Map

Reference: Thorndale Wastewater Treatment Plant (WWTP) Expansion

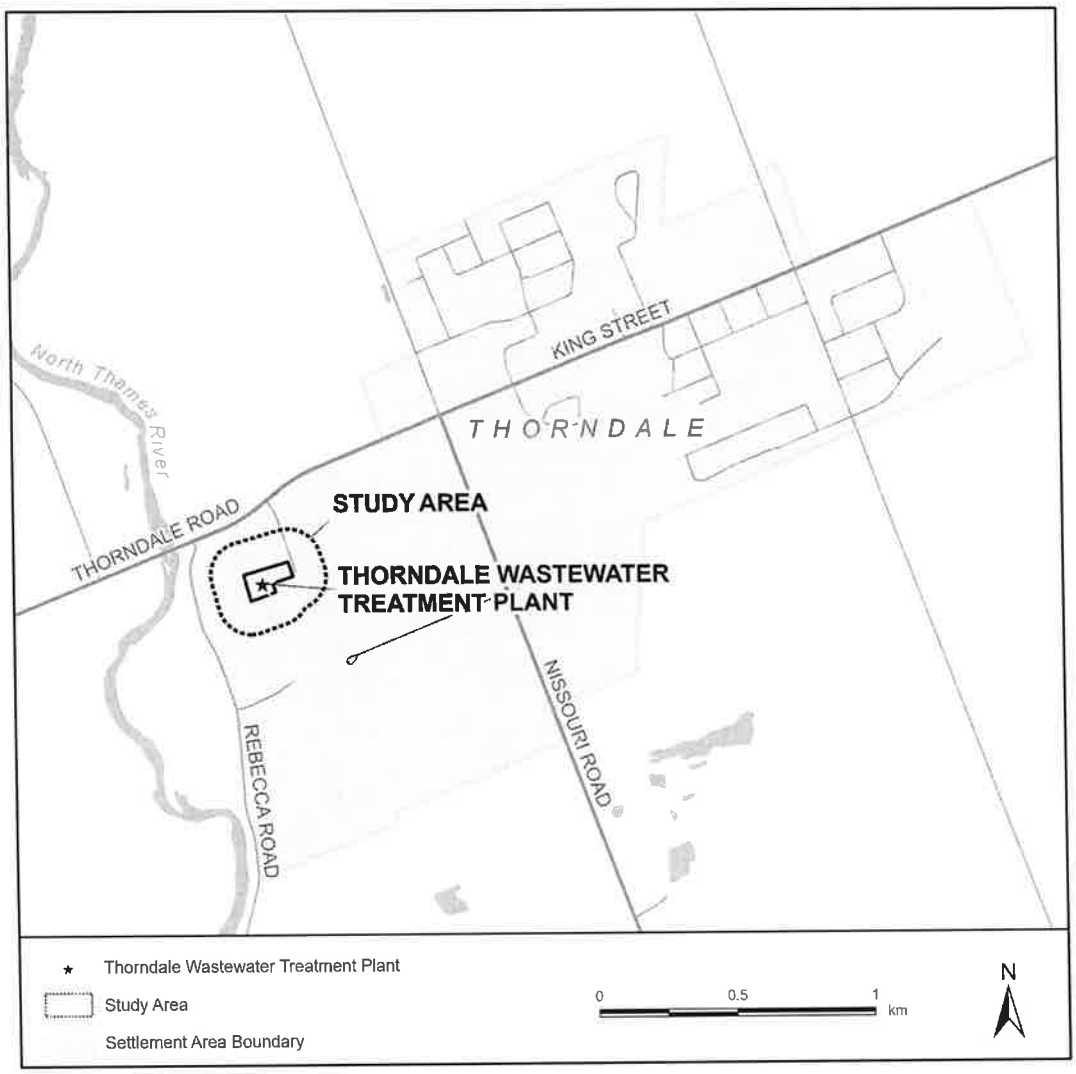


Figure 1 Key Map

From:	Kielstra, David
To:	"ChiefMaryDuckworth@caldwellfirstnation.ca"; "info@caldwellfirstnation.ca"
Cc:	Paul, Jeff; Jarrod Craven; "etow@caldwellfirstnation.ca"; "ecc@caldwellfirstnation.ca"
Subject:	Notice of Study Commencement - Thorndale Wastewater Treatment Plant (WWTP) Expansion, Schedule C Municipal Class EA, Municipality of Thames Centre
Date:	Thursday, December 21, 2023 9:55:00 PM
Attachments:	let_ind_comm_0251_nosc_caldwell.pdf Notice_Thorndale_Wastewater_Treatment_Plant_Expansion_Class_EA_dec2023.pdf

---

Hello Chief Duckworth,

Please see the attached Notice of Study Commencement for the Thorndale Wastewater Treatment Plant (WWTP) Expansion project, on behalf of the Municipality of Thames Centre. The project is being undertaken as a Schedule 'C' project in accordance with the Municipal Engineers Association (MEA) Municipal Class Environmental Assessment (as amended in 2023).

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Thank you,

David Kielstra MA, EP, MCIP, RPP
Environmental Planner

Direct: 905 381-3247
Fax: 905 385-3534
David.Kielstra@stantec.com

Stantec
200-835 Paramount Drive
Stoney Creek ON L8J 0B4

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Please consider the environment before printing this email.

December 21, 2023

Project/File: 165630251

Mary Duckworth, Chief
Caldwell First Nation
14 Orange Street, PO Box 388
Leamington ON N8H 1P5

ChiefMaryDuckworth@caldwellfirstnation.ca; info@caldwellfirstnation.ca; etow@caldwellfirstnation.ca; ecc@caldwellfirstnation.ca

Hello Chief Duckworth,

Reference: Thorndale Wastewater Treatment Plant (WWTP) Expansion
Municipal Class Environmental Assessment
Notice of Study Commencement

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Reference: Thorndale Wastewater Treatment Plant (WWTP) Expansion

Solutions will be identified to identify the preferred approach for the expansion, followed by the identification and evaluation of Alternative Designs to implement the preferred plan.

The need for more detailed investigations will be determined in subsequent stages of this study, based on recommended locations for infrastructure.

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Sincerely,

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

CC: Jeff Paul, David Kielstra, Stantec Consulting Ltd; Jenna Smids and Michelle McCormick, Caldwell First Nation

Attachment: Notice of Study Commencement, Key Map

Reference: Thorndale Wastewater Treatment Plant (WWTP) Expansion

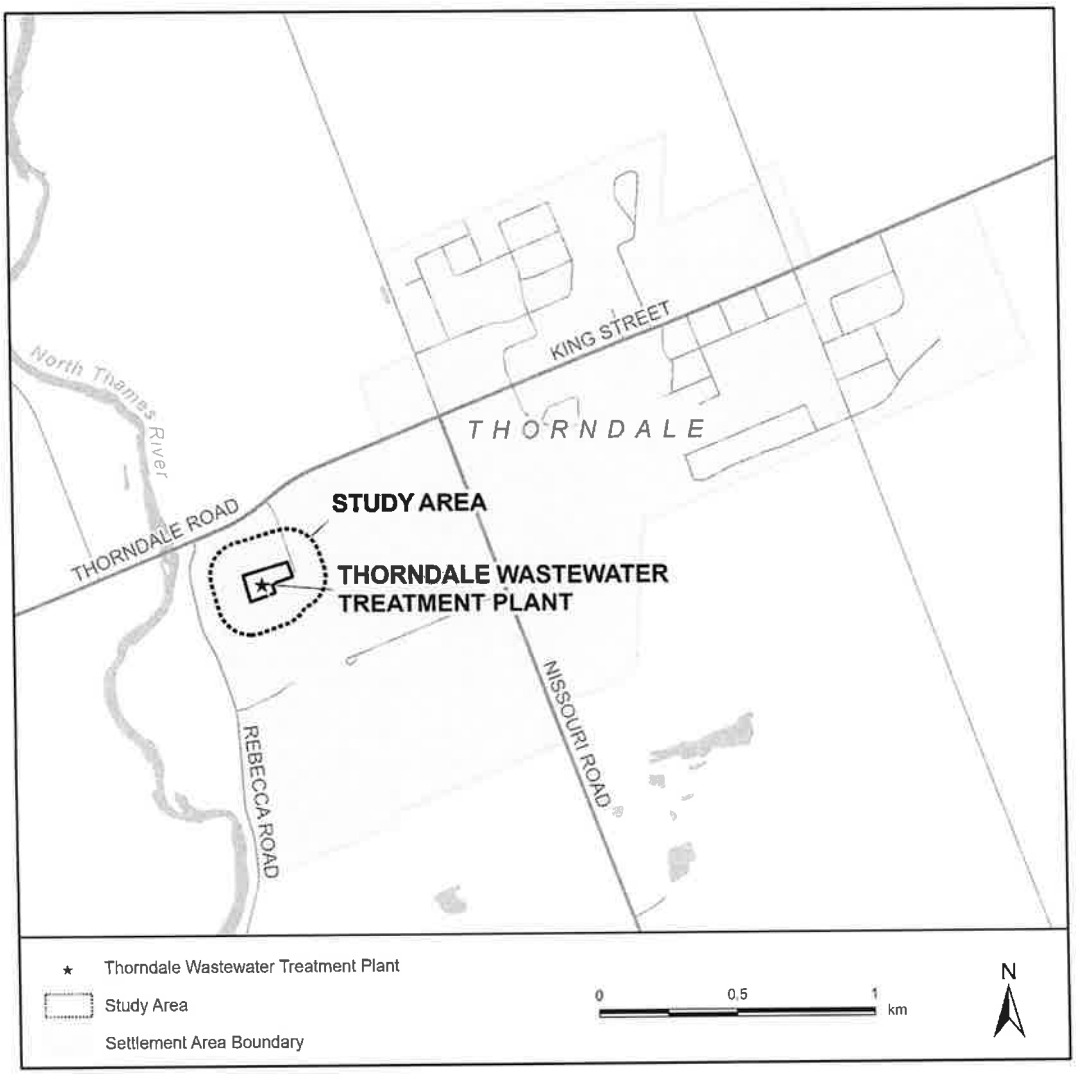


Figure 1 Key Map

From:	Kielstra, David
To:	chief.plain@aamjiwnaang.ca
Cc:	Paul, Jeff; Jarrod Craven; cobrien@aamjiwnaang.ca
Subject:	Notice of Study Commencement - Thorndale Wastewater Treatment Plant (WWTP) Expansion, Schedule C Municipal Class EA, Municipality of Thames Centre
Date:	Thursday, December 21, 2023 9:55:00 PM
Attachments:	let_ind_comm_0251_nosc_aamjiwnaang.pdf Notice_Thorndale_Wastewater_Treatment_Plant_Expansion_Class_EA_dec2023.pdf

---

Hello Chief Plain and Ms. Cathleen O'Brien,

Please see the attached Notice of Study Commencement for the Thorndale Wastewater Treatment Plant (WWTP) Expansion project, on behalf of the Municipality of Thames Centre. The project is being undertaken as a Schedule 'C' project in accordance with the Municipal Engineers Association (MEA) Municipal Class Environmental Assessment (as amended in 2023).

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Thank you,

David Kielstra MA, EP, MCIP, RPP
Environmental Planner

Direct: 905 381-3247
Fax: 905 385-3534
David.Kielstra@stantec.com

Stantec
200-835 Paramount Drive
Stoney Creek ON L8J 0B4

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Please consider the environment before printing this email.

December 21, 2023

Project/File: 165630251

Chris Plain, Chief
Aamjiwnaang First Nation
978 Tashmoo Avenue
Sarnia ON N7T 7H5

chief.plain@aamjiwnaang.ca; cobrien@aamjiwnaang.ca

Hello Chief Plain,

Reference: Thorndale Wastewater Treatment Plant (WWTP) Expansion
Municipal Class Environmental Assessment
Notice of Study Commencement

The Municipality of Thames Centre (Municipality) has retained Stantec Consulting Ltd. to complete a Municipal Class Environmental Assessment (EA) to identify options for expansion of the Thorndale Wastewater Treatment Plant (WWTP), located at 1135 Ideal Drive. The study area for the WWTP is shown on the key map.

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Sincerely,

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

CC: Jeff Paul, David Kielstra, Stantec Consulting Ltd.

Attachment: Notice of Study Commencement, Key Map

Reference: Thorndale Wastewater Treatment Plant (WWTP) Expansion

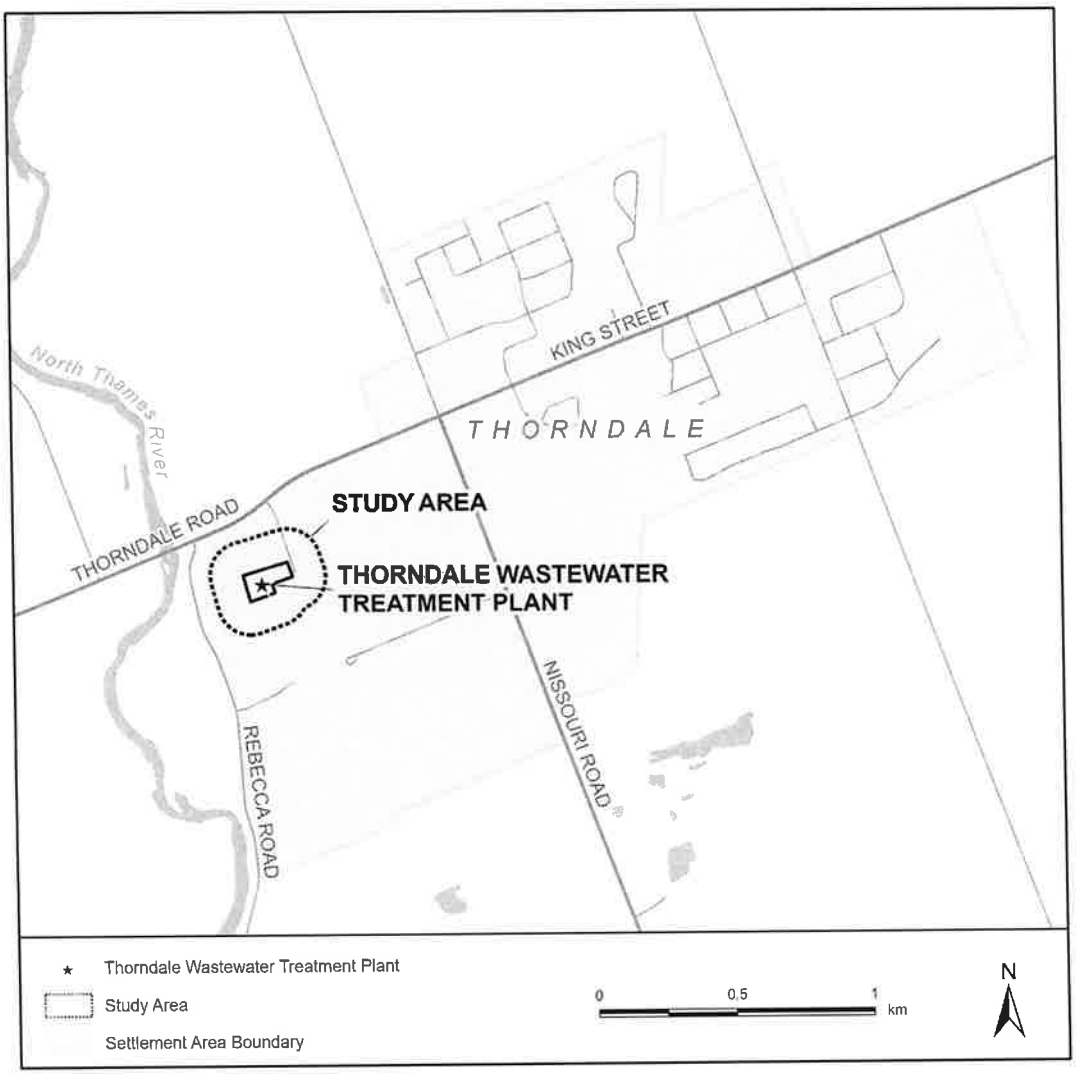


Figure 1 Key Map

From:	Kielstra, David
To:	justin.logan@delawarenation.on.ca
Cc:	Paul, Jeff; Jarrod Craven
Subject:	Notice of Study Commencement - Thorndale Wastewater Treatment Plant (WWTP) Expansion, Schedule C Municipal Class EA, Municipality of Thames Centre
Date:	Thursday, December 21, 2023 9:56:00 PM
Attachments:	let_ind_comm_0251_nosc_delaware_logan.pdf Notice_Thorndale_Wastewater_Treatment_Plant_Expansion_Class_EA_dec2023.pdf

---

Hello Chief Logan,

Please see the attached Notice of Study Commencement for the Thorndale Wastewater Treatment Plant (WWTP) Expansion project, on behalf of the Municipality of Thames Centre. The project is being undertaken as a Schedule 'C' project in accordance with the Municipal Engineers Association (MEA) Municipal Class Environmental Assessment (as amended in 2023).

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Thank you,

David Kielstra MA, EP, MCIP, RPP
Environmental Planner

Direct: 905 381-3247
Fax: 905 385-3534
David.Kielstra@stantec.com

Stantec
200-835 Paramount Drive
Stoney Creek ON L8J 0B4

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December 21, 2023

Project/File: 165630251

Justin Logan, Chief
Delaware Nation
14760 School House Line, RR #3
Thamesville ON N0P 2K0

justin.logan@delawarenation.on.ca

Hello Chief Logan,

Reference: Thorndale Wastewater Treatment Plant (WWTP) Expansion
Municipal Class Environmental Assessment
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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

CC: Jeff Paul, David Kielstra, Stantec Consulting Ltd.

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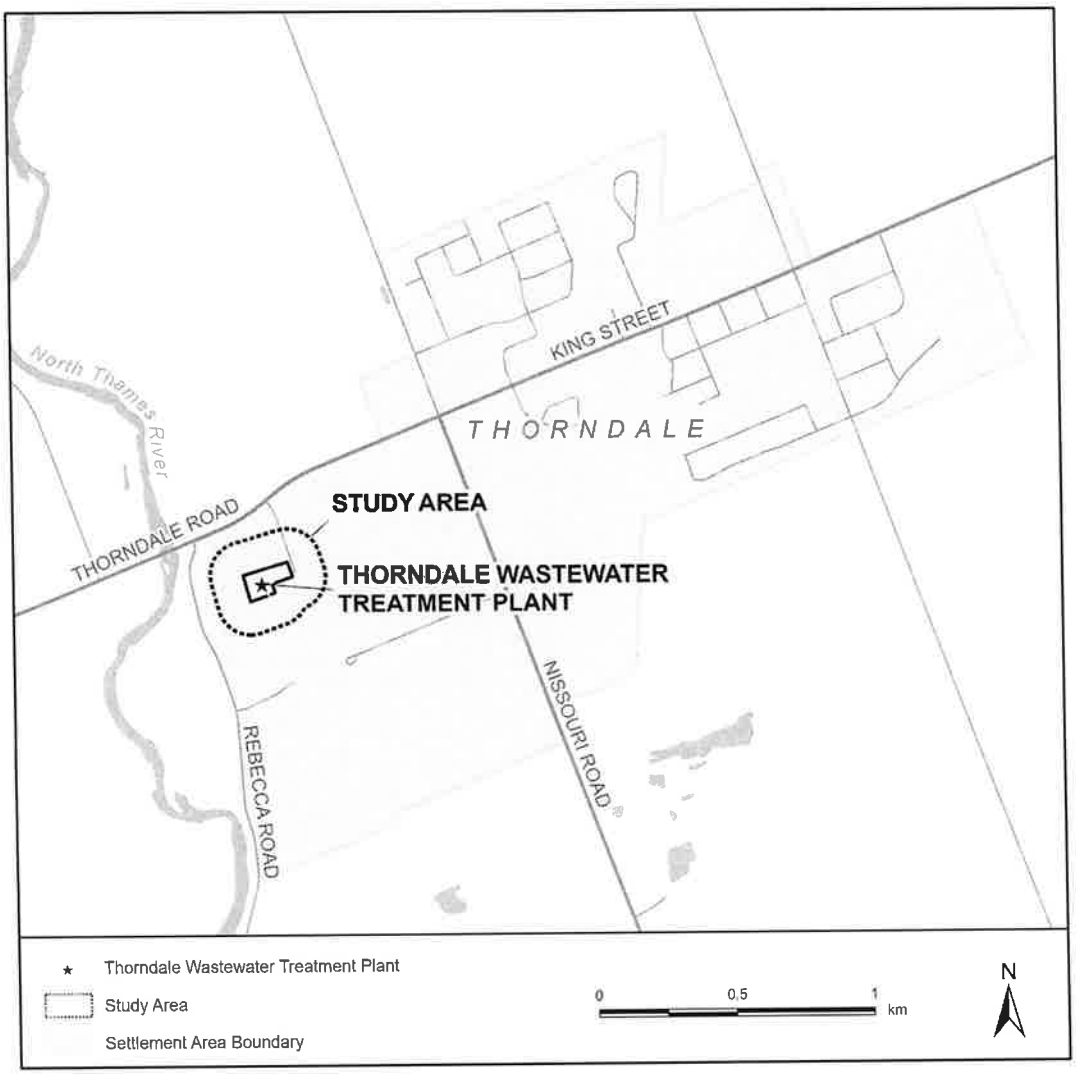


Figure 1 Key Map

From:	Kielstra, David
To:	"communications@hdi.land"; "info@hdi.land"
Cc:	Paul, Jeff; Jarrod Craven
Subject:	Notice of Study Commencement - Thorndale Wastewater Treatment Plant (WWTP) Expansion, Schedule C Municipal Class EA, Municipality of Thames Centre
Date:	Thursday, December 21, 2023 9:56:00 PM
Attachments:	let_ind_comm_0251_nosc_HDI.pdf Notice_Thorndale_Wastewater_Treatment_Plant_Expansion_Class_EA_dec2023.pdf

---

Hello Leroy Hill,

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Environmental Planner

Direct: 905 381-3247
Fax: 905 385-3534
David.Kielstra@stantec.com

Stantec
200-835 Paramount Drive
Stoney Creek ON L8J 0B4

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December 21, 2023

Project/File: 165630251

Leroy Hill, Secretary
Haudenosaunee Confederacy Council
16 Sunrise Court, P.O. Box 714, Suite 600
Ohsweken ON N0A1M0

communications@hdi.land; info@hdi.land

Hello Leroy Hill,

Reference: Thorndale Wastewater Treatment Plant (WWTP) Expansion
Municipal Class Environmental Assessment
Notice of Study Commencement

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Sincerely,

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

CC: Jeff Paul, David Kielstra, Stantec Consulting Ltd.

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Reference: Thorndale Wastewater Treatment Plant (WWTP) Expansion

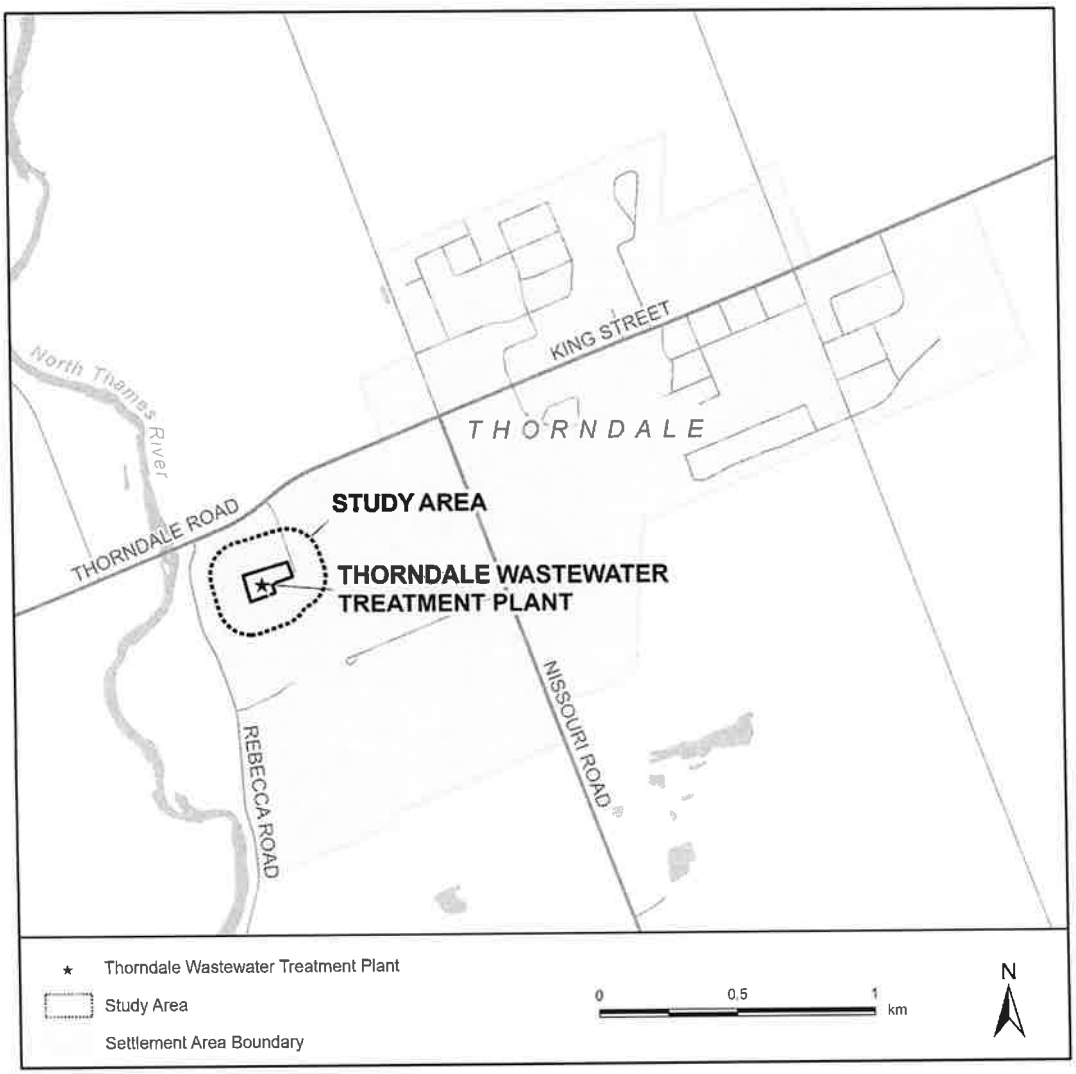


Figure 1 Key Map

From:	Kielstra, David
To:	"consultation@kettlepoint.org"
Cc:	Paul, Jeff; Jarrod Craven
Subject:	Notice of Study Commencement - Thorndale Wastewater Treatment Plant (WWTP) Expansion, Schedule C Municipal Class EA, Municipality of Thames Centre
Date:	Thursday, December 21, 2023 9:55:00 PM
Attachments:	let_ind_comm_0251_nosc_kettle_stony.pdf Notice_Thorndale_Wastewater_Treatment_Plant_Expansion_Class_EA_dec2023.pdf

---

Hello Chief Kimberly Bressette,

Please see the attached Notice of Study Commencement for the Thorndale Wastewater Treatment Plant (WWTP) Expansion project, on behalf of the Municipality of Thames Centre. The project is being undertaken as a Schedule 'C' project in accordance with the Municipal Engineers Association (MEA) Municipal Class Environmental Assessment (as amended in 2023).

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David Kielstra MA, EP, MCIP, RPP
Environmental Planner

Direct: 905 381-3247
Fax: 905 385-3534
David.Kielstra@stantec.com

Stantec
200-835 Paramount Drive
Stoney Creek ON L8J 0B4

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December 21, 2023

Project/File: 165630251

Kimberly Bressette, Chief
Chippewas of Kettle and Stony Point First Nation
6247 Indian Lane, RR#2
Lambton Shores ON N0N 1J0

consultation@kettlepoint.org

Hello Chief Bressette,

Reference: Thorndale Wastewater Treatment Plant (WWTP) Expansion
Municipal Class Environmental Assessment
Notice of Study Commencement

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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

CC: Jeff Paul, David Kielstra, Stantec Consulting Ltd.

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Reference: Thorndale Wastewater Treatment Plant (WWTP) Expansion

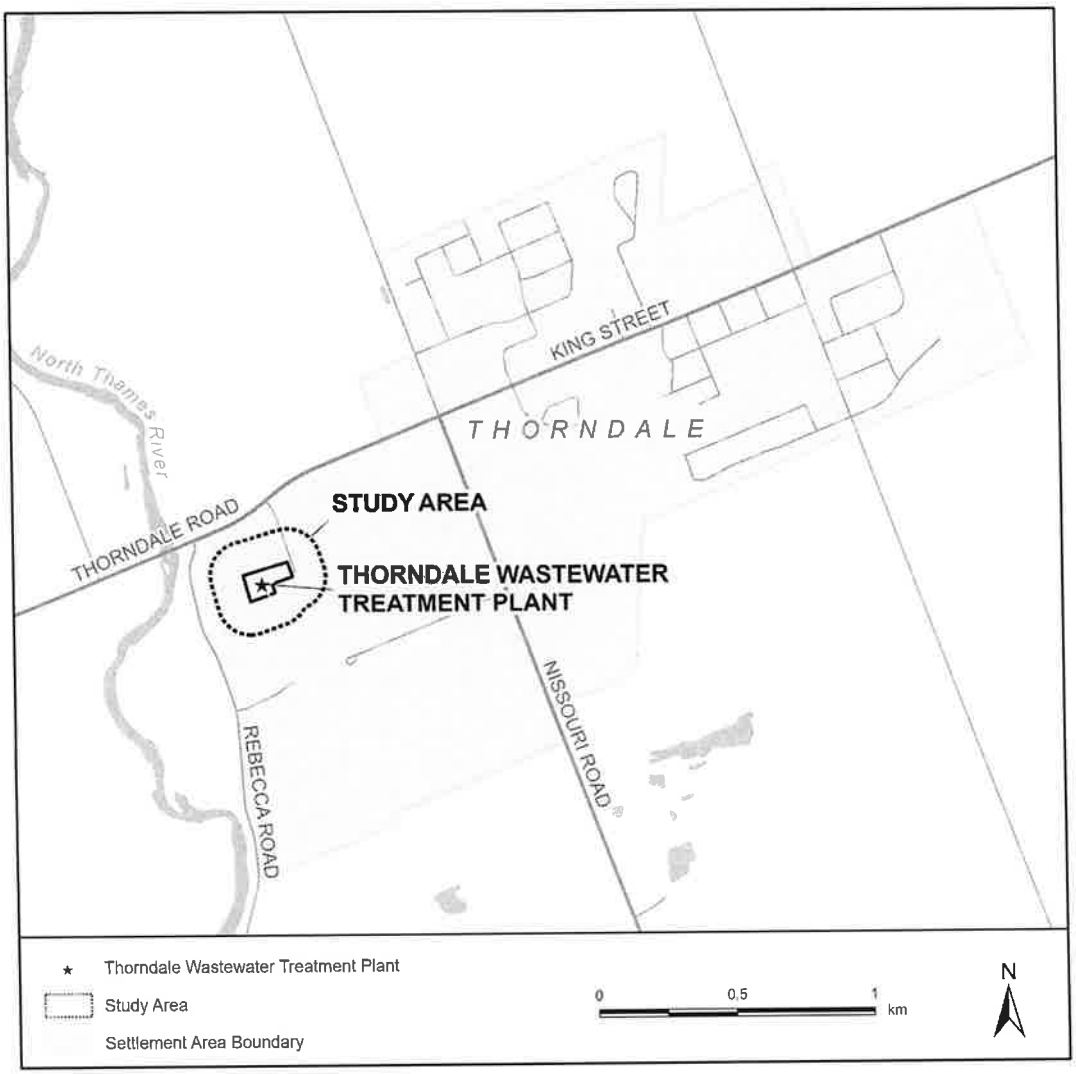


Figure 1 Key Map

From:	Kielstra, David
To:	communications@mncfn.ca; mark.laforme@mncfn.ca; doca.admin@mncfn.ca
Cc:	Paul, Jeff; Jarrod Craven
Subject:	Notice of Study Commencement - Thorndale Wastewater Treatment Plant (WWTP) Expansion, Schedule C Municipal Class EA, Municipality of Thames Centre
Date:	Thursday, December 21, 2023 9:56:00 PM
Attachments:	let_ind_comm_0251_nosc_MCFN.pdf Notice_Thorndale_Wastewater_Treatment_Plant_Expansion_Class_EA_dec2023.pdf

---

Hello Chief Clara Sault and Mark LaForme,

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David Kielstra MA, EP, MCIP, RPP
Environmental Planner

Direct: 905 381-3247
Fax: 905 385-3534
David.Kielstra@stantec.com

Stantec
200-835 Paramount Drive
Stoney Creek ON L8J 0B4

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December 21, 2023

Project/File: 165630251

Clara Sault, Chief
Mississaugas of the Credit First Nation
2789 Mississauga Road, RR # 6
Hagersville ON N0A 1H0

communications@mncfn.ca; mark.laforme@mncfn.ca; doca.admin@mncfn.ca

Hello Chief Sault,

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Municipal Class Environmental Assessment
Notice of Study Commencement

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4305 Hamilton Road
Dorchester, ON N0L 1G3
Phone (519) 268-7334 ext. 245
Email: jcraven@thamescentre.on.ca

CC: Jeff Paul, David Kielstra, Stantec Consulting Ltd.;
Mark LaForme, Mississaugas of the Credit First Nation

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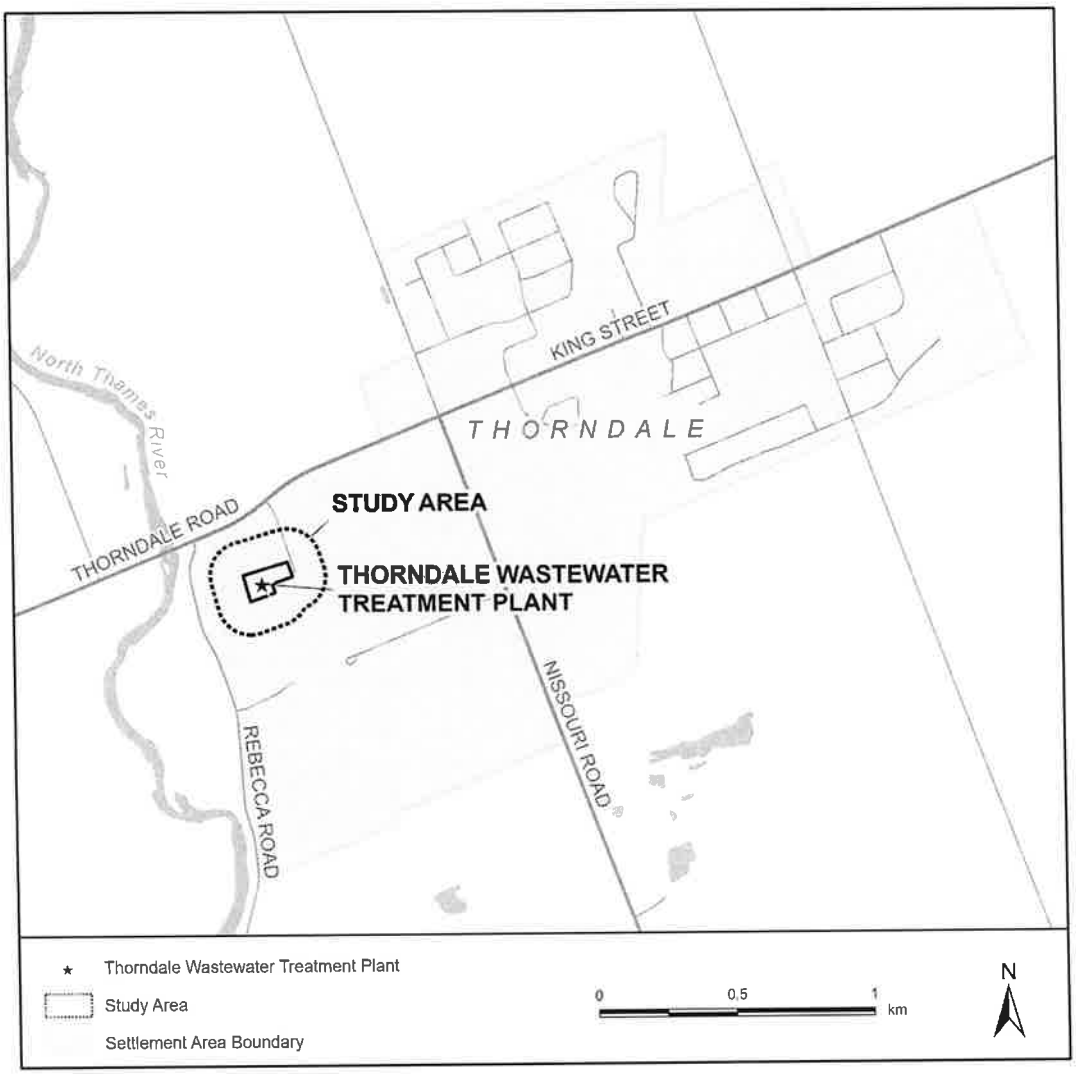


Figure 1 Key Map

From:	Kielstra, David
To:	consultations@metisnation.org
Cc:	Paul, Jeff; Jarrod Craven
Subject:	Notice of Study Commencement - Thorndale Wastewater Treatment Plant (WWTP) Expansion, Schedule C Municipal Class EA, Municipality of Thames Centre
Date:	Thursday, December 21, 2023 9:57:00 PM
Attachments:	Notice_Thorndale_Wastewater_Treatment_Plant_Expansion_Class_EA_dec2023.pdf let_ind_comm_0251_nosc_MNO.pdf

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Project/File: 165630251

Metis Consultation Unit
Metis Nation of Ontario (MNO)
Head Office

consultations@metisnation.org

Hello,

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Municipal Class Environmental Assessment
Notice of Study Commencement

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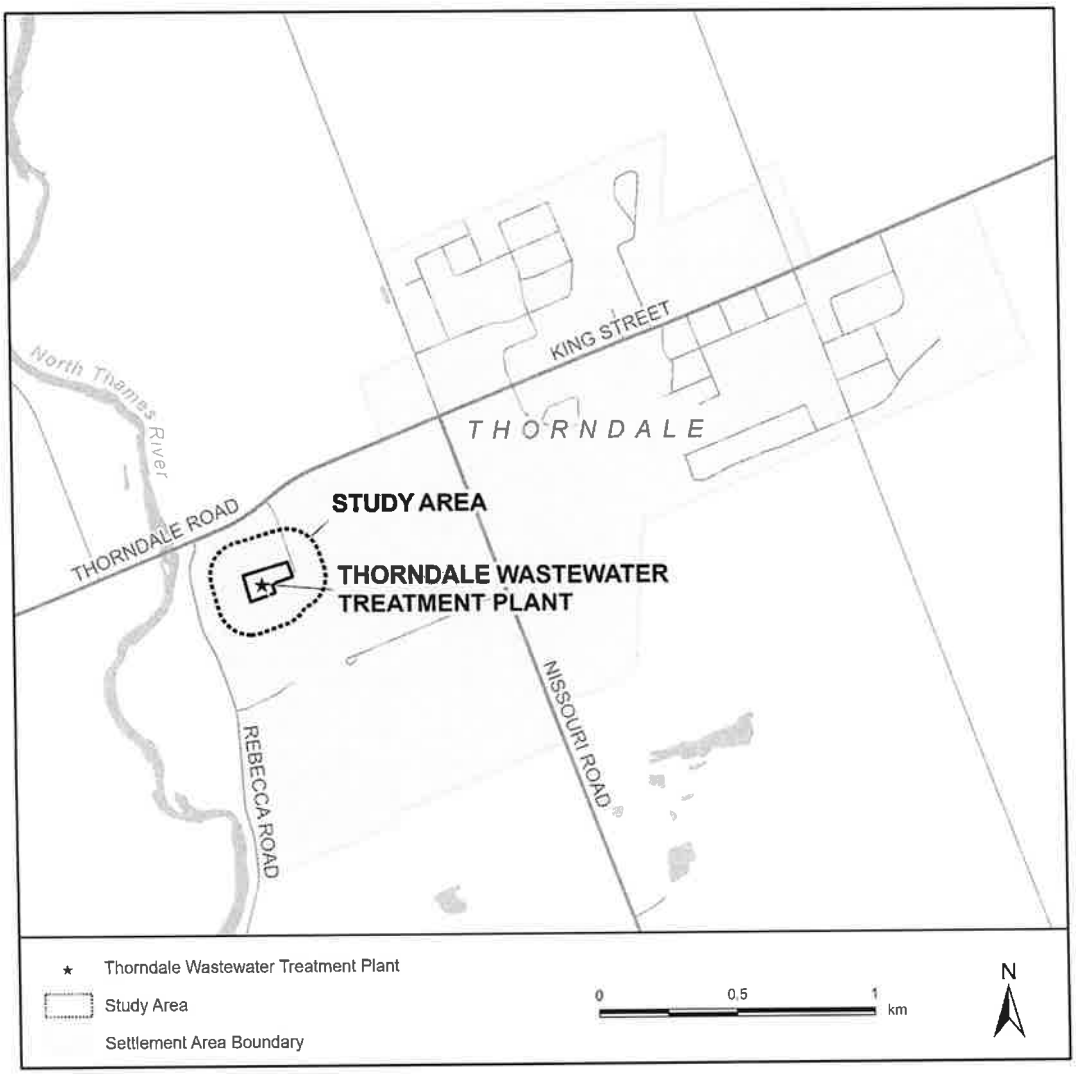


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From:	Kielstra, David
To:	chief.peters@munsee.ca; glenn@munsee.ca
Cc:	Paul, Jeff; Jarrod Craven
Subject:	Notice of Study Commencement - Thorndale Wastewater Treatment Plant (WWTP) Expansion, Schedule C Municipal Class EA, Municipality of Thames Centre
Date:	Thursday, December 21, 2023 9:56:00 PM
Attachments:	let_ind_comm_0251_nosc_munsee_delaware.pdf Notice_Thorndale_Wastewater_Treatment_Plant_Expansion_Class_EA_dec2023.pdf

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Hello Chief Mark Peters and Mr. Glenn Forrest,

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David.Kielstra@stantec.com

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December 21, 2023

Project/File: 165630251

Mark Peters, Chief
Munsee-Delaware Nation
289 Jubilee Road
Muncey ON N0L 1Y0

chief.peters@munsee.ca; glenn@munsee.ca

Hello Chief Peters,

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Municipal Class Environmental Assessment
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The need for more detailed investigations will be determined in subsequent stages of this study, based on recommended locations for infrastructure.

Details regarding opportunities for engagement as the study progresses, including Public Information Centres (PICs), will be advertised in a local newspaper and on the municipal website: www.thamescentre.on.ca/ThorndaleWWTPExpansion. Upon completion of the study, an Environmental Study Report (ESR) will be prepared and placed on the public record for a minimum 30-day review period.

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Should you have any questions, comments or interests regarding this Municipal Class EA Study, or if you would like to schedule a meeting to discuss this project further, please do not hesitate to contact the undersigned.

Sincerely,

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

CC: Jeff Paul, David Kielstra, Stantec Consulting Ltd;

Glenn Forrest, Munsee-Delaware First Nation

Attachment: Notice of Study Commencement, Key Map

Reference: Thorndale Wastewater Treatment Plant (WWTP) Expansion

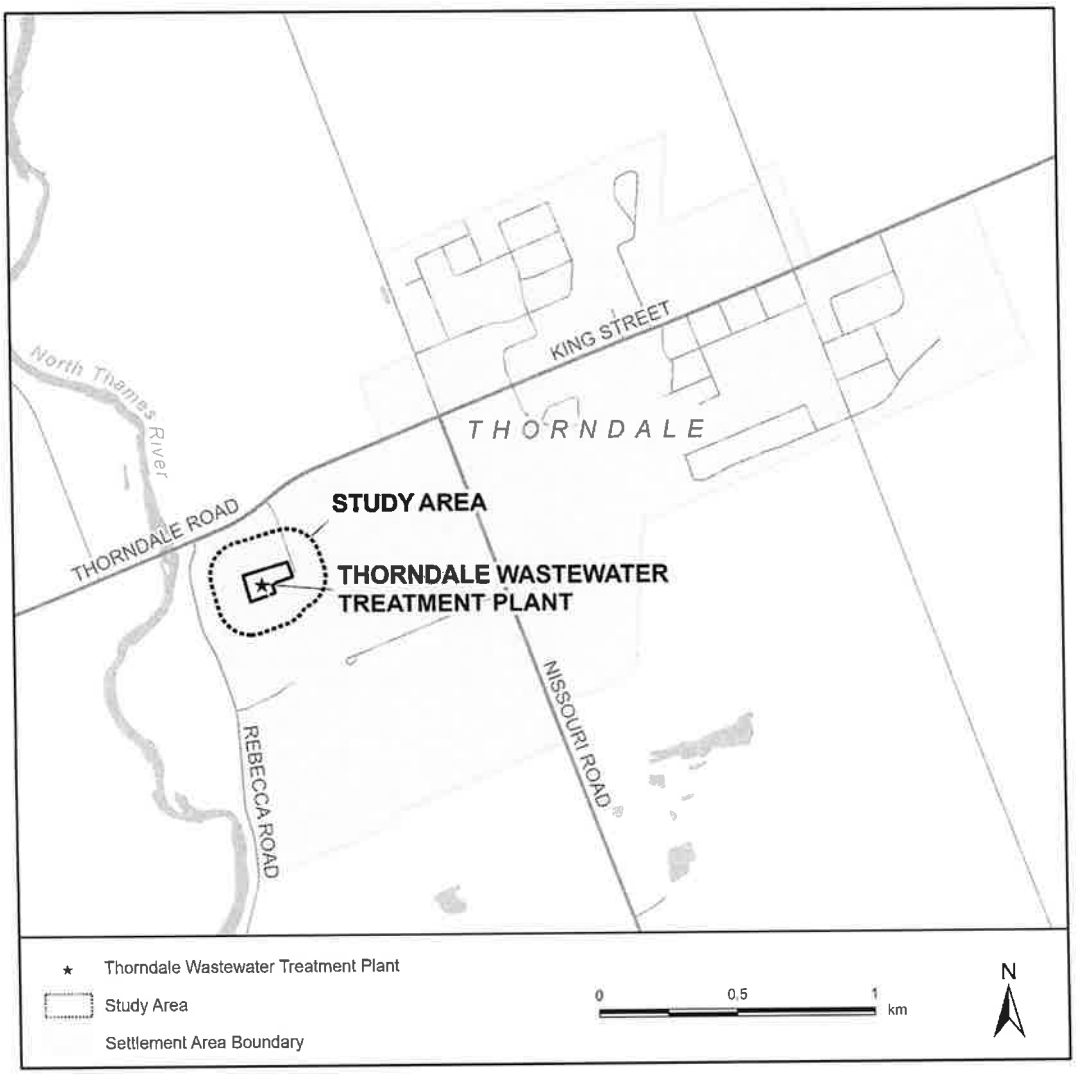


Figure 1 Key Map

From:	Kielstra, David
To:	todd.cornelius@oneida.on.ca; cherilyn.hill@oneida.on.ca
Cc:	Paul, Jeff; Jarrod Craven
Subject:	Notice of Study Commencement - Thorndale Wastewater Treatment Plant (WWTP) Expansion, Schedule C Municipal Class EA, Municipality of Thames Centre
Date:	Thursday, December 21, 2023 9:56:00 PM
Attachments:	let_ind_comm_0251_nosc_oneida.pdf Notice_Thorndale_Wastewater_Treatment_Plant_Expansion_Class_EA_dec2023.pdf

---

Hello Chief Todd Cornelius and Ms. Cherilyn Hill,

Please see the attached Notice of Study Commencement for the Thorndale Wastewater Treatment Plant (WWTP) Expansion project, on behalf of the Municipality of Thames Centre. The project is being undertaken as a Schedule 'C' project in accordance with the Municipal Engineers Association (MEA) Municipal Class Environmental Assessment (as amended in 2023).

Should you have any questions, please let me know or send comments to the individuals identified on the Notice.

Thank you,

David Kielstra MA, EP, MCIP, RPP
Environmental Planner

Direct: 905 381-3247
Fax: 905 385-3534
David.Kielstra@stantec.com

Stantec
200-835 Paramount Drive
Stoney Creek ON L8J 0B4

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Project/File: 165630251

J.Todd Cornelius, Chief
Oneida Nation of the Thames
2212 Elm Avenue
Southwold ON N0L 2G0

todd.cornelius@oneida.on.ca; cherilyn.hill@oneida.on.ca

Hello Chief Cornelius,

Reference: Thorndale Wastewater Treatment Plant (WWTP) Expansion
Municipal Class Environmental Assessment
Notice of Study Commencement

The Municipality of Thames Centre (Municipality) has retained Stantec Consulting Ltd. to complete a Municipal Class Environmental Assessment (EA) to identify options for expansion of the Thorndale Wastewater Treatment Plant (WWTP), located at 1135 Ideal Drive. The study area for the WWTP is shown on the key map.

The purpose of this letter is to introduce you to the study, request your consultation, and provide you with some background information. A copy of the Notice of Study Commencement is provided.

Nature of the Proposed Activity

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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

CC: Jeff Paul, David Kielstra, Stantec Consulting Ltd;
Cherilyn Hill, Oneida Nation of the Thames

Attachment: Notice of Study Commencement, Key Map

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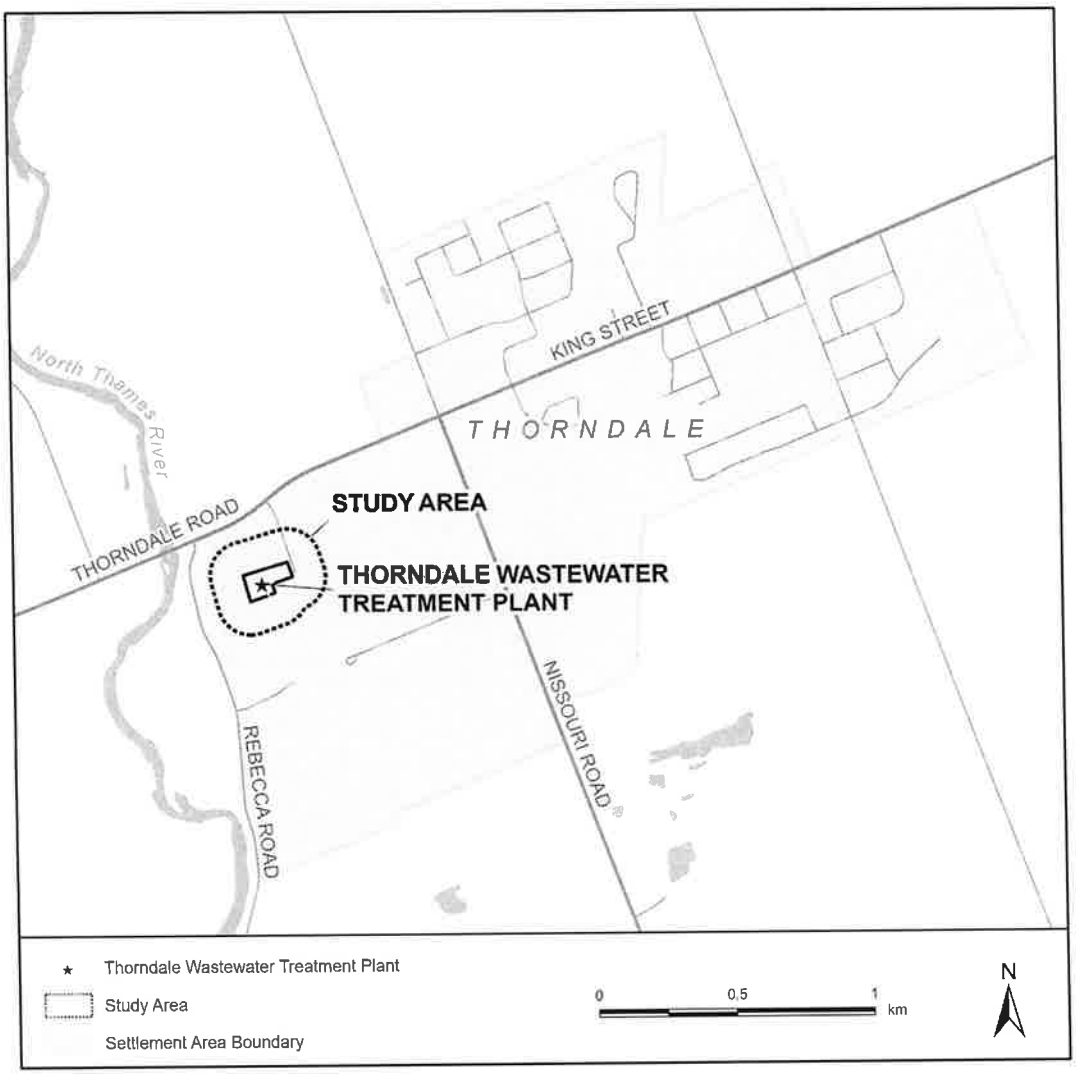


Figure 1 Key Map

From:	Kielstra, David
To:	rvanstone@sixnations.ca
Cc:	Paul, Jeff; Jarrod Craven
Subject:	Notice of Study Commencement - Thorndale Wastewater Treatment Plant (WWTP) Expansion, Schedule C Municipal Class EA, Municipality of Thames Centre
Date:	Thursday, December 21, 2023 9:55:00 PM
Attachments:	let_ind_comm_0251_nosc_six_nations.pdf Notice_Thorndale_Wastewater_Treatment_Plant_Expansion_Class_EA_dec2023.pdf

---

Hello Chief Sherri-Lyn Hill and Ms. Robbin VanStone,

Please see the attached Notice of Study Commencement for the Thorndale Wastewater Treatment Plant (WWTP) Expansion project, on behalf of the Municipality of Thames Centre. The project is being undertaken as a Schedule 'C' project in accordance with the Municipal Engineers Association (MEA) Municipal Class Environmental Assessment (as amended in 2023).

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Thank you,

David Kielstra MA, EP, MCIP, RPP
Environmental Planner

Direct: 905 381-3247
Fax: 905 385-3534
David.Kielstra@stantec.com

Stantec
200-835 Paramount Drive
Stoney Creek ON L8J 0B4

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December 21, 2023

Project/File: 165630251

Sherri-Lyn Hill, Chief
Six Nations of the Grand River Territory
1695 Chiefswood Road
PO Box 5000
Ohsweken ON N0A 1M0

c/o: rvanstone@sixnations.ca

Hello Chief Hill,

Reference: Thorndale Wastewater Treatment Plant (WWTP) Expansion
Municipal Class Environmental Assessment
Notice of Study Commencement

The Municipality of Thames Centre (Municipality) has retained Stantec Consulting Ltd. to complete a Municipal Class Environmental Assessment (EA) to identify options for expansion of the Thorndale Wastewater Treatment Plant (WWTP), located at 1135 Ideal Drive. The study area for the WWTP is shown on the key map.

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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

CC: Jeff Paul, David Kielstra, Stantec Consulting Ltd.; Robin VanStone, Six Nations of the Grand River Territory

Attachment: Notice of Study Commencement, Key Map

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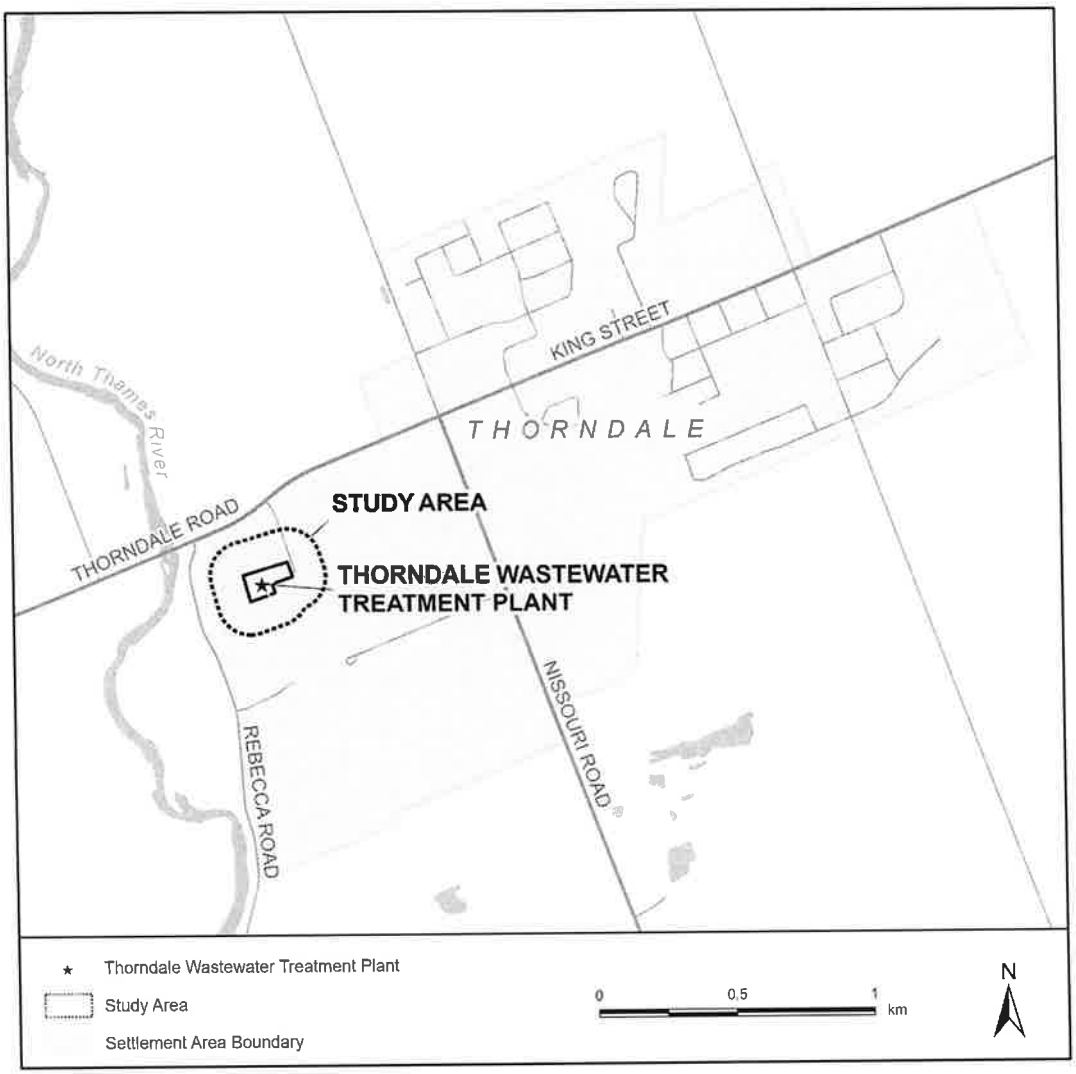


Figure 1 Key Map

From:	Kielstra, David
To:	"drskoke@wifn.org"
Cc:	Paul, Jeff; Jarrod Craven; Janet Macbeth; Dean Jacobs
Subject:	Notice of Study Commencement - Thorndale Wastewater Treatment Plant (WWTP) Expansion, Schedule C Municipal Class EA, Municipality of Thames Centre
Date:	Thursday, December 21, 2023 9:56:00 PM
Attachments:	let_ind_comm_0251_nosc_walpole_miskokomon.pdf Notice_Thorndale_Wastewater_Treatment_Plant_Expansion_Class_EA_dec2023.pdf

---

Hello Chief Dan Miskokomon, Ms. Janet MacBeth, and Mr. Dean Jacobs,

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Environmental Planner

Direct: 905 381-3247
Fax: 905 385-3534
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Stoney Creek ON L8J 0B4

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Please consider the environment before printing this email.

December 21, 2023

Project/File: 165630251

Dan Miskokomon, Chief
Bkejwanong Territory (Walpole Island)
117 Tahgahoning Road, RR #3
Wallaceburg ON N8A 4K9

drskoke@wifn.org; janet.macbeth@wifn.org: dean.jacobs@wifn.org;
dean.jacobs@wifn.org

Hello Chief Miskokomon,

Reference: Thorndale Wastewater Treatment Plant (WWTP) Expansion
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4305 Hamilton Road
Dorchester, ON N0L 1G3
Phone (519) 268-7334 ext. 245
Email: jcraven@thamescentre.on.ca

CC: Jeff Paul, David Kielstra, Stantec Consulting Ltd;
Janet MacBeth and Dean Jacobs, Bkejwanong Territory

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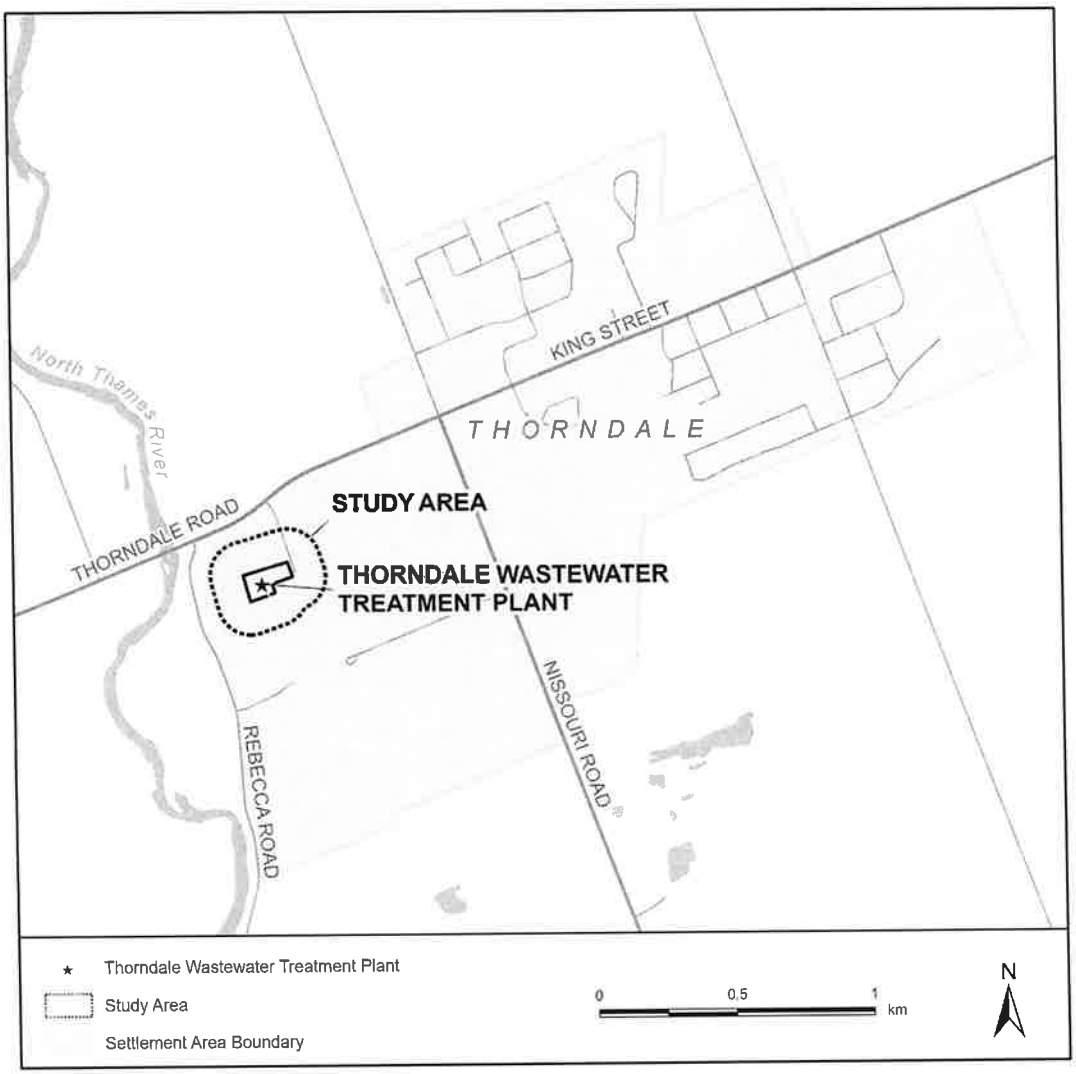


Figure 1 Key Map

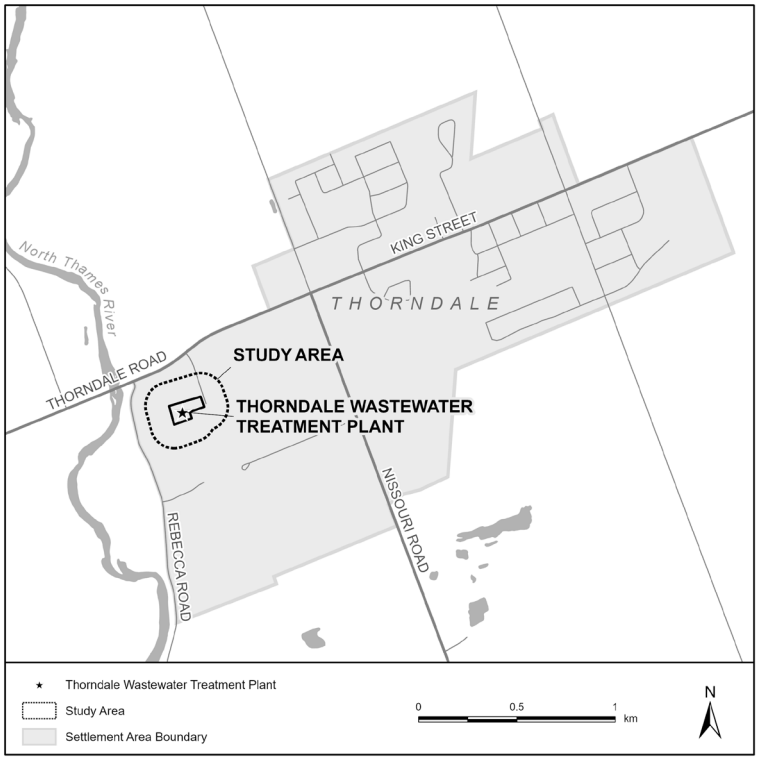
NOTICE OF PUBLIC INFORMATION CENTRE #1

Thorndale Wastewater Treatment Plant Expansion
Schedule C Municipal Class Environmental Assessment Study

THE STUDY

The Municipality of Thames Centre (Municipality) has retained Stantec Consulting Ltd. to complete a Municipal Class Environmental Assessment (EA) to identify options for expansion of the Thorndale Wastewater Treatment Plant (WWTP), located at 1135 Ideal Drive, as shown on the map below.

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HOW CAN I PARTICIPATE?

An in-person Public Information Centre (PIC #1) is being held using a drop-in format, with members of the project team available to discuss the project and respond to any questions you may have.

Date: **Thursday, January 25, 2024**
Location: **Thorndale Lions Community Centre – Meeting Room #1**
265 Upper Queen Street, Thorndale, ON
Time: **5:00 pm - 7:00 pm**

Presentation materials will also be available on the Municipality's website following the PIC at: www.thamescentre.on.ca/ThorndaleWWTPExpansion. Comments are requested by **February 2, 2024**.

This study is being undertaken in accordance with the requirements of Schedule C projects, as outlined in the Municipal Class EA document (2000, as amended in 2007, 2011, 2015 and 2023) which is approved under the *Ontario Environmental Assessment Act*. Near the end of the project, an Environmental Study Report (ESR) will be prepared to document the EA process, consultation activities, and the evaluation. The ESR will be presented for a 30 day public review at that time.

If you wish to provide comments, have your name added to the study mailing list, or if you have questions about this project, please contact 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

If you have any accessibility requirements in order to participate in this project, please contact one of the Project Team members listed above. Comments and information are being collected to assist with meeting the requirements of the *Ontario Environmental Assessment Act*. Information collected will be used in accordance with the *Municipal Freedom of Information and Protection of Privacy Act* and *Access to Information Act*. With the exception of personal information, all comments will become part of the public record.

Notice

NOTICE OF PUBLIC INFORMATION CENTRE #1
Thorndale Wastewater Treatment Plant Expansion
Schedule C Municipal Class Environmental Assessment Study

MUNICIPALITY OF Thames Centre

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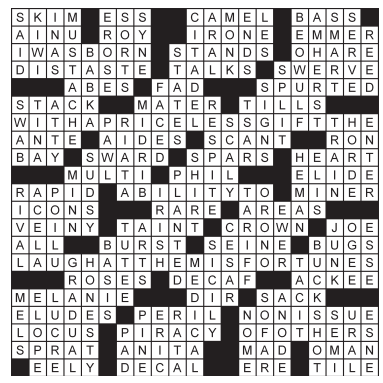
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The Signpost
15 Bridge Street, Dorchester
519.268.7337 • signpost@rogers.com

Last Week's Answers

CRYPTO ANSWERS: *A. data B. memory C. files D. server*



6	2	4	8	9	1	7	3	5
1	9	7	3	2	5	4	8	6
3	8	5	4	6	7	1	2	9
2	4	6	7	3	8	9	5	1
9	5	3	1	4	2	6	7	8
8	7	1	6	5	9	2	4	3
4	3	9	2	8	6	5	1	7
7	6	8	5	1	4	3	9	2
5	1	2	9	7	3	8	6	4

The Mega Paper is coming soon! January 31

Friday, January 26 is the last day to stake your claim in the January Mega Paper.
Contact The Signpost at 519.268.7337 to reserve your ad.
This special edition will be published on **Wednesday, January 31**.

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signpost@rogers.com • www.dorchestersignpost.com

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EIGHTH PAGE	$126.00
QUARTER PAGE	$229.50
HALF PAGE	$495.00
FULL PAGE	$994.50

FLYERS

$721 for full distribution
9000 flyers must be supplied by noon on January 26.
*All prices are subject to 13% HST

From:	Kielstra, David
Cc:	Paul, Jeff; Jarrod Craven
Bcc:	MNRF.Ayl@ontario.ca; mark.badali1@ontario.ca; karla.barboza@ontario.ca; joseph.harvey@ontario.ca; mivanic@middlesex.ca; ctraini@middlesex.ca; smcmillan@thamescentre.on.ca; msmibert@thamescentre.on.ca; tmichiels@thamescentre.on.ca; jmckillop@thamescentre.on.ca; jcraven@thamescentre.on.ca; kwillson@thamescentre.on.ca; winfieldk@thamesriver.on.ca; allainJ@thamesriver.on.ca; dafoeb@thamesriver.on.ca; welkerj@thamesriver.on.ca; abennett@mlems.ca; ndorken@thamescentre.on.ca; OPP.Middlesex@opp.ca; b.puzanov@tvdsb.ca; rmclean@ldcsb.ca; crossi@mybigyellowbus.ca; info@progrowfarms.com; andrew.okolisan@ads-pipe.com; info@ilovethorndale.ca; richard.bolliger@rci.rogers.com; rogers.moc@telecon.ca; markups@enbridge.com; james.goodchild@bell.ca; pucc.circulations.GT@bell.ca; jeff.soetemans@execulink.com; SecondaryLandUse@HydroOne.com; jane@fieldcrest.biz; pat@fieldcrest.biz; clinton@ndev.ca; phil.masschelein@sifton.com; matt.robertson@sifton.com
Subject:	Notice of Public Information Centre 1 - Thorndale Wastewater Treatment Plant (WWTP) Expansion, Schedule C Municipal Class EA, Municipality of Thames Centre
Date:	Friday, January 19, 2024 9:58:00 AM
Attachments:	Notice_PIC1 - Thorndale_Wastewater_Treatment_Plant_Expansion_Class_EA.pdf

---

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Thank you,

David Kielstra MA, EP, MCIP, RPP
Environmental Planner

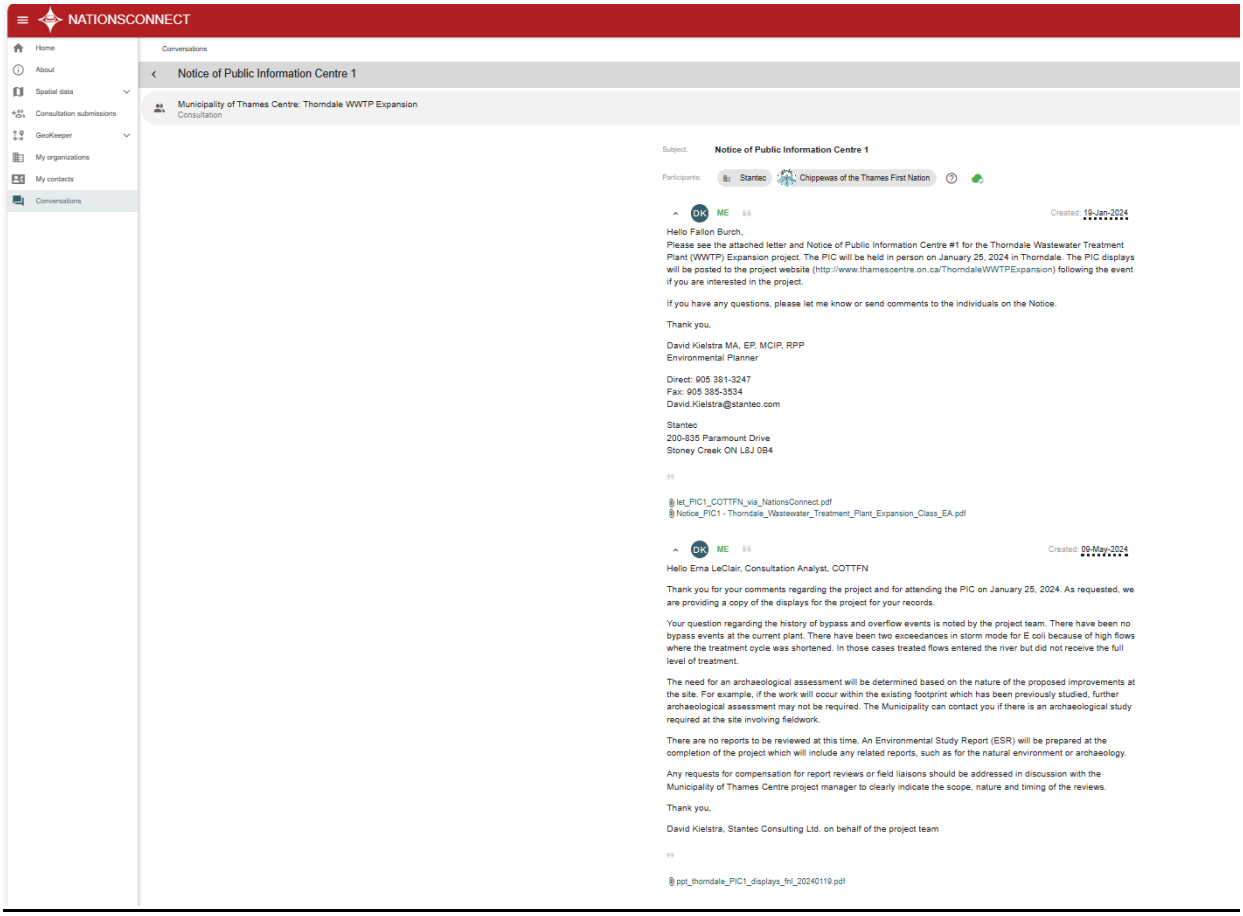
Direct: 905 381-3247
Fax: 905 385-3534
David.Kielstra@stantec.com

Stantec
200-835 Paramount Drive
Stoney Creek ON L8J 0B4

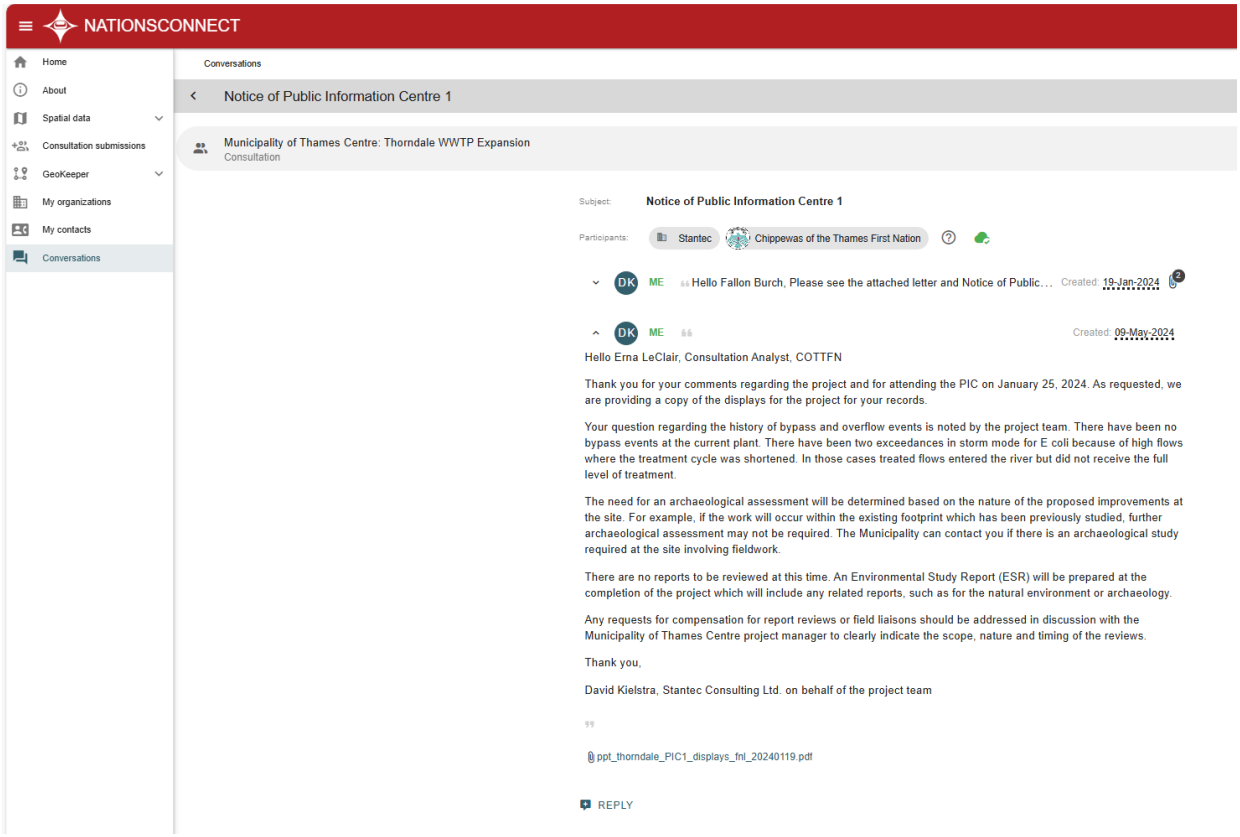
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COTTFN – Notice of Public Information Centre 1 - January 2024



COTTFN – Notice of Public Information Centre 1 Response – May 2024



January 19, 2024

Project/File: 165630251

Joe Miskokomon, Chief
Chippewas of the Thames First Nation
320 Chippewa Road, RR1
Muncey ON N0L 1Y0

via NationsConnect

Hello Chief Miskokomon,

Reference: Thorndale Wastewater Treatment Plant (WWTP) Expansion
Municipal Class Environmental Assessment
Notice of Public Information Centre #1

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Your comments are requested by February 2, 2024, although we welcome your community's participation beyond this comment period and as the study continues.

Reference: Thorndale Wastewater Treatment Plant (WWTP) Expansion

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Should you have any questions, comments or interests regarding this Municipal Class EA Study, or if you would like to schedule a meeting to discuss this project further, please do not hesitate to contact the undersigned.

Sincerely,



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

CC: Jeff Paul, David Kielstra, Stantec Consulting Ltd.;

Rochelle Smith and Fallon Burch, COTTFN

Attachment: Notice of Public Information Centre #1

From:	Kielstra, David
To:	rvanstone@sixnations.ca
Cc:	Paul, Jeff; Jarrod Craven
Subject:	Notice of Public Information Centre 1 - Thorndale Wastewater Treatment Plant (WWTP) Expansion, Schedule C Municipal Class EA, Municipality of Thames Centre
Date:	Friday, January 19, 2024 4:00:00 PM
Attachments:	let_PIC1_SNGR.pdf Notice_PIC1 - Thorndale_Wastewater_Treatment_Plant_Expansion_Class_EA.pdf

---

Hello Chief Hill and Ms. Van Stone,

Please see the attached letter and Notice of Public Information Centre #1 for the Thorndale Wastewater Treatment Plant (WWTP) Expansion project. The PIC will be held in person on January 25, 2024 in Thorndale. The PIC displays will be posted to the project website (http://www.thamescentre.on.ca/ThorndaleWWTPExpansion) following the event if you are interested in the project.

If you have any questions, please let me know or send comments to the individuals on the Notice.

Thank you,

David Kielstra MA, EP, MCIP, RPP
Environmental Planner

Direct: 905 381-3247
Fax: 905 385-3534
David.Kielstra@stantec.com

Stantec
200-835 Paramount Drive
Stoney Creek ON L8J 0B4

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Please consider the environment before printing this email.

January 19, 2024

Project/File: 165630251

Sherri-Lyn Hill, Chief
Six Nations of the Grand River Territory
1695 Chiefswood Road
PO Box 5000
Ohsweken ON N0A 1M0

c/o: rvanstone@sixnations.ca

Hello Chief Hill,

Reference: Thorndale Wastewater Treatment Plant (WWTP) Expansion
Municipal Class Environmental Assessment
Notice of Public Information Centre #1

The Municipality of Thames Centre (Municipality) has retained Stantec Consulting Ltd. to complete a Municipal Class Environmental Assessment (EA) to identify options for expansion of the Thorndale Wastewater Treatment Plant (WWTP), located at 1135 Ideal Drive.

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Sincerely,



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

CC: Jeff Paul, David Kielstra, Stantec Consulting Ltd.; Robin VanStone, Six Nations of the Grand River Territory

Attachment: Notice of Public Information Centre #1

From:	Kielstra, David
To:	chief.plain@aamjiwnaang.ca
Cc:	Paul, Jeff; Jarrod Craven; cobrien@aamjiwnaang.ca
Subject:	Notice of Public Information Centre 1 - Thorndale Wastewater Treatment Plant (WWTP) Expansion, Schedule C Municipal Class EA, Municipality of Thames Centre
Date:	Friday, January 19, 2024 4:00:00 PM
Attachments:	let_PIC1_Aamjiwnaang.pdf Notice_PIC1 - Thorndale_Wastewater_Treatment_Plant_Expansion_Class_EA.pdf

---

Hello Chief Plain and staff,

Please see the attached letter and Notice of Public Information Centre #1 for the Thorndale Wastewater Treatment Plant (WWTP) Expansion project. The PIC will be held in person on January 25, 2024 in Thorndale. The PIC displays will be posted to the project website (http://www.thamescentre.on.ca/ThorndaleWWTPExpansion) following the event if you are interested in the project.

If you have any questions, please let me know or send comments to the individuals on the Notice.

Thank you,

David Kielstra MA, EP, MCIP, RPP
Environmental Planner

Direct: 905 381-3247
Fax: 905 385-3534
David.Kielstra@stantec.com

Stantec
200-835 Paramount Drive
Stoney Creek ON L8J 0B4

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Please consider the environment before printing this email.

January 19, 2024

Project/File: 165630251

Chris Plain, Chief
Aamjiwnaang First Nation
978 Tashmoo Avenue
Sarnia ON N7T 7H5

chief.plain@aamjiwnaang.ca; cobrien@aamjiwnaang.ca

Hello Chief Plain,

Reference: Thorndale Wastewater Treatment Plant (WWTP) Expansion
Municipal Class Environmental Assessment
Notice of Public Information Centre #1

The Municipality of Thames Centre (Municipality) has retained Stantec Consulting Ltd. to complete a Municipal Class Environmental Assessment (EA) to identify options for expansion of the Thorndale Wastewater Treatment Plant (WWTP), located at 1135 Ideal Drive.

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Sincerely,



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

CC: Jeff Paul, David Kielstra, Stantec Consulting Ltd.

Attachment: Notice of Public Information Centre #1

From:	Kielstra, David
To:	ChiefMaryDuckworth@caldwellfirstnation.ca; info@caldwellfirstnation.ca
Cc:	Paul, Jeff; Jarrod Craven; etow@caldwellfirstnation.ca; ecc@caldwellfirstnation.ca
Subject:	Notice of Public Information Centre 1 - Thorndale Wastewater Treatment Plant (WWTP) Expansion, Schedule C Municipal Class EA, Municipality of Thames Centre
Date:	Friday, January 19, 2024 3:59:00 PM
Attachments:	let_PIC1_Caldwell.pdf Notice_PIC1 - Thorndale_Wastewater_Treatment_Plant_Expansion_Class_EA.pdf

---

Hello Chief Duckworth and staff,

Please see the attached letter and Notice of Public Information Centre #1 for the Thorndale Wastewater Treatment Plant (WWTP) Expansion project. The PIC will be held in person on January 25, 2024 in Thorndale. The PIC displays will be posted to the project website (http://www.thamescentre.on.ca/ThorndaleWWTPExpansion) following the event if you are interested in the project.

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Thank you,

David Kielstra MA, EP, MCIP, RPP
Environmental Planner

Direct: 905 381-3247
Fax: 905 385-3534
David.Kielstra@stantec.com

Stantec
200-835 Paramount Drive
Stoney Creek ON L8J 0B4

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Please consider the environment before printing this email.

January 19, 2024

Project/File: 165630251

Mary Duckworth, Chief
Caldwell First Nation
14 Orange Street, PO Box 388
Leamington ON N8H 1P5

ChiefMaryDuckworth@caldwellfirstnation.ca; info@caldwellfirstnation.ca; etow@caldwellfirstnation.ca; ecc@caldwellfirstnation.ca

Hello Chief Duckworth,

Reference: Thorndale Wastewater Treatment Plant (WWTP) Expansion
Municipal Class Environmental Assessment
Notice of Public Information Centre #1

The Municipality of Thames Centre (Municipality) has retained Stantec Consulting Ltd. to complete a Municipal Class Environmental Assessment (EA) to identify options for expansion of the Thorndale Wastewater Treatment Plant (WWTP), located at 1135 Ideal Drive.

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Sincerely,



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

CC: Jeff Paul, David Kielstra, Stantec Consulting Ltd; Jenna Smids and Michelle McCormick, Caldwell First Nation

Attachment: Notice of Public Information Centre #1

<u>Caldwell First Nation</u>

Notice of Study Commencement and Notice of Public Information Centre 1 letters and notices sent by email, December 2023 and January 2024

ThordaleWWTP: **Thorndale Wastewater Treatment Plant Caldwell First Nation**

Report generated on February 27, 2025 by David Kielstra



Details

Distributed: May 9, 2024

Project description

Municipal Class EA for a proposed expansion of the Thorndale WWTP, anticipated on the same site

Information

Consulting organization	Primary contacts
Stantec	David Kielstra
Region	**Consultation stream**
Ontario	Water
Project type	**Consultation identifiers**
Sanitary & storm waste water	Project ID: ThordaleWWTP
Project access requirements	**Requested response date**
Uses existing access	2024-05-17
Planned project start date	**Planned project end date**
2025-01-01	2025-12-01
Project area	**Area of new cut (disturbance)**
0 hectares	0 hectares

Location description

Existing WWTP on Ideal Drive in Thorndale, Municipality of Thames Centre

Supplemental organizations

Municipality of Thames Centre (Contacts: Jarrod Craven)

Documentation

Project web page links

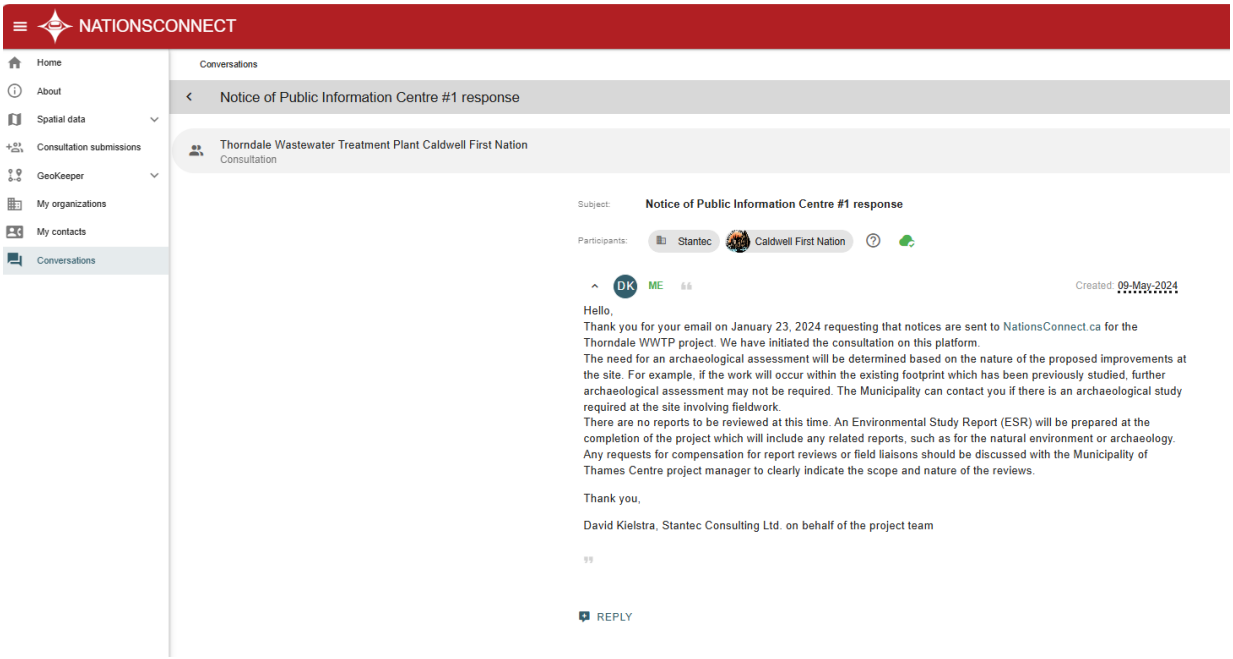
PIC 1 link: https://www.thamescentre.on.ca/articles/notice-public-information-centre-1-thorndale-wastewater-treatment-plant-expansion

Spatial files	Attachments
Thorndale WWTP.kmz	ad_NOSC - Thorndale_Wastewater_Treatment_Plant_Expansion_Class_EA_dec2023_fnl_AODA.pdf

Attachments for Caldwell First Nation

let_ind_comm_0251_nosc_caldwell.pdf

Caldwell First Nation – Notice of Study Commencement/Public Information Centre 1 Response (requesting to consult through NationsConnect.ca) – May 2024



From:	Kielstra, David
To:	"drskoke@wifn.org"
Cc:	Paul, Jeff; "Jarrod Craven"; "Janet Macbeth"; "Dean Jacobs"
Subject:	Notice of Public Information Centre 1 - Thorndale Wastewater Treatment Plant (WWTP) Expansion, Schedule C Municipal Class EA, Municipality of Thames Centre
Date:	Friday, January 19, 2024 3:59:00 PM
Attachments:	let_PIC1_Bkejwanong_Territory.pdf Notice_PIC1 - Thorndale_Wastewater_Treatment_Plant_Expansion_Class_EA.pdf

---

Hello Chief Miskokomon and staff,

Please see the attached letter and Notice of Public Information Centre #1 for the Thorndale Wastewater Treatment Plant (WWTP) Expansion project. The PIC will be held in person on January 25, 2024 in Thorndale. The PIC displays will be posted to the project website (http://www.thamescentre.on.ca/ThorndaleWWTPExpansion) following the event if you are interested in the project.

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Thank you,

David Kielstra MA, EP, MCIP, RPP
Environmental Planner

Direct: 905 381-3247
Fax: 905 385-3534
David.Kielstra@stantec.com

Stantec
200-835 Paramount Drive
Stoney Creek ON L8J 0B4

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Please consider the environment before printing this email.

January 19, 2024

Project/File: 165630251

Dan Miskokomon, Chief
Bkejwanong Territory (Walpole Island)
117 Tahgahoning Road, RR #3
Wallaceburg ON N8A 4K9

drskoke@wifn.org; janet.macbeth@wifn.org: dean.jacobs@wifn.org;
dean.jacobs@wifn.org

Hello Chief Miskokomon,

Reference: Thorndale Wastewater Treatment Plant (WWTP) Expansion
Municipal Class Environmental Assessment
Notice of Public Information Centre #1

The Municipality of Thames Centre (Municipality) has retained Stantec Consulting Ltd. to complete a Municipal Class Environmental Assessment (EA) to identify options for expansion of the Thorndale Wastewater Treatment Plant (WWTP), located at 1135 Ideal Drive.

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Sincerely,



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

CC: Jeff Paul, David Kielstra, Stantec Consulting Ltd;
Janet MacBeth and Dean Jacobs, Bkejwanong Territory

Attachment: Notice of Public Information Centre #1

From:	Kielstra, David
To:	justin.logan@delawarenation.on.ca
Cc:	Paul, Jeff; Jarrod Craven
Subject:	Notice of Public Information Centre 1 - Thorndale Wastewater Treatment Plant (WWTP) Expansion, Schedule C Municipal Class EA, Municipality of Thames Centre
Date:	Friday, January 19, 2024 4:08:00 PM
Attachments:	let_PIC1_Delaware_Nation.pdf Notice_PIC1 - Thorndale_Wastewater_Treatment_Plant_Expansion_Class_EA.pdf

---

Hello Chief Logan,

Please see the attached letter and Notice of Public Information Centre #1 for the Thorndale Wastewater Treatment Plant (WWTP) Expansion project. The PIC will be held in person on January 25, 2024 in Thorndale. The PIC displays will be posted to the project website (http://www.thamescentre.on.ca/ThorndaleWWTPExpansion) following the event if you are interested in the project.

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Thank you,

David Kielstra MA, EP, MCIP, RPP
Environmental Planner

Direct: 905 381-3247
Fax: 905 385-3534
David.Kielstra@stantec.com

Stantec
200-835 Paramount Drive
Stoney Creek ON L8J 0B4

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Please consider the environment before printing this email.

January 19, 2024

Project/File: 165630251

Justin Logan, Chief
Delaware Nation
14760 School House Line, RR #3
Thamesville ON N0P 2K0

justin.logan@delawarenation.on.ca

Hello Chief Logan,

Reference: Thorndale Wastewater Treatment Plant (WWTP) Expansion
Municipal Class Environmental Assessment
Notice of Public Information Centre #1

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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

CC: Jeff Paul, David Kielstra, Stantec Consulting Ltd.

Attachment: Notice of Public Information Centre #1

From:	Kielstra, David
To:	communications@hdi.land; info@hdi.land
Cc:	Paul, Jeff; Jarrod Craven
Subject:	Notice of Public Information Centre 1 - Thorndale Wastewater Treatment Plant (WWTP) Expansion, Schedule C Municipal Class EA, Municipality of Thames Centre
Date:	Friday, January 19, 2024 4:09:00 PM
Attachments:	let_PIC1_HDI.pdf Notice_PIC1 - Thorndale_Wastewater_Treatment_Plant_Expansion_Class_EA.pdf

---

Hello Mr. Hill,

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Thank you,

David Kielstra MA, EP, MCIP, RPP
Environmental Planner

Direct: 905 381-3247
Fax: 905 385-3534
David.Kielstra@stantec.com

Stantec
200-835 Paramount Drive
Stoney Creek ON L8J 0B4

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January 19, 2024

Project/File: 165630251

Leroy Hill, Secretary
Haudenosaunee Confederacy Council
16 Sunrise Court, P.O. Box 714, Suite 600
Ohsweken ON N0A1M0

communications@hdi.land; info@hdi.land

Hello Leroy Hill,

Reference: Thorndale Wastewater Treatment Plant (WWTP) Expansion
Municipal Class Environmental Assessment
Notice of Public Information Centre #1

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Sincerely,



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

CC: Jeff Paul, David Kielstra, Stantec Consulting Ltd.

Attachment: Notice of Public Information Centre #1

From:	Kielstra, David
To:	communications@mncfn.ca; mark.laforme@mncfn.ca; doca.admin@mncfn.ca
Cc:	Paul, Jeff; Jarrod Craven
Subject:	Notice of Public Information Centre 1 - Thorndale Wastewater Treatment Plant (WWTP) Expansion, Schedule C Municipal Class EA, Municipality of Thames Centre
Date:	Friday, January 19, 2024 4:09:00 PM
Attachments:	let_PIC1_MCFN.pdf Notice_PIC1 - Thorndale_Wastewater_Treatment_Plant_Expansion_Class_EA.pdf

---

Hello Chief Sault and Mr. LaForme,

Please see the attached letter and Notice of Public Information Centre #1 for the Thorndale Wastewater Treatment Plant (WWTP) Expansion project. The PIC will be held in person on January 25, 2024 in Thorndale. The PIC displays will be posted to the project website (http://www.thamescentre.on.ca/ThorndaleWWTPExpansion) following the event if you are interested in the project.

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Thank you,

David Kielstra MA, EP, MCIP, RPP
Environmental Planner

Direct: 905 381-3247
Fax: 905 385-3534
David.Kielstra@stantec.com

Stantec
200-835 Paramount Drive
Stoney Creek ON L8J 0B4

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January 19, 2024

Project/File: 165630251

Clara Sault, Chief
Mississaugas of the Credit First Nation
2789 Mississauga Road, RR # 6
Hagersville ON N0A 1H0

communications@mncfn.ca; mark.laforme@mncfn.ca; doca.admin@mncfn.ca

Hello Chief Sault,

Reference: Thorndale Wastewater Treatment Plant (WWTP) Expansion
Municipal Class Environmental Assessment
Notice of Public Information Centre #1

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Sincerely,



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

CC: Jeff Paul, David Kielstra, Stantec Consulting Ltd.;
Mark LaForme, Mississaugas of the Credit First Nation

Attachment: Notice of Public Information Centre #1

From:	Kielstra, David
To:	"consultations@metisnation.org"
Cc:	Paul, Jeff; "Jarrod Craven"
Subject:	Notice of Public Information Centre 1 - Thorndale Wastewater Treatment Plant (WWTP) Expansion, Schedule C Municipal Class EA, Municipality of Thames Centre
Date:	Friday, January 19, 2024 4:08:00 PM
Attachments:	let_mno_PIC1.pdf Notice_PIC1 - Thorndale_Wastewater_Treatment_Plant_Expansion_Class_EA.pdf

---

Hello Metis Nation of Ontario,

Please see the attached letter and Notice of Public Information Centre #1 for the Thorndale Wastewater Treatment Plant (WWTP) Expansion project. The PIC will be held in person on January 25, 2024 in Thorndale. The PIC displays will be posted to the project website (http://www.thamescentre.on.ca/ThorndaleWWTPExpansion) following the event if you are interested in the project.

If you have any questions, please let me know or send comments to the individuals on the Notice.

Thank you,

David Kielstra MA, EP, MCIP, RPP
Environmental Planner

Direct: 905 381-3247
Fax: 905 385-3534
David.Kielstra@stantec.com

Stantec
200-835 Paramount Drive
Stoney Creek ON L8J 0B4

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January 19, 2024

Project/File: 165630251

Metis Consultation Unit
Metis Nation of Ontario (MNO)
Head Office

consultations@metisnation.org

Hello,

Reference: Thorndale Wastewater Treatment Plant (WWTP) Expansion
Municipal Class Environmental Assessment
Notice of Public Information Centre #1

The Municipality of Thames Centre (Municipality) has retained Stantec Consulting Ltd. to complete a Municipal Class Environmental Assessment (EA) to identify options for expansion of the Thorndale Wastewater Treatment Plant (WWTP), located at 1135 Ideal Drive.

The Municipality of Thames Centre is interested in engaging with your community as the study progresses. Please let the study team know how your community would like to participate or be consulted as part of this study.

The purpose of this letter is to invite you to the first Public Information Centre being held for this project. The attached notice provides information about the meeting, the project and the Municipal Class EA process. The Public Information Centre is being held in-person using a drop-in format, with project team members available to discuss the project and respond to any questions you may have. Presentation materials will also be available on the Municipality's website following the Public Information Centre at: www.thamescentre.on.ca/ThorndaleWWTPExpansion.

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Reference: Thorndale Wastewater Treatment Plant (WWTP) Expansion

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Should you have any questions, comments or interests regarding this Municipal Class EA Study, or if you would like to schedule a meeting to discuss this project further, please do not hesitate to contact the undersigned.

Sincerely,



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

CC: Jeff Paul, David Kielstra, Stantec Consulting Ltd.

Attachment: Notice of Public Information Centre #1

From:	Kielstra, David
To:	consultation@kettlepoint.org
Cc:	Paul, Jeff; Jarrod Craven
Subject:	Notice of Public Information Centre 1 - Thorndale Wastewater Treatment Plant (WWTP) Expansion, Schedule C Municipal Class EA, Municipality of Thames Centre
Date:	Friday, January 19, 2024 4:00:00 PM
Attachments:	let_PIC1_Kettle_Stony.pdf Notice_PIC1 - Thorndale_Wastewater_Treatment_Plant_Expansion_Class_EA.pdf

---

Hello Chief Bressette,

Please see the attached letter and Notice of Public Information Centre #1 for the Thorndale Wastewater Treatment Plant (WWTP) Expansion project. The PIC will be held in person on January 25, 2024 in Thorndale. The PIC displays will be posted to the project website (http://www.thamescentre.on.ca/ThorndaleWWTPExpansion) following the event if you are interested in the project.

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Thank you,

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Environmental Planner

Direct: 905 381-3247
Fax: 905 385-3534
David.Kielstra@stantec.com

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200-835 Paramount Drive
Stoney Creek ON L8J 0B4

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January 19, 2024

Project/File: 165630251

Kimberly Bressette, Chief
Chippewas of Kettle and Stony Point First Nation
6247 Indian Lane, RR#2
Lambton Shores ON N0N 1J0

consultation@kettlepoint.org

Hello Chief Bressette,

Reference: Thorndale Wastewater Treatment Plant (WWTP) Expansion
Municipal Class Environmental Assessment
Notice of Public Information Centre #1

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Sincerely,



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

CC: Jeff Paul, David Kielstra, Stantec Consulting Ltd.

Attachment: Notice of Public Information Centre #1, Key Map

From:	Kielstra, David
To:	chief.peters@munsee.ca; glenn@munsee.ca
Cc:	Paul, Jeff; Jarrod Craven
Subject:	Notice of Public Information Centre 1 - Thorndale Wastewater Treatment Plant (WWTP) Expansion, Schedule C Municipal Class EA, Municipality of Thames Centre
Date:	Friday, January 19, 2024 4:08:00 PM
Attachments:	let_PIC1_Munsee_Delaware.pdf Notice_PIC1 - Thorndale_Wastewater_Treatment_Plant_Expansion_Class_EA.pdf

---

Hello Chief Peters and staff,

Please see the attached letter and Notice of Public Information Centre #1 for the Thorndale Wastewater Treatment Plant (WWTP) Expansion project. The PIC will be held in person on January 25, 2024 in Thorndale. The PIC displays will be posted to the project website (http://www.thamescentre.on.ca/ThorndaleWWTPExpansion) following the event if you are interested in the project.

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Thank you,

David Kielstra MA, EP, MCIP, RPP
Environmental Planner

Direct: 905 381-3247
Fax: 905 385-3534
David.Kielstra@stantec.com

Stantec
200-835 Paramount Drive
Stoney Creek ON L8J 0B4

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January 19, 2024

Project/File: 165630251

Mark Peters, Chief
Munsee-Delaware Nation
289 Jubilee Road
Muncey ON N0L 1Y0

chief.peters@munsee.ca; glenn@munsee.ca

Hello Chief Peters,

Reference: Thorndale Wastewater Treatment Plant (WWTP) Expansion
Municipal Class Environmental Assessment
Notice of Public Information Centre #1

The Municipality of Thames Centre (Municipality) has retained Stantec Consulting Ltd. to complete a Municipal Class Environmental Assessment (EA) to identify options for expansion of the Thorndale Wastewater Treatment Plant (WWTP), located at 1135 Ideal Drive.

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Sincerely,



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

CC: Jeff Paul, David Kielstra, Stantec Consulting Ltd;

Glenn Forrest, Munsee-Delaware First Nation

Attachment: Notice of Public Information Centre #1

From:	Kielstra, David
To:	"todd.cornelius@oneida.on.ca"; "cherilyn.hill@oneida.on.ca"
Cc:	Paul, Jeff; "Jarrod Craven"
Subject:	Notice of Public Information Centre 1- Thorndale Wastewater Treatment Plant (WWTP) Expansion, Schedule C Municipal Class EA, Municipality of Thames Centre
Date:	Friday, January 19, 2024 4:08:00 PM
Attachments:	let_PIC1_Oneida.pdf Notice_PIC1 - Thorndale_Wastewater_Treatment_Plant_Expansion_Class_EA.pdf

---

Hello Chief Cornelius and Ms. Hill,

Please see the attached letter and Notice of Public Information Centre #1 for the Thorndale Wastewater Treatment Plant (WWTP) Expansion project. The PIC will be held in person on January 25, 2024 in Thorndale. The PIC displays will be posted to the project website (http://www.thamescentre.on.ca/ThorndaleWWTPExpansion) following the event if you are interested in the project.

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Thank you,

David Kielstra MA, EP, MCIP, RPP
Environmental Planner

Direct: 905 381-3247
Fax: 905 385-3534
David.Kielstra@stantec.com

Stantec
200-835 Paramount Drive
Stoney Creek ON L8J 0B4

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January 19, 2024

Project/File: 165630251

J.Todd Cornelius, Chief
Oneida Nation of the Thames
2212 Elm Avenue
Southwold ON N0L 2G0

todd.cornelius@oneida.on.ca; cherilyn.hill@oneida.on.ca

Hello Chief Cornelius,

Reference: Thorndale Wastewater Treatment Plant (WWTP) Expansion
Municipal Class Environmental Assessment
Notice of Public Information Centre #1

The Municipality of Thames Centre (Municipality) has retained Stantec Consulting Ltd. to complete a Municipal Class Environmental Assessment (EA) to identify options for expansion of the Thorndale Wastewater Treatment Plant (WWTP), located at 1135 Ideal Drive.

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Sincerely,



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

CC: Jeff Paul, David Kielstra, Stantec Consulting Ltd;
Cherilyn Hill, Oneida Nation of the Thames

Attachment: Notice of Public Information Centre #1

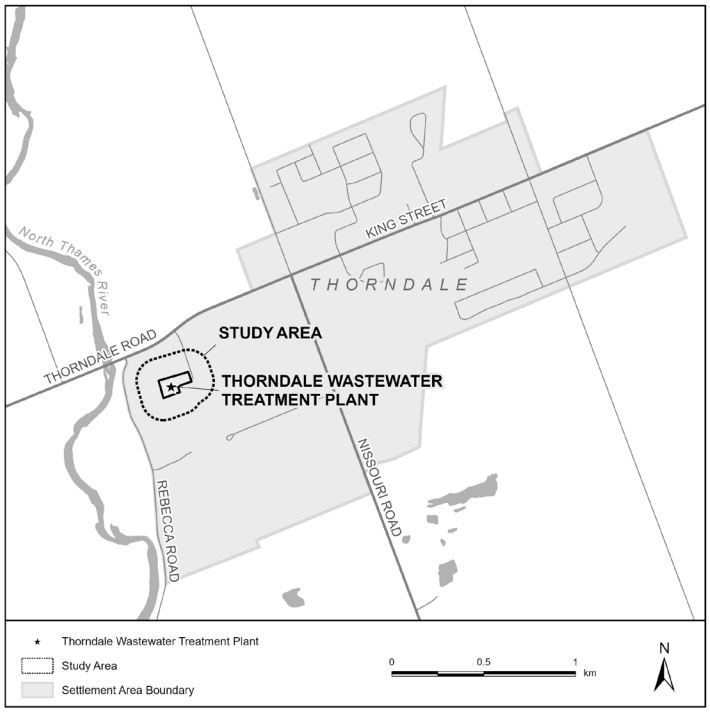
NOTICE OF PUBLIC INFORMATION CENTRE #2

Thorndale Wastewater Treatment Plant Expansion
Schedule C Municipal Class Environmental Assessment Study

THE STUDY

The Municipality of Thames Centre (Municipality) has retained Stantec Consulting Ltd. to complete a Municipal Class Environmental Assessment (EA) to identify options for expansion of the Thorndale Wastewater Treatment Plant (WWTP), located at 1135 Ideal Drive, as shown on the map below.

The Thorndale WWTP provides municipal wastewater treatment to Thorndale. WWTP expansion alternatives are being developed to address current needs and consider anticipated community growth.



HOW CAN I PARTICIPATE?

An in-person Public Information Centre (PIC #2) is being held using a drop-in format to provide the evaluation of expansion alternatives for comment. Members of the project team will be available to discuss the project and respond to any questions you may have.

Date: **Thursday, September 26, 2024**
Location: **Thorndale Lions Community Centre – Meeting Room #1**
265 Upper Queen Street, Thorndale, ON
Time: **5:00 pm - 7:00 pm**

Presentation materials will also be available on the Municipality's website following the PIC at: www.thamescentre.on.ca. Comments are requested by **October 4, 2024**.

This study is being undertaken in accordance with the requirements of Schedule C projects, as outlined in the Municipal Class EA document (2000, as amended in 2007, 2011, 2015 and 2023) which is approved under the *Ontario Environmental Assessment Act*. Near the end of the project, an Environmental Study Report (ESR) will be prepared to document the EA process, consultation activities, and the evaluation. The ESR will be presented for a 30 day public review at that time.

If you wish to provide comments, have your name added to the study mailing list, or if you have questions about this project, please contact 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

If you have any accessibility requirements in order to participate in this project, please contact one of the Project Team members listed above. Comments and information are being collected to assist with meeting the requirements of the *Ontario Environmental Assessment Act*. Information collected will be used in accordance with the *Municipal Freedom of Information and Protection of Privacy Act* and *Access to Information Act*. With the exception of personal information, all comments will become part of the public record.

First Published September 13, 2024

Help Wanted

Thames Centre

WE'RE LOOKING FOR A SCHOOL CROSSWALK MONITOR (PART-TIME)

We're currently seeking an School Crosswalk Monitor to be on duty each school day of the year at the time and crossing.

10Hr/Week (up to 2Hr/Day)
Salary Range: $17.52-$19.72/hr
Education: Ontario Secondary School Diploma (OSSD)

Key Responsibilities

- Direct & guide pedestrians across the street, stopping traffic as necessary.
- Communicate traffic, crossing rules & other information to students & adults.
- Report unsafe student behaviour to school officials.
- Inspect your intersection daily & report any unsafe conditions to the supervisor
- Monitor traffic flow to locate the safe gaps pedestrians can cross.
- Create safe gaps in high-traffic situations by asserting your authority to stop traffic.

Applications will be reviewed on an ongoing basis until a successful candidate is selected.

Apply now on our website!

thamescentre.on.ca or 519-268-7334
4305 Hamilton Rd, Dorchester, Ontario, N0L 1G3

Together we grow.

Thames Centre

Notices

Thames Centre

IMPORTANT
WATER SUPPLY NOTICE
DORCHESTER & THORNDALE WATER SYSTEMS

September 1, 2024

Dear Property Owner / Resident,

The Municipality of Thames Centre will be conducting the **Fall Flushing Program** during the week of **Monday, October 21st to Friday, October 25th, 2024.** The flushing will take place between the hours of 8am and 4pm.

Fire hydrant flushing is done to remove any sediment or stagnant water from the distribution system, and to test fire hydrant operation. These steps are being taken to improve the overall water quality within the distribution system and to ensure the delivery of the highest quality water possible.

As in the past, we suggest that residents switch water softeners to "bi-pass" and avoid doing laundry during the flushing times. Discoloured water may be observed and has the potential to stain clothing. If laundry has been stained during this period the Environmental Services Department has a wash additive available to remove the stains.

Once the flushing program has been completed, we ask that a cold water tap be turned on and let it run for approximately 2 (two) to 3 (three) minutes to flush out any discoloured water that may have accumulated in your water connection. If clean water is not experienced after this time, shut off the tap and repeat after 1 (one) hour.

Due to the unpredictability of weather, operator availability (emergency situations), and the increasing size of the water systems it can be a challenge to know when a specific area will be flushed. Social media updates will be provided on a daily basis to inform residents where flushing will be taking place and where it has been completed.

Contact Information

We appreciate your patience and understanding during this period. If you have any questions, please reach out to the number below.

Kevin Willson, Environmental Services Superintendent
kwillson@thamescentre.on.ca
Tel: 519.268.7334 ext. 745

Corporation of the Municipality of Thames Centre
4305 Hamilton Road, Dorchester, Ontario N0L 1G3 – Phone 519-268-7334 – Fax 519-268-3928
www.thamescentre.on.ca – inquiries@thamescentre.on.ca

NOTICE OF PUBLIC INFORMATION CENTRE #2

Thorndale Wastewater Treatment Plant Expansion
Schedule C Municipal Class Environmental Assessment Study

Thames Centre

THE STUDY

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COLUMN

UKRAINIAN CORNER: Ukrainian varenyky – a taste of tradition in every bite

By Olianina Olena

Ukrainian cuisine is a culinary tapestry rich with history, tradition and heartfelt flavours. Among its most beloved dishes is varenyky – a staple that not only satisfies hunger but also carries deep cultural significance. As Ukrainian immigrants continue to enrich Canada's diverse food landscape, varenyky have become a symbol of cultural heritage and an ambassador of authentic Ukrainian taste.

Varenyky are more than just dumplings; they are a cherished part of Ukrainian culture. Traditionally, these delicious parcels are made with a tender dough filled with a variety of savory or sweet ingredients, and then boiled to perfection. They are often served with a dollop of sour cream, melted butter, or crispy onions, enhancing their rich flavor.

In Ukraine, varenyky hold a special place at the table, especially during festive occasions. They are often prepared as a family, with everyone gathering in the kitchen to fill, shape and cook the varenyky together. This communal activity is as much about bonding as it is about making food.



De Varenyk: Traditional Ukrainian varenyky made with love and quality. Photo by Shyshkivska Nataly

It's a time-honoured tradition that has been passed down through generations, preserving the essence of Ukrainian hospitality.

A world of fillings: from savoury to sweet

One of the most fascinating aspects of varenyky is their versatility. The fillings can vary widely, reflecting the regional diversity of Ukraine as well as personal and family preferences. Here are a few of the classics:

- Potato and Onion: Perhaps the most classic filling, potato and onion varenyky are hearty and comforting, often enhanced with a bit of cheese for an extra layer of flavour.
- Sauerkraut and Mushroom: A tangy and earthy combination that speaks to Ukraine's rural roots, perfect for those who enjoy robust, savoury flavors.
- Cottage Cheese: Known as "syrnyky," these are a mild and creamy option, sometimes served with sugar and vanilla for a sweet twist.
- Cherry or Berry: On the sweeter side, varenyky filled with cherries or berries are a summertime favourite, often enjoyed as a dessert or a treat during the harvest season.

Each variety of varenyky tells a story, reflecting the local ingredients and seasonal influences that shape Ukrainian cuisine.

De Varenyk: crafting tradition by hand

In an era where mass production is the norm, it's refreshing to find a company like De Varenyk, which honours the tradition of handcrafting varenyky with the same care and attention that our ancestors did.

Each varenyky from De Varenyk is made by hand, ensuring that every piece is unique and filled with the love and dedication that only a handmade product can offer. De Varenyk uses only the finest ingredients, staying true to the authenticity of Ukrainian recipes while also adding a modern twist for today's palate. Whether it's the classic potato and onion or a more adventurous filling like spinach and feta, the quality and taste are unparalleled.

A cultural connection

As an emigrant from Ukraine, varenyky are more than just food to me – they are a connection to my heritage, a reminder of the times spent with family and a symbol of the warmth and generosity that defines Ukrainian culture.

In a country as diverse as Canada, food is one of the most powerful ways to share and celebrate our cultures. Varenyky offer Canadians a taste of Ukraine, inviting them to experience the warmth, tradition and flavours that define Ukrainian hospitality. The experience of making and eating varenyky brings back memories of family gatherings, where the kitchen was filled with the aroma of freshly cooked dumplings and the sounds of laughter and conversation.

In today's fast-paced world, where convenience often trumps tradition, it's comforting to know that there are still places where the art of making varenyky by hand is cherished. Companies like De Varenyk play a crucial role in keeping this tradition alive, offering everyone a chance to experience the authentic taste of Ukrainian varenyky.

Whether you're exploring Ukrainian cuisine for the first time or looking to reconnect with your roots, I highly recommend trying varenyky from De Varenyk. These handmade dumplings are not just a meal; they are a taste of tradition, culture and the love that goes into every bite.

NOTICE OF PUBLIC INFORMATION CENTRE #2
Thorndale Wastewater Treatment Plant Expansion
Schedule C Municipal Class Environmental Assessment Study

Thames Centre

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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

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STONETOWN TRAVEL
Head Office: 150 Queen Street East, St. Marys, ON N4S 1B4 | 519-284-2322
agent@stonetowntravel.com
TICO #50010169
Branch Office: 310 Snyder Street, New Hamburg, ON N3A 1P6 | 226-333-9838
newhamburg@stonetowntravel.com
TICO #50020794
Where in the world would you like to go?
Let us take the hassle out of your holidays.
Reach out to one of our knowledgeable travel consultants today!
www.stonetowntravel.com

From:	Kielstra, David
To:	"rvanstone@sixnations.ca"
Cc:	Paul, Jeff; "Jarrod Craven"
Subject:	RE: Notice of Public Information Centre 2 - Thorndale Wastewater Treatment Plant (WWTP) Expansion, Schedule C Municipal Class EA, Municipality of Thames Centre
Date:	Wednesday, September 18, 2024 2:59:00 PM
Attachments:	Notice_PIC2_Thorndale_Wastewater_Treatment_Plant_Expansion_Class_EA_Sept2024.pdf let_six_nations_PIC2.pdf

Hello Chief Hill and Ms. Van Stone,

Please see the attached letter and Notice of Public Information Centre #2 for the Thorndale Wastewater Treatment Plant (WWTP) Expansion project. The PIC will be held in person on September 26, 2024 in Thorndale. The PIC displays will be posted to the project website (http://www.thamescentre.on.ca) following the event if you are interested in the project.

If you have any questions, please let me know or send comments to the individuals on the Notice.

Thank you,

David Kielstra MA, EP, MCIP, RPP
Environmental Planner

Direct: 905 381-3247
Fax: 905 385-3534
David.Kielstra@stantec.com

Stantec
200-835 Paramount Drive
Stoney Creek ON L8J 0B4

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Please consider the environment before printing this email.

From: Kielstra, David
Sent: Friday, January 19, 2024 4:04 PM
To: rvanstone@sixnations.ca
Cc: Paul, Jeff <jeff.paul@stantec.com>; Jarrod Craven <JCraven@thamescentre.on.ca>
Subject: Notice of Public Information Centre 1 - Thorndale Wastewater Treatment Plant (WWTP) Expansion, Schedule C Municipal Class EA, Municipality of Thames Centre

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Environmental Planner

Direct: 905 381-3247
Fax: 905 385-3534
David.Kielstra@stantec.com

Stantec
200-835 Paramount Drive
Stoney Creek ON L8J 0B4

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September 18, 2024

Project/File: 165630251

Sherri-Lyn Hill, Chief
Six Nations of the Grand River Territory
1695 Chiefswood Road
PO Box 5000
Ohsweken ON N0A 1M0

c/o: rvanstone@sixnations.ca

Hello Chief Hill,

Reference: Thorndale Wastewater Treatment Plant (WWTP) Expansion
Municipal Class Environmental Assessment
Notice of Public Information Centre #2

The Municipality of Thames Centre (Municipality) has retained Stantec Consulting Ltd. to complete a Municipal Class Environmental Assessment (EA) to identify options for expansion of the Thorndale Wastewater Treatment Plant (WWTP), located at 1135 Ideal Drive. The Municipality of Thames Centre is interested in engaging with your community as the study progresses. Please let the study team know how your community would like to participate or be consulted as part of this study.

The purpose of this letter is to invite you to the second Public Information Centre being held for this project. The attached notice provides information about the meeting, the project and the Municipal Class EA process. Wastewater treatment capacity expansion alternatives have been identified and evaluated, and they are being provided for public comment. The preliminary preferred alternative involves capacity expansion on the existing site.

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Reference: Thorndale Wastewater Treatment Plant (WWTP) Expansion

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Should you have any questions, comments or interests regarding this Municipal Class EA Study, or if you would like to schedule a meeting to discuss this project further, please do not hesitate to contact the undersigned.

Sincerely,



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

CC: Jeff Paul, David Kielstra, Stantec Consulting Ltd.; Robin VanStone, Six Nations of the Grand River Territory

Attachment: Notice of Public Information Centre #2

From:	Kielstra, David
To:	"chief.plain@aamjiwnaang.ca"
Cc:	Paul, Jeff; "Jarrod Craven"; "cobrien@aamjiwnaang.ca"
Subject:	RE: Notice of Public Information Centre 2 - Thorndale Wastewater Treatment Plant (WWTP) Expansion, Schedule C Municipal Class EA, Municipality of Thames Centre
Date:	Wednesday, September 18, 2024 2:58:00 PM
Attachments:	Notice_PIC2_Thorndale_Wastewater_Treatment_Plant_Expansion_Class_EA_Sept2024.pdf let_aamjiwnaang_nation_PIC2.pdf

Hello Chief Plain and staff,

Please see the attached letter and Notice of Public Information Centre #2 for the Thorndale Wastewater Treatment Plant (WWTP) Expansion project. The PIC will be held in person on September 26, 2024 in Thorndale. The PIC displays will be posted to the project website (http://www.thamescentre.on.ca) following the event if you are interested in the project.

If you have any questions, please let me know or send comments to the individuals on the Notice.

Thank you,

David Kielstra MA, EP, MCIP, RPP
Environmental Planner

Direct: 905 381-3247
Fax: 905 385-3534
David.Kielstra@stantec.com

Stantec
200-835 Paramount Drive
Stoney Creek ON L8J 0B4

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Please consider the environment before printing this email.

From: Kielstra, David
Sent: Friday, January 19, 2024 4:03 PM
To: chief.plain@aamjiwnaang.ca
Cc: Paul, Jeff <jeff.paul@stantec.com>; Jarrod Craven <JCraven@thamescentre.on.ca>; cobrien@aamjiwnaang.ca
Subject: Notice of Public Information Centre 1 - Thorndale Wastewater Treatment Plant (WWTP) Expansion, Schedule C Municipal Class EA, Municipality of Thames Centre

Hello Chief Plain and staff,

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Environmental Planner

Direct: 905 381-3247
Fax: 905 385-3534
David.Kielstra@stantec.com

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September 18, 2024

Project/File: 165630251

Chris Plain, Chief
Aamjiwnaang First Nation
978 Tashmoo Avenue
Sarnia ON N7T 7H5

chief.plain@aamjiwnaang.ca; cobrien@aamjiwnaang.ca

Hello Chief Plain,

Reference: Thorndale Wastewater Treatment Plant (WWTP) Expansion
Municipal Class Environmental Assessment
Notice of Public Information Centre #2

The Municipality of Thames Centre (Municipality) has retained Stantec Consulting Ltd. to complete a Municipal Class Environmental Assessment (EA) to identify options for expansion of the Thorndale Wastewater Treatment Plant (WWTP), located at 1135 Ideal Drive. The Municipality of Thames Centre is interested in engaging with your community as the study progresses. Please let the study team know how your community would like to participate or be consulted as part of this study.

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Sincerely,



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

CC: Jeff Paul, David Kielstra, Stantec Consulting Ltd.

Attachment: Notice of Public Information Centre #2

From:	Kielstra, David
To:	"drskoke@wifn.org"
Cc:	Paul, Jeff; "Jarrod Craven"; "Janet Macbeth"; "Dean Jacobs"
Subject:	RE: Notice of Public Information Centre 2 - Thorndale Wastewater Treatment Plant (WWTP) Expansion, Schedule C Municipal Class EA, Municipality of Thames Centre
Date:	Wednesday, September 18, 2024 3:03:00 PM
Attachments:	Notice_PIC2_Thorndale_Wastewater_Treatment_Plant_Expansion_Class_EA_Sept2024.pdf let_bkejwanong_territory_PIC2.pdf

Hello Chief Miskokomon and staff,

Please see the attached letter and Notice of Public Information Centre #2 for the Thorndale Wastewater Treatment Plant (WWTP) Expansion project. The PIC will be held in person on September 26, 2024 in Thorndale. The PIC displays will be posted to the project website (http://www.thamescentre.on.ca) following the event if you are interested in the project.

If you have any questions, please let me know or send comments to the individuals on the Notice.

Thank you,

David Kielstra MA, EP, MCIP, RPP
Environmental Planner

Direct: 905 381-3247
Fax: 905 385-3534
David.Kielstra@stantec.com

Stantec
200-835 Paramount Drive
Stoney Creek ON L8J 0B4

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Please consider the environment before printing this email.

From: Kielstra, David
Sent: Friday, January 19, 2024 4:02 PM
To: 'drskoke@wifn.org' <drskoke@wifn.org>
Cc: Paul, Jeff <jeff.paul@stantec.com>; 'Jarrod Craven' <JCraven@thamescentre.on.ca>; 'Janet Macbeth' <janet.macbeth@wifn.org>; 'Dean Jacobs' <dean.jacobs@wifn.org>
Subject: Notice of Public Information Centre 1 - Thorndale Wastewater Treatment Plant (WWTP) Expansion, Schedule C Municipal Class EA, Municipality of Thames Centre

Hello Chief Miskokomon and staff,

Please see the attached letter and Notice of Public Information Centre #1 for the Thorndale Wastewater Treatment Plant (WWTP) Expansion project. The PIC will be held in person on January 25, 2024 in Thorndale. The PIC displays will be posted to the project website (http://www.thamescentre.on.ca/ThorndaleWWTPExpansion) following the event if you are interested in the project.

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David Kielstra MA, EP, MCIP, RPP
Environmental Planner

Direct: 905 381-3247
Fax: 905 385-3534
David.Kielstra@stantec.com

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Please consider the environment before printing this email.

September 18, 2024

Project/File: 165630251

Dan Miskokomon, Chief
Bkejwanong Territory (Walpole Island)
117 Tahgahoning Road, RR #3
Wallaceburg ON N8A 4K9

drskoke@wifn.org; janet.macbeth@wifn.org: dean.jacobs@wifn.org; dean.jacobs@wifn.org

Hello Chief Miskokomon,

Reference: Thorndale Wastewater Treatment Plant (WWTP) Expansion
Municipal Class Environmental Assessment
Notice of Public Information Centre #2

The Municipality of Thames Centre (Municipality) has retained Stantec Consulting Ltd. to complete a Municipal Class Environmental Assessment (EA) to identify options for expansion of the Thorndale Wastewater Treatment Plant (WWTP), located at 1135 Ideal Drive. The Municipality of Thames Centre is interested in engaging with your community as the study progresses. Please let the study team know how your community would like to participate or be consulted as part of this study.

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Should you have any questions, comments or interests regarding this Municipal Class EA Study, or if you would like to schedule a meeting to discuss this project further, please do not hesitate to contact the undersigned.

Sincerely,



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

CC: Jeff Paul, David Kielstra, Stantec Consulting Ltd;

Janet MacBeth and Dean Jacobs, Bkejwanong Territory

Attachment: Notice of Public Information Centre #2

From:	Kielstra, David
To:	"ChiefMaryDuckworth@caldwellfirstnation.ca"; "info@caldwellfirstnation.ca"
Cc:	Paul, Jeff; "Jarrod Craven"; "etow@caldwellfirstnation.ca"; "ecc@caldwellfirstnation.ca"
Subject:	RE: Notice of Public Information Centre 2 - Thorndale Wastewater Treatment Plant (WWTP) Expansion, Schedule C Municipal Class EA, Municipality of Thames Centre
Date:	Wednesday, September 18, 2024 3:03:00 PM
Attachments:	Notice_PIC2_Thorndale_Wastewater_Treatment_Plant_Expansion_Class_EA_Sept2024.pdf let_caldwell_nation_PIC2.pdf

Hello Chief Duckworth and staff,

Please see the attached letter and Notice of Public Information Centre #2 for the Thorndale Wastewater Treatment Plant (WWTP) Expansion project. The PIC will be held in person on September 26, 2024 in Thorndale. The PIC displays will be posted to the project website (http://www.thamescentre.on.ca) following the event if you are interested in the project.

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Thank you,

David Kielstra MA, EP, MCIP, RPP
Environmental Planner

Direct: 905 381-3247
Fax: 905 385-3534
David.Kielstra@stantec.com

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200-835 Paramount Drive
Stoney Creek ON L8J 0B4

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From: Kielstra, David
Sent: Friday, January 19, 2024 4:03 PM
To: ChiefMaryDuckworth@caldwellfirstnation.ca; info@caldwellfirstnation.ca
Cc: Paul, Jeff <jeff.paul@stantec.com>; Jarrod Craven <JCraven@thamescentre.on.ca>; etow@caldwellfirstnation.ca; ecc@caldwellfirstnation.ca
Subject: Notice of Public Information Centre 1 - Thorndale Wastewater Treatment Plant (WWTP) Expansion, Schedule C Municipal Class EA, Municipality of Thames Centre

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Environmental Planner

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Fax: 905 385-3534
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September 18, 2024

Project/File: 165630251

Mary Duckworth, Chief
Caldwell First Nation
14 Orange Street, PO Box 388
Leamington ON N8H 1P5

ChiefMaryDuckworth@caldwellfirstnation.ca; info@caldwellfirstnation.ca; etow@caldwellfirstnation.ca; ecc@caldwellfirstnation.ca

Hello Chief Duckworth,

Reference: Thorndale Wastewater Treatment Plant (WWTP) Expansion
Municipal Class Environmental Assessment
Notice of Public Information Centre #2

The Municipality of Thames Centre (Municipality) has retained Stantec Consulting Ltd. to complete a Municipal Class Environmental Assessment (EA) to identify options for expansion of the Thorndale Wastewater Treatment Plant (WWTP), located at 1135 Ideal Drive. The Municipality of Thames Centre is interested in engaging with your community as the study progresses. Please let the study team know how your community would like to participate or be consulted as part of this study.

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Reference: Thorndale Wastewater Treatment Plant (WWTP) Expansion

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Sincerely,

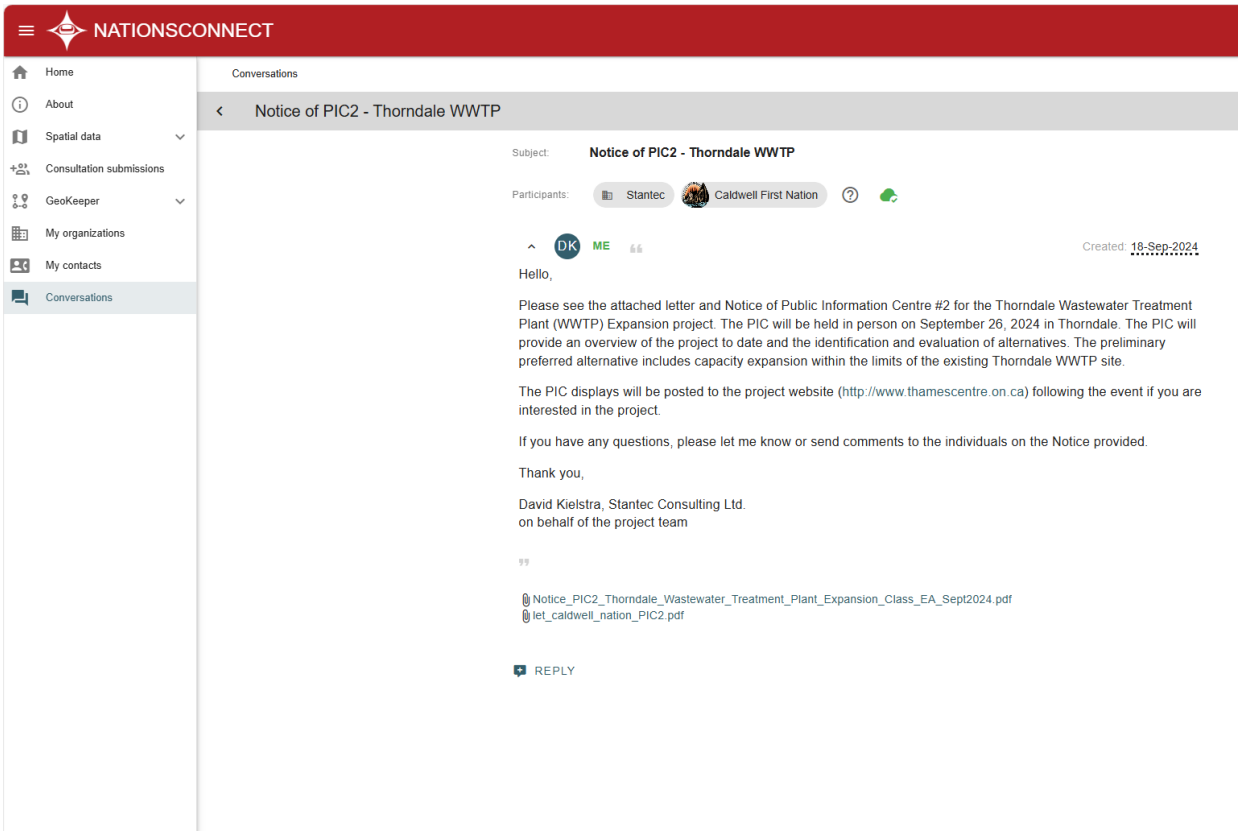


Jarrod Craven
Director of Public Works
Municipality of Thames Centre
4305 Hamilton Road Dorchester, ON N0L 1G3
Phone (519) 268-7334 ext. 245
Email: jcraven@thamescentre.on.ca

CC: Jeff Paul, David Kielstra, Stantec Consulting Ltd; Jenna Smids and Michelle McCormick, Caldwell First Nation

Attachment: Notice of Public Information Centre #2

Caldwell First Nation – Notice of Public Information Centre 2 – September 2024



From:	Kielstra, David
To:	consultation@kettlepoint.org
Cc:	Paul, Jeff; Jarrod Craven
Subject:	RE: Notice of Public Information Centre 2 - Thorndale Wastewater Treatment Plant (WWTP) Expansion, Schedule C Municipal Class EA, Municipality of Thames Centre
Date:	Wednesday, September 18, 2024 2:59:00 PM
Attachments:	Notice_PIC2_Thorndale_Wastewater_Treatment_Plant_Expansion_Class_EA_Sept2024.pdf let_chippewas_Kettle_StonyPoint_PIC2.pdf

Hello Chief Bressette,

Please see the attached letter and Notice of Public Information Centre #2 for the Thorndale Wastewater Treatment Plant (WWTP) Expansion project. The PIC will be held in person on September 26, 2024 in Thorndale. The PIC displays will be posted to the project website (http://www.thamescentre.on.ca) following the event if you are interested in the project.

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Thank you,

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Environmental Planner

Direct: 905 381-3247
Fax: 905 385-3534
David.Kielstra@stantec.com

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200-835 Paramount Drive
Stoney Creek ON L8J 0B4

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From: Kielstra, David
Sent: Friday, January 19, 2024 4:03 PM
To: consultation@kettlepoint.org
Cc: Paul, Jeff <jeff.paul@stantec.com>; Jarrod Craven <JCraven@thamescentre.on.ca>
Subject: Notice of Public Information Centre 1 - Thorndale Wastewater Treatment Plant (WWTP) Expansion, Schedule C Municipal Class EA, Municipality of Thames Centre

Hello Chief Bressette,

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Environmental Planner

Direct: 905 381-3247
Fax: 905 385-3534
David.Kielstra@stantec.com

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September 18, 2024

Project/File: 165630251

Kimberly Bressette, Chief
Chippewas of Kettle and Stony Point First Nation
6247 Indian Lane, RR#2
Lambton Shores ON N0N 1J0

consultation@kettlepoint.org

Hello Chief Bressette,

Reference: Thorndale Wastewater Treatment Plant (WWTP) Expansion
Municipal Class Environmental Assessment
Notice of Public Information Centre #2

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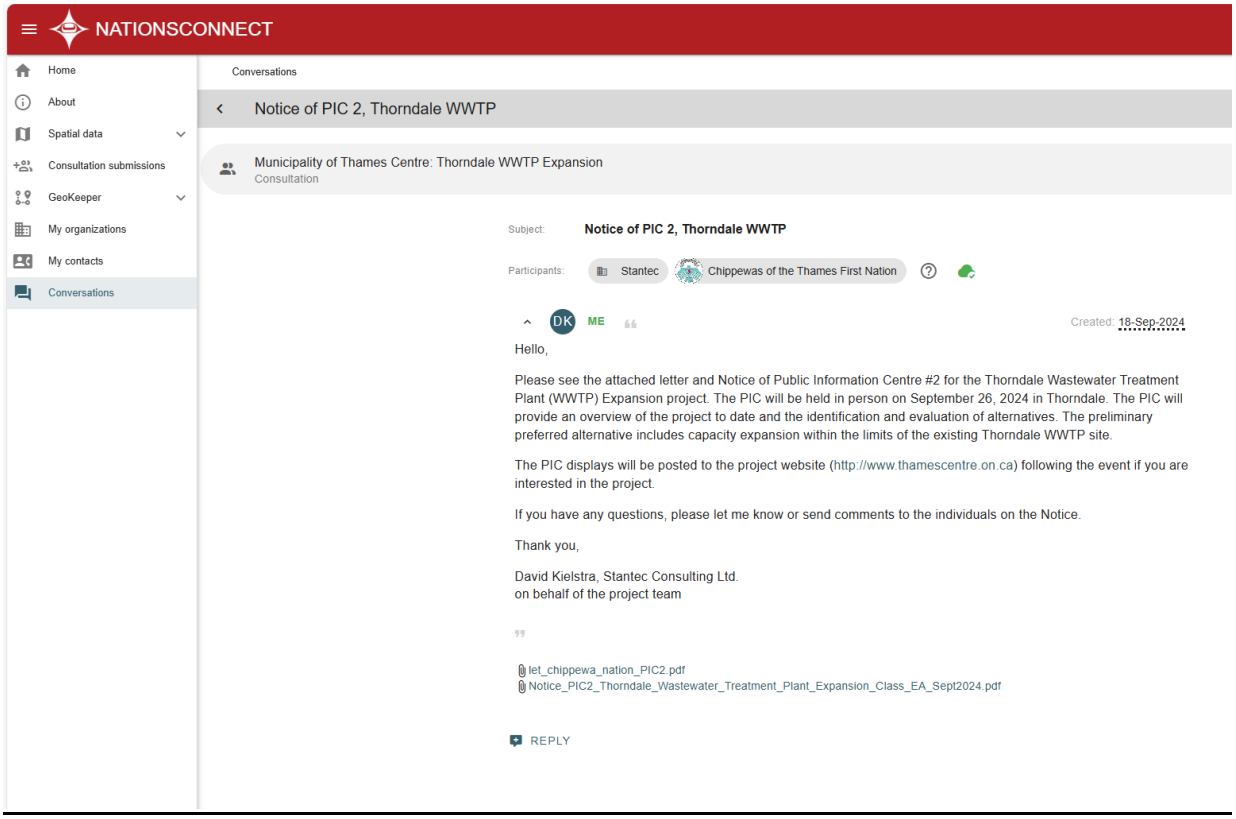


Jarrod Craven
Director of Public Works
Municipality of Thames Centre
4305 Hamilton Road Dorchester, ON N0L 1G3
Phone (519) 268-7334 ext. 245
Email: jcraven@thamescentre.on.ca

CC: Jeff Paul, David Kielstra, Stantec Consulting Ltd.

Attachment: Notice of Public Information Centre #2, Key Map

COTTFN – Notice of Public Information Centre 2 – September 2024



September 18, 2024

Project/File: 165630251

Joe Miskokomon, Chief
Chippewas of the Thames First Nation
320 Chippewa Road, RR1
Muncey ON N0L 1Y0

via NationsConnect

Hello Chief Miskokomon,

Reference: Thorndale Wastewater Treatment Plant (WWTP) Expansion
Municipal Class Environmental Assessment
Notice of Public Information Centre #2

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Sincerely,



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

CC: Jeff Paul, David Kielstra, Stantec Consulting Ltd.;

Rochelle Smith and Fallon Burch, COTTFN

Attachment: Notice of Public Information Centre #2

From:	Kielstra, David
To:	communications@hdi.land; info@hdi.land
Cc:	Paul, Jeff; Jarrod Craven
Subject:	RE: Notice of Public Information Centre 2 - Thorndale Wastewater Treatment Plant (WWTP) Expansion, Schedule C Municipal Class EA, Municipality of Thames Centre
Date:	Wednesday, September 18, 2024 3:01:00 PM
Attachments:	Notice_PIC2_Thorndale_Wastewater_Treatment_Plant_Expansion_Class_EA_Sept2024.pdf let_haudenosaunee_council_PIC2.pdf

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Direct: 905 381-3247
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David.Kielstra@stantec.com

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Please consider the environment before printing this email.

From: Kielstra, David
Sent: Friday, January 19, 2024 4:12 PM
To: communications@hdi.land; info@hdi.land
Cc: Paul, Jeff <jeff.paul@stantec.com>; Jarrod Craven <JCraven@thamescentre.on.ca>
Subject: Notice of Public Information Centre 1 - Thorndale Wastewater Treatment Plant (WWTP) Expansion, Schedule C Municipal Class EA, Municipality of Thames Centre

Hello Mr. Hill,

Please see the attached letter and Notice of Public Information Centre #1 for the Thorndale Wastewater Treatment Plant (WWTP) Expansion project. The PIC will be held in person on January 25, 2024 in Thorndale. The PIC displays will be posted to the project website (http://www.thamescentre.on.ca/ThorndaleWWTPExpansion) following the event if you are interested in the project.

If you have any questions, please let me know or send comments to the individuals on the Notice.

Thank you,

David Kielstra MA, EP, MCIP, RPP
Environmental Planner

Direct: 905 381-3247
Fax: 905 385-3534
David.Kielstra@stantec.com

Stantec
200-835 Paramount Drive
Stoney Creek ON L8J 0B4

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September 18, 2024

Project/File: 165630251

Leroy Hill, Secretary
Haudenosaunee Confederacy Council
16 Sunrise Court, P.O. Box 714, Suite 600
Ohsweken ON N0A1M0

communications@hdi.land; info@hdi.land

Hello Leroy Hill,

Reference: Thorndale Wastewater Treatment Plant (WWTP) Expansion
Municipal Class Environmental Assessment
Notice of Public Information Centre #2

The Municipality of Thames Centre (Municipality) has retained Stantec Consulting Ltd. to complete a Municipal Class Environmental Assessment (EA) to identify options for expansion of the Thorndale Wastewater Treatment Plant (WWTP), located at 1135 Ideal Drive. The Municipality of Thames Centre is interested in engaging with your community as the study progresses. Please let the study team know how your community would like to participate or be consulted as part of this study.

The purpose of this letter is to invite you to the second Public Information Centre being held for this project. The attached notice provides information about the meeting, the project and the Municipal Class EA process. Wastewater treatment capacity expansion alternatives have been identified and evaluated, and they are being provided for public comment. The preliminary preferred alternative involves capacity expansion on the existing site.

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Sincerely,



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

CC: Jeff Paul, David Kielstra, Stantec Consulting Ltd.

Attachment: Notice of Public Information Centre #2

From:	Kielstra, David
To:	chief.peters@munsee.ca; glenn@munsee.ca
Cc:	Paul, Jeff; Jarrod Craven
Subject:	RE: Notice of Public Information Centre 2 - Thorndale Wastewater Treatment Plant (WWTP) Expansion, Schedule C Municipal Class EA, Municipality of Thames Centre
Date:	Wednesday, September 18, 2024 3:02:00 PM
Attachments:	Notice_PIC2_Thorndale_Wastewater_Treatment_Plant_Expansion_Class_EA_Sept2024.pdf let_munsee-delaware_PIC2.pdf

Hello Chief Peters and staff,

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Fax: 905 385-3534
David.Kielstra@stantec.com

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From: Kielstra, David
Sent: Friday, January 19, 2024 4:11 PM
To: chief.peters@munsee.ca; glenn@munsee.ca
Cc: Paul, Jeff <jeff.paul@stantec.com>; Jarrod Craven <JCraven@thamescentre.on.ca>
Subject: Notice of Public Information Centre 1 - Thorndale Wastewater Treatment Plant (WWTP) Expansion, Schedule C Municipal Class EA, Municipality of Thames Centre

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September 18, 2024

Project/File: 165630251

Mark Peters, Chief
Munsee-Delaware Nation
289 Jubilee Road
Muncey ON N0L 1Y0

chief.peters@munsee.ca; glenn@munsee.ca

Hello Chief Peters,

Reference: Thorndale Wastewater Treatment Plant (WWTP) Expansion
Municipal Class Environmental Assessment
Notice of Public Information Centre #2

The Municipality of Thames Centre (Municipality) has retained Stantec Consulting Ltd. to complete a Municipal Class Environmental Assessment (EA) to identify options for expansion of the Thorndale Wastewater Treatment Plant (WWTP), located at 1135 Ideal Drive. The Municipality of Thames Centre is interested in engaging with your community as the study progresses. Please let the study team know how your community would like to participate or be consulted as part of this study.

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Sincerely,



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

CC: Jeff Paul, David Kielstra, Stantec Consulting Ltd;

Glenn Forrest, Munsee-Delaware First Nation

Attachment: Notice of Public Information Centre #2

From:	Kielstra, David
To:	"consultations@metisnation.org"
Cc:	Paul, Jeff; "Jarrod Craven"
Subject:	RE: Notice of Public Information Centre 2 - Thorndale Wastewater Treatment Plant (WWTP) Expansion, Schedule C Municipal Class EA, Municipality of Thames Centre
Date:	Wednesday, September 18, 2024 3:02:00 PM
Attachments:	Notice_PIC2_Thorndale_Wastewater_Treatment_Plant_Expansion_Class_EA_Sept2024.pdf let_metis_nation_PIC2.pdf

Hello Metis Nation of Ontario,

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Environmental Planner

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Fax: 905 385-3534
David.Kielstra@stantec.com

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From: Kielstra, David
Sent: Friday, January 19, 2024 4:11 PM
To: 'consultations@metisnation.org' <consultations@metisnation.org>
Cc: Paul, Jeff <jeff.paul@stantec.com>; 'Jarrod Craven' <JCraven@thamescentre.on.ca>
Subject: Notice of Public Information Centre 1 - Thorndale Wastewater Treatment Plant (WWTP) Expansion, Schedule C Municipal Class EA, Municipality of Thames Centre

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Fax: 905 385-3534
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September 18, 2024

Project/File: 165630251

Metis Consultation Unit
Metis Nation of Ontario (MNO)
Head Office

consultations@metisnation.org

Hello,

Reference: Thorndale Wastewater Treatment Plant (WWTP) Expansion
Municipal Class Environmental Assessment
Notice of Public Information Centre #2

The Municipality of Thames Centre (Municipality) has retained Stantec Consulting Ltd. to complete a Municipal Class Environmental Assessment (EA) to identify options for expansion of the Thorndale Wastewater Treatment Plant (WWTP), located at 1135 Ideal Drive. The Municipality of Thames Centre is interested in engaging with your community as the study progresses. Please let the study team know how your community would like to participate or be consulted as part of this study.

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Sincerely,



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

CC: Jeff Paul, David Kielstra, Stantec Consulting Ltd.

Attachment: Notice of Public Information Centre #2

From:	Kielstra, David
To:	communications@mncfn.ca; mark.laforme@mncfn.ca; doca.admin@mncfn.ca
Cc:	Paul, Jeff; Jarrod Craven
Subject:	RE: Notice of Public Information Centre 2 - Thorndale Wastewater Treatment Plant (WWTP) Expansion, Schedule C Municipal Class EA, Municipality of Thames Centre
Date:	Wednesday, September 18, 2024 2:59:00 PM
Attachments:	let_mississaugas_nation_PIC2.pdf Notice_PIC2_Thorndale_Wastewater_Treatment_Plant_Expansion_Class_EA_Sept2024.pdf

Hello Chief Sault and Mr. LaForme,

Please see the attached letter and Notice of Public Information Centre #2 for the Thorndale Wastewater Treatment Plant (WWTP) Expansion project. The PIC will be held in person on September 26, 2024 in Thorndale. The PIC displays will be posted to the project website (http://www.thamescentre.on.ca) following the event if you are interested in the project.

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Environmental Planner

Direct: 905 381-3247
Fax: 905 385-3534
David.Kielstra@stantec.com

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From: Kielstra, David
Sent: Friday, January 19, 2024 4:12 PM
To: communications@mncfn.ca; mark.laforme@mncfn.ca; doca.admin@mncfn.ca
Cc: Paul, Jeff <jeff.paul@stantec.com>; Jarrod Craven <JCraven@thamescentre.on.ca>
Subject: Notice of Public Information Centre 1 - Thorndale Wastewater Treatment Plant (WWTP) Expansion, Schedule C Municipal Class EA, Municipality of Thames Centre

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Environmental Planner

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Fax: 905 385-3534
David.Kielstra@stantec.com

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Stoney Creek ON L8J 0B4

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September 18, 2024

Project/File: 165630251

Clara Sault, Chief
Mississaugas of the Credit First Nation
2789 Mississauga Road, RR # 6
Hagersville ON N0A 1H0

communications@mncfn.ca; mark.laforme@mncfn.ca; doca.admin@mncfn.ca

Hello Chief Sault,

Reference: Thorndale Wastewater Treatment Plant (WWTP) Expansion
Municipal Class Environmental Assessment
Notice of Public Information Centre #2

The Municipality of Thames Centre (Municipality) has retained Stantec Consulting Ltd. to complete a Municipal Class Environmental Assessment (EA) to identify options for expansion of the Thorndale Wastewater Treatment Plant (WWTP), located at 1135 Ideal Drive. The Municipality of Thames Centre is interested in engaging with your community as the study progresses. Please let the study team know how your community would like to participate or be consulted as part of this study.

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Sincerely,



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

CC: Jeff Paul, David Kielstra, Stantec Consulting Ltd.;
Mark LaForme, Mississaugas of the Credit First Nation

Attachment: Notice of Public Information Centre #2

From:	Kielstra, David
To:	"todd.cornelius@oneida.on.ca"; "cherilyn.hill@oneida.on.ca"
Cc:	Paul, Jeff; "Jarrod Craven"
Subject:	RE: Notice of Public Information Centre 2- Thorndale Wastewater Treatment Plant (WWTP) Expansion, Schedule C Municipal Class EA, Municipality of Thames Centre
Date:	Wednesday, September 18, 2024 2:58:00 PM
Attachments:	Notice_PIC2_Thorndale_Wastewater_Treatment_Plant_Expansion_Class_EA_Sept2024.pdf let_oneida_nation_PIC2.pdf

Hello Chief Cornelius and staff,

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Environmental Planner

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Fax: 905 385-3534
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From: Kielstra, David
Sent: Friday, January 19, 2024 4:11 PM
To: 'todd.cornelius@oneida.on.ca' <todd.cornelius@oneida.on.ca>; 'cherilyn.hill@oneida.on.ca' <cherilyn.hill@oneida.on.ca>
Cc: Paul, Jeff <jeff.paul@stantec.com>; 'Jarrod Craven' <JCraven@thamescentre.on.ca>
Subject: Notice of Public Information Centre 1- Thorndale Wastewater Treatment Plant (WWTP) Expansion, Schedule C Municipal Class EA, Municipality of Thames Centre

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Environmental Planner

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September 18, 2024

Project/File: 165630251

J.Todd Cornelius, Chief
Oneida Nation of the Thames
2212 Elm Avenue
Southwold ON N0L 2G0

todd.cornelius@oneida.on.ca; cherilyn.hill@oneida.on.ca

Hello Chief Cornelius,

Reference: Thorndale Wastewater Treatment Plant (WWTP) Expansion
Municipal Class Environmental Assessment
Notice of Public Information Centre #2

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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

CC: Jeff Paul, David Kielstra, Stantec Consulting Ltd;

Cherilyn Hill, Oneida Nation of the Thames

Attachment: Notice of Public Information Centre #2

From:	Kielstra, David
To:	"justin.logan@delawarenation.on.ca"
Cc:	Paul, Jeff; "Jarrod Craven"
Subject:	RE: Notice of Public Information Centre 2 - Thorndale Wastewater Treatment Plant (WWTP) Expansion, Schedule C Municipal Class EA, Municipality of Thames Centre
Date:	Wednesday, September 18, 2024 3:02:00 PM
Attachments:	Notice_PIC2_Thorndale_Wastewater_Treatment_Plant_Expansion_Class_EA_Sept2024.pdf let_delaware_nation_PIC2.pdf

Hello Chief Logan,

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Fax: 905 385-3534
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Sent: Friday, January 19, 2024 4:11 PM
To: justin.logan@delawarenation.on.ca
Cc: Paul, Jeff <jeff.paul@stantec.com>; Jarrod Craven <JCraven@thamescentre.on.ca>
Subject: Notice of Public Information Centre 1 - Thorndale Wastewater Treatment Plant (WWTP) Expansion, Schedule C Municipal Class EA, Municipality of Thames Centre

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September 18, 2024

Project/File: 165630251

Justin Logan, Chief
Delaware Nation
14760 School House Line, RR #3
Thamesville ON N0P 2K0

justin.logan@delawarenation.on.ca

Hello Chief Logan,

Reference: Thorndale Wastewater Treatment Plant (WWTP) Expansion
Municipal Class Environmental Assessment
Notice of Public Information Centre #2

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Reference: Thorndale Wastewater Treatment Plant (WWTP) Expansion

Following the PIC, An Environmental Study Report (ESR) will be prepared to document the EA process, consultation, and the evaluation of alternatives. The ESR will be provided for a minimum 30 day public review and it is anticipated to be prepared in Spring 2025.

The project team will provide you with future project notices should you wish to participate or obtain a copy of the materials presented.

Should you have any questions, comments or interests regarding this Municipal Class EA Study, or if you would like to schedule a meeting to discuss this project further, please do not hesitate to contact the undersigned.

Sincerely,



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

CC: Jeff Paul, David Kielstra, Stantec Consulting Ltd.

Attachment: Notice of Public Information Centre #2

Appendix B Public Information Centre Displays

Public Information Centre #1

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.

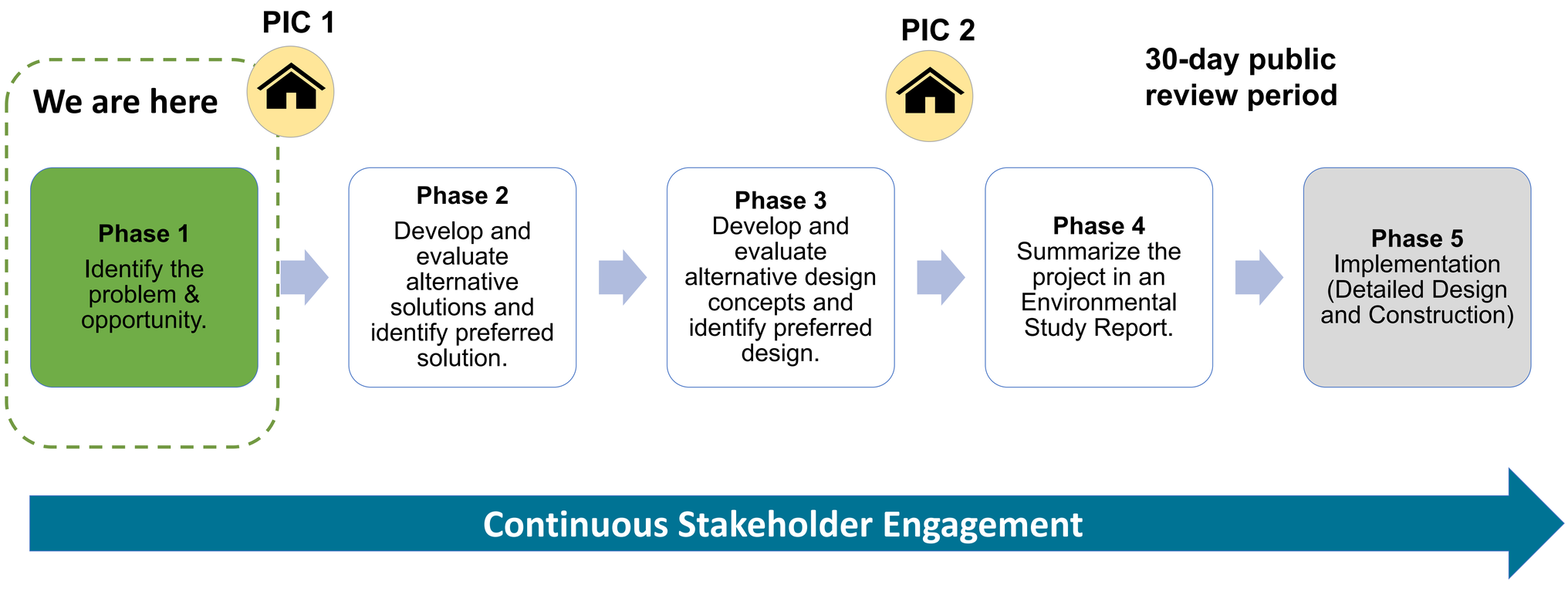
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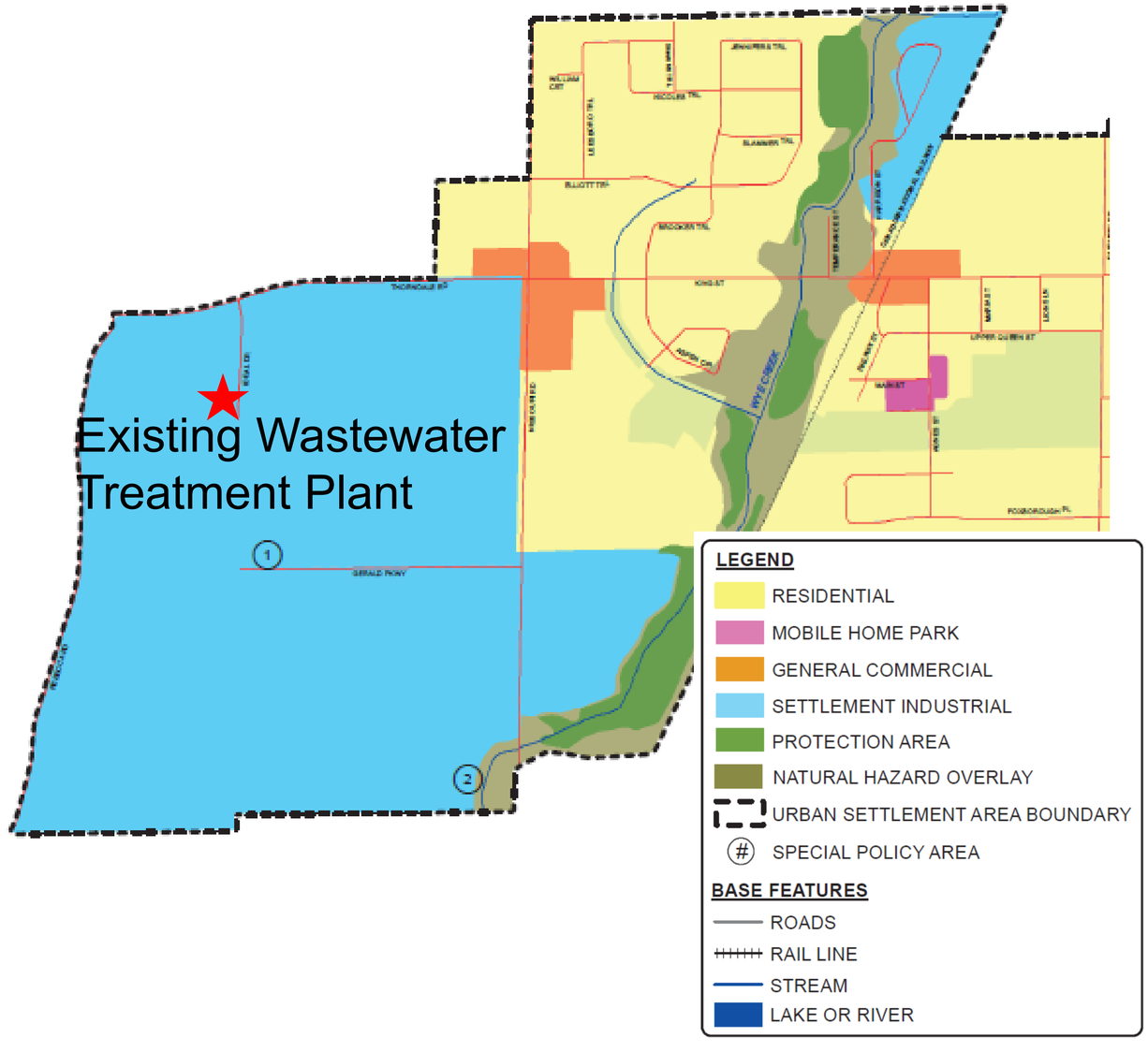
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- The study includes opportunities for public input including two Public Information Centres (PICs) and a 30-day review of the Environmental Study Report at the end of the project.



Existing Conditions - Land Use Context

- The Municipality of Thames Centre Official Plan (2004, consolidated 2022) designates the WWTP property as “Settlement Industrial”.
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- The County Official Plan encourages the development and improvement of sanitary services in the County.
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    - 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

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- The Thorndale WWTP has a design capacity of 674 m³/day.
- The site services approximately 1,500 Thorndale residents.
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Existing Thorndale WWTP (Google Streetview, 2023)

The existing WWTP has the following key process features:

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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

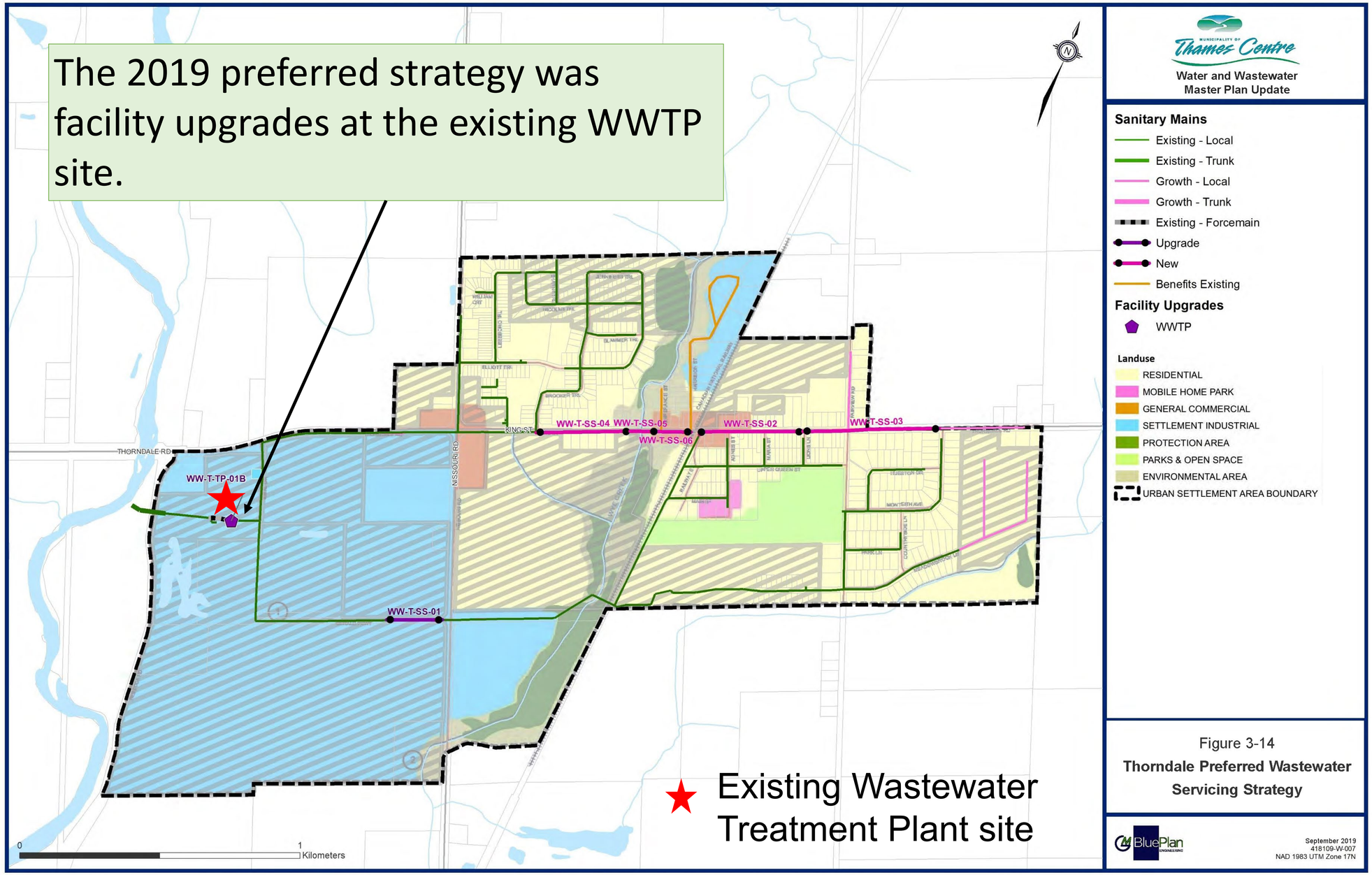
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- The *Master Plan Update* considered various growth scenarios for future flows to the WWTP for growth lands both within the limits of the settlement boundary as well as lands outside the settlement boundary. The study concluded that additional treatment 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

The 2019 preferred strategy was facility upgrades at the existing WWTP site.



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;
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Identification of Alternative Solutions

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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
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Next Steps

- Review and respond to comments received at PIC 1.
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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:

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Public Information Centre #2

Welcome!

Welcome to the second 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 #2

September 26, 2024

The purpose of this PIC is to:

- Provide an overview of the Thorndale WWTP and study context.
- Evaluate the alternative solutions and alternative designs
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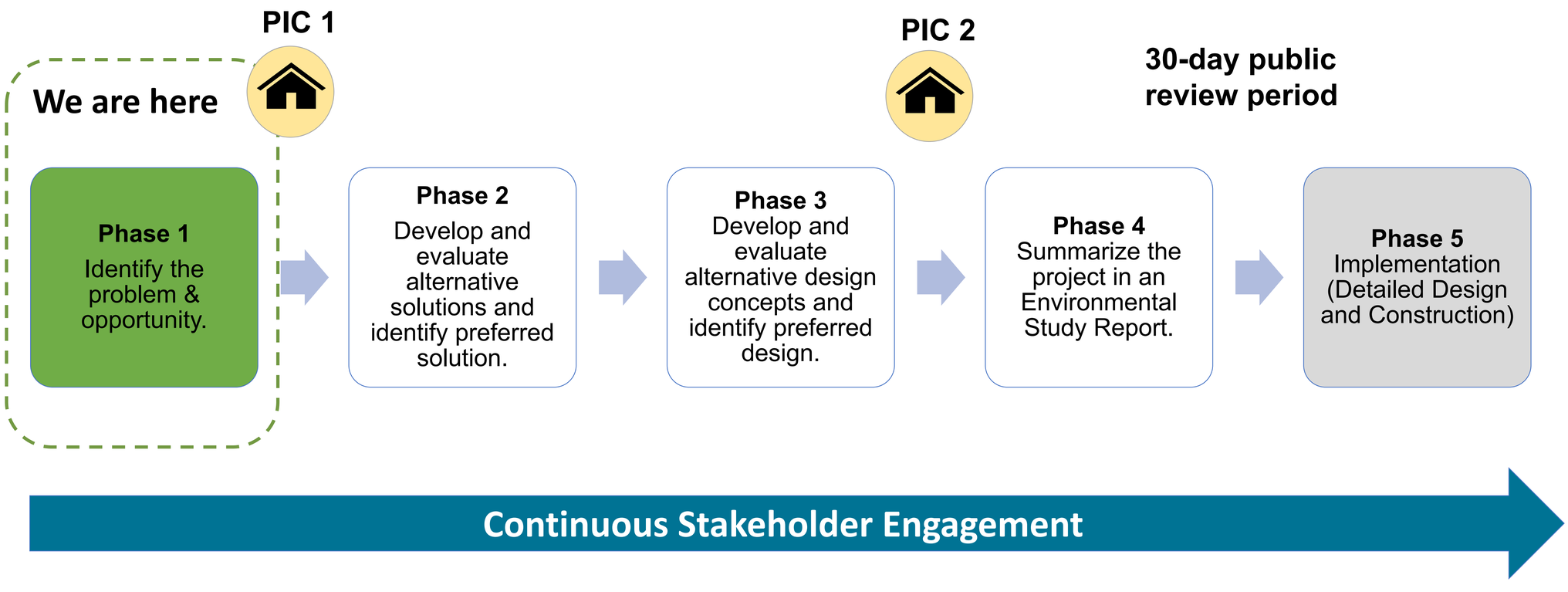
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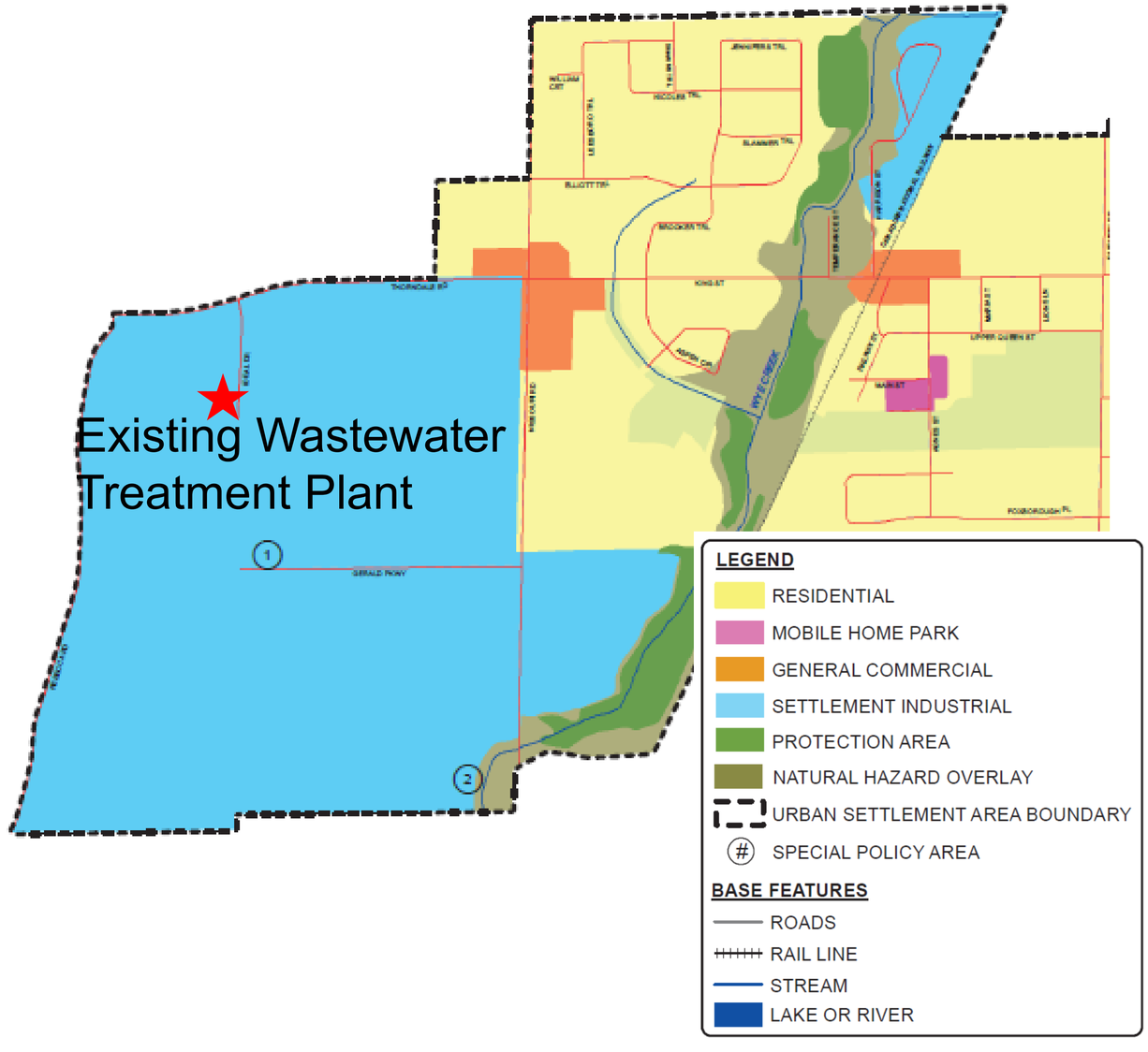
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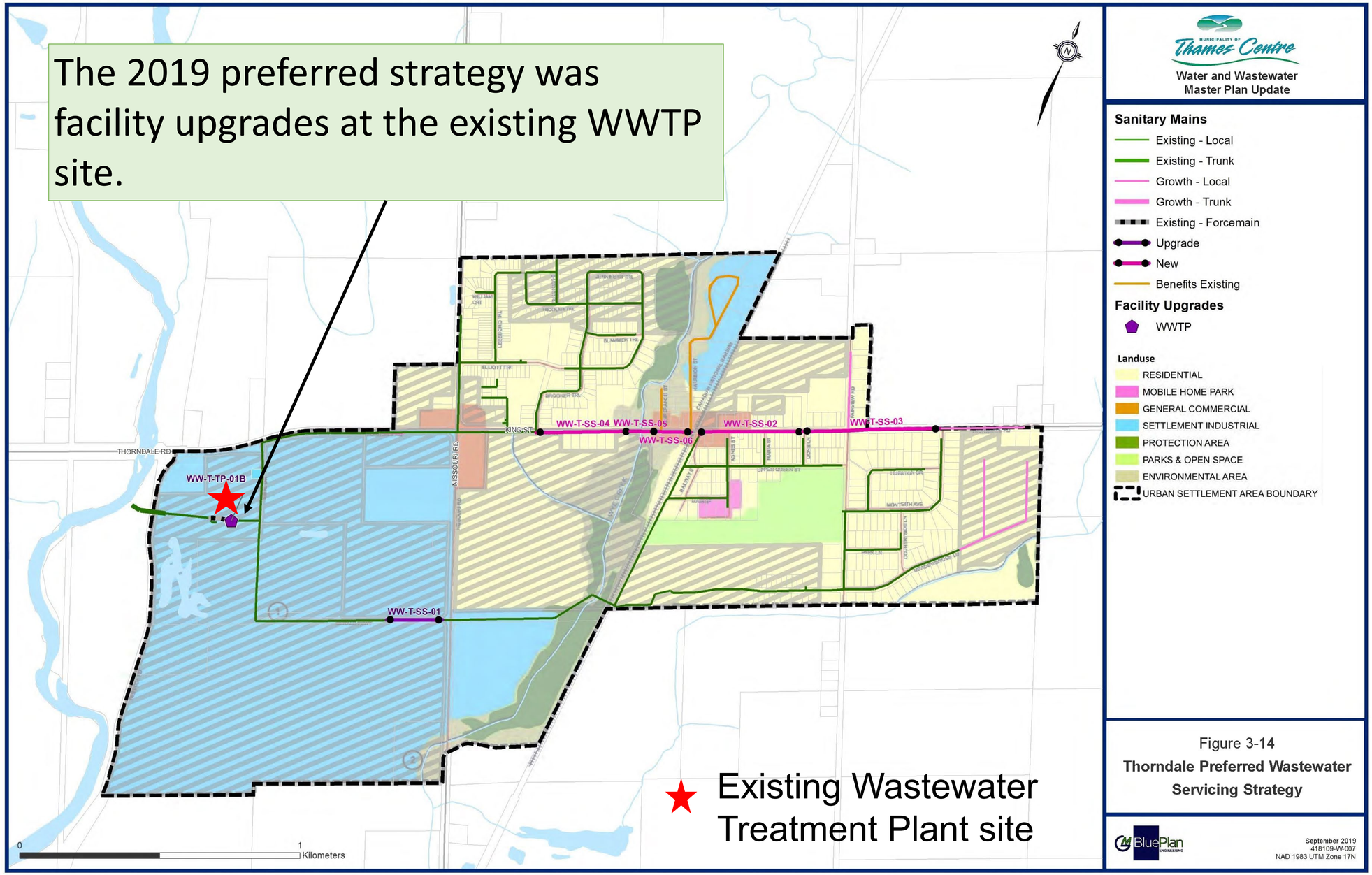
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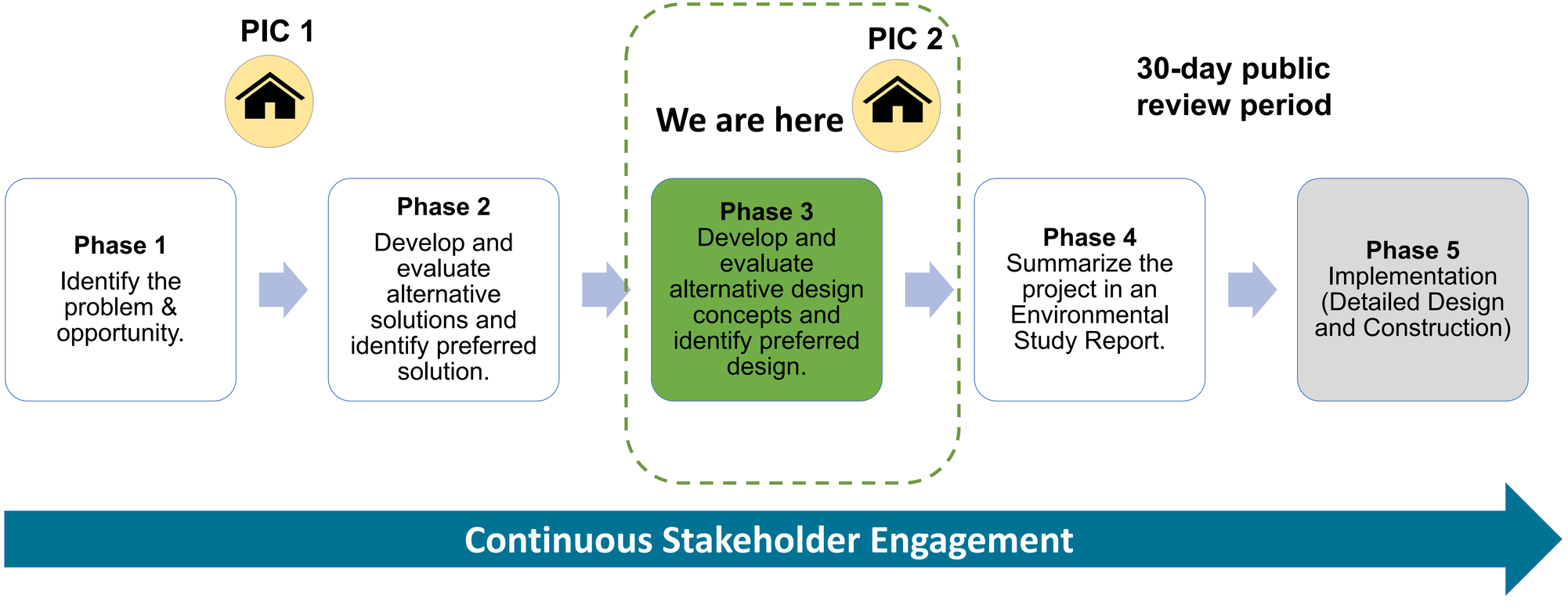
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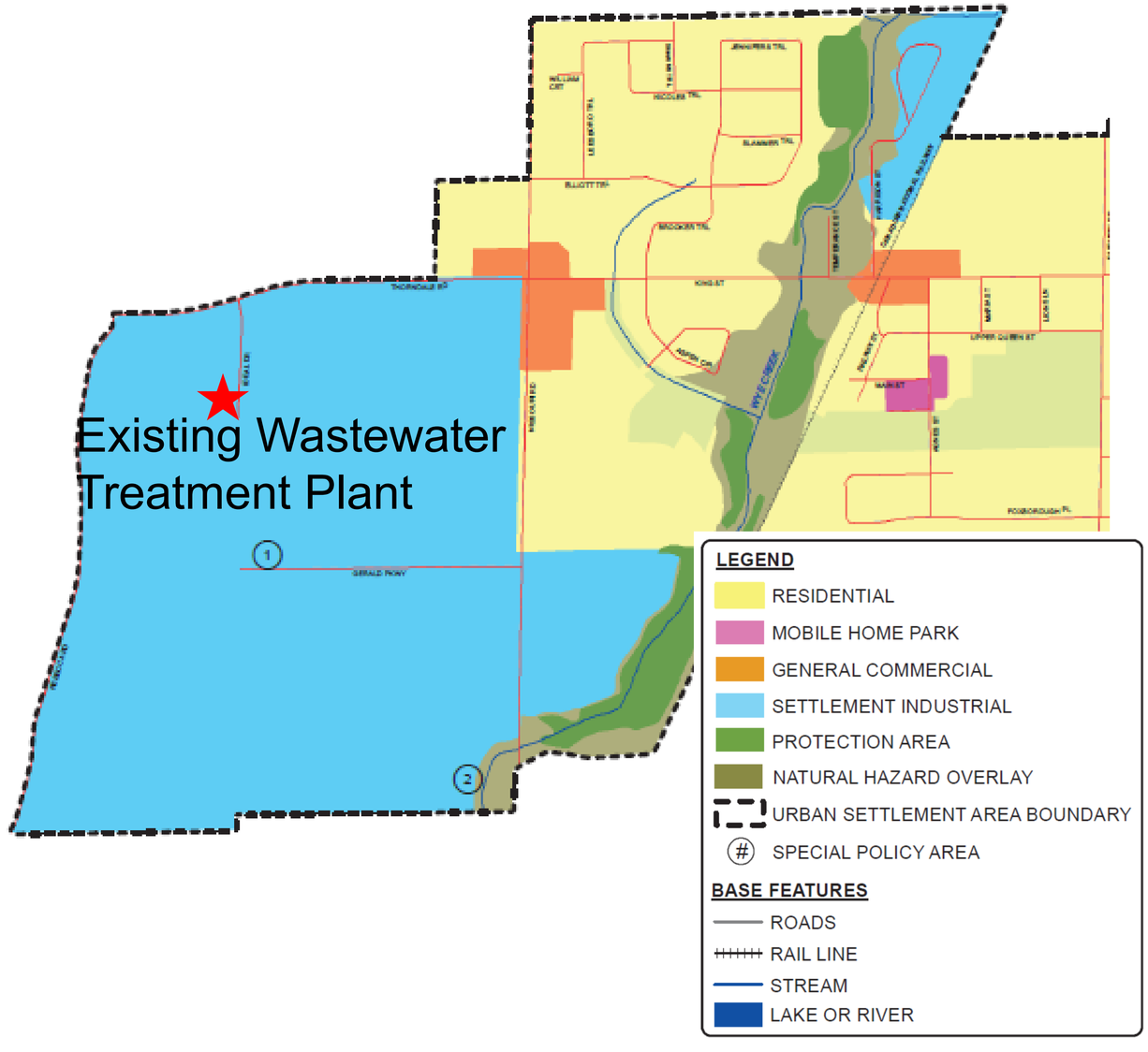
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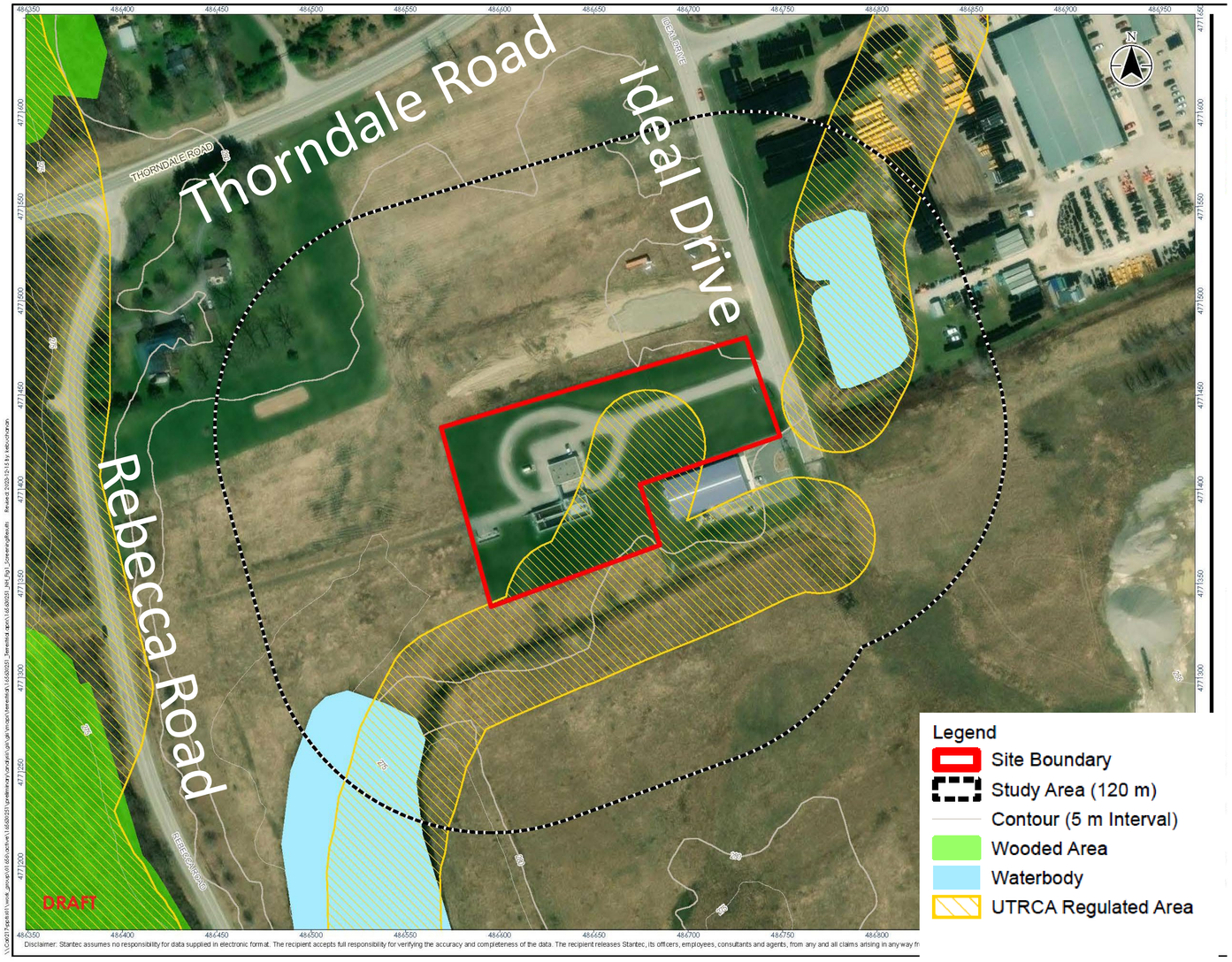
Existing Conditions - Investigations

Terrestrial and Aquatic Environment

- No Areas of Natural and Scientific Interest (ANSIs), or Provincially Significant Wetlands (PSWs).
- Waterbodies are present in the study area. Thames River is the effluent receiver.
- 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, although none within the fenced area.
- A future field study is recommended prior to construction in work areas to search for migratory birds or SAR/SOCC species.

Archaeology and Built Heritage

- No Built heritage resources within 50 m of the site.
- Previous Stage 1 archaeological assessment did not identify archaeological potential due to previous disturbance (former gravel pit).



Natural Environment Existing Conditions

Problem and Opportunity Statement

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Identification of Alternative Solutions

Evaluation of Alternative Solutions is part of Phase 2 of the Municipal Class EA.

A preliminary screening was conducted to determine whether the alternatives had the potential to align with the problem opportunity statement and the Master Plan Update (2019).

Description

- **Do Nothing –** No upgrades to the existing site. The site would continue to use the same capacity.
- **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.

Preliminary Screening

ALTERNATIVE	DISCUSSION	RESULT
Do Nothing	• No upgrades to the existing facility, but also no increases in capacity in Thorndale • This alternative cannot address the Problem and Opportunity Statement since there are no capacity increases to meet demand growth to 2046	Not carried forward
Limit Future Growth	• Thorndale is a Growth area within the Municipality of Thames Centre Official Plan • Limiting growth would not align with the Official Plan • Cannot avoid future expansion needs when rated capacity is reached	Not carried forward
Upgrades at the Existing Site	• Potential to address the Problem Opportunity Statement to address capacity requirements • Aligns with the *Master Plan Update* (2019) to address capacity increase needs • Available land on site. Requirements for site size would be confirmed in the Alternative Designs phase	**Carried forward**
Upgrades Requiring Site Expansion	• Potential to address the Problem and Opportunity Statement to address capacity requirements should additional land be available • The existing WWTP site has enough space for expansion and there is open space available within the site footprint	**Carried forward**

Evaluation Criteria

Social Environment

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

Cultural Environment

- Protects archaeological and cultural heritage resources

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Financial

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

Evaluation of Alternative Solutions

CATEGORY	UPGRADES AT THE EXISTING SITE	UPGRADES REQUIRING SITE EXPANSION	DISCUSSION
Socio-Economic Environment	**Preferred**	Not Preferred	• Similar level of impact (construction-related), minor removal of nearby land for the industrial park may limit future development potential of the lands.
Cultural Environment	**Preferred**	Not Preferred	• No archaeological potential on the existing site. • No cultural heritage resources are within 50 m of the existing site, but expansion footprint may be larger.
Natural Environment	**Preferred**	Not Preferred	• Work within the existing limits minimizes the potential to impact natural environment. Confirmed no additional property is necessary to construct upgrades.
Technical	**Preferred**	**Preferred**	• Similar technical complexity and constructability.
Financial	**Preferred**	Not Preferred	• Least cost as property is available on site. • Reduced distances to convey flow by keeping it close to existing processes.
Overall	**Preferred** **Construction on site minimizes the potential for off-site impacts, and available land is present to address process upgrade requirements.**	Not Preferred	**"Upgrades at the Existing Site" was identified as the preliminary preferred Alternative Solution.** **Alternative Design concepts are developed in Phase 3 to implement the preferred solution.**

Identification of Alternative Designs Long-List

- Phase 3 of the Municipal Class EA includes identifying and evaluating Alternative Designs to address the preferred Alternative Solution: Upgrades on the Existing Site.
- A long list of wastewater treatment options was considered to identify potential treatment process options:

Re-rate the existing Sequencing Batch Reactors (SBRs)

- Uses existing 2 SBRs for small flow increases.
- Duration of phases and dissolved oxygen adjusted to assist with re-rating.

Pros: Lowest cost per unit, minimal construction, little new operator training

Cons: Potentially inefficient treatment. May not lead to flow/load increases – limits may not be met.

Sequencing Batch Reactors (SBR)+ Equalization (EQ) tank

- Biological treatment and solids/liquids are achieved in a single vessel.
- Requires 1 or 2 SBR reactors, and a new Equalization tank

Sequencing Batch Reactors (SBR) + EQ tank+ filters for Phosphorous removal

- Biological treatment and solids/liquid separation are achieved in a single vessel. Biological treatment and filtration – 2-step process with filters.
- EQ tank required for peak flows.
- Phosphorous removal achieved by using a coagulant. Nitrification in the processes may be required.

Pros: SBR process can be expanded. Processes are already in use, and operator skill is available

SBR+EQ tank + filters offers excellent tertiary effluent quality.

Cons: Complicated programing, mechanical plant process requires higher construction and operation & maintenance costs compared to re-rating

Extended Aeration (EA) + filters for Phosphorous removal

- Multi-step process with extended aeration for biological treatment, secondary clarifier for solids/liquid separation, followed by filtration for particulates filtration.

Membrane bioreactor (MBR)

- Biological treatment and filtration are achieved in a 1-step process. Uses Aeration tanks for biological treatment and Ultra-filtration membranes for solids/liquid separation and particulates filtration.

Pros: Higher tertiary effluent quality and improved processes. Options can be expanded as flows/loads increase.

Cons: Increased complexity requiring longer planning and commissioning periods.

Alternative Designs Long-List Screening

A series of “YES/NO” questions was used to assess factors contributing to effective treatment of effluent. This screening process led to the selection of two preferred designs for further evaluation.

Questions

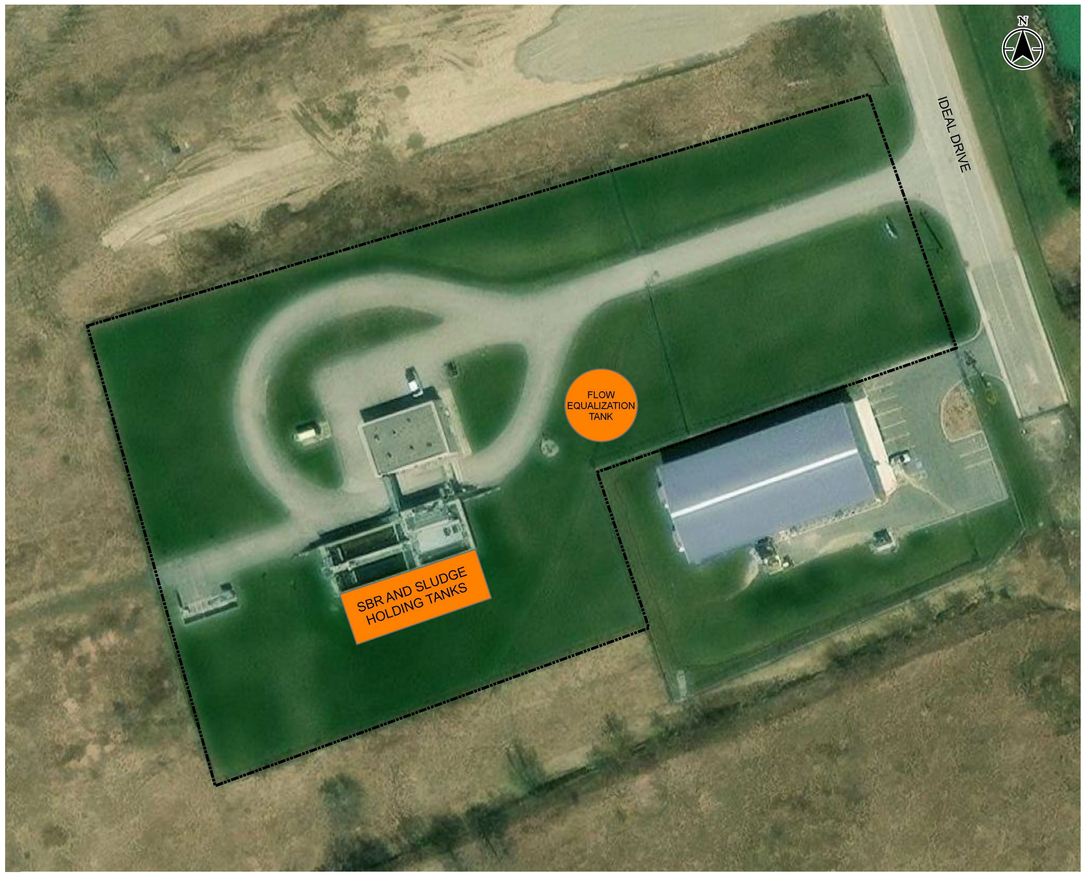
1. Is there sufficient space for a new process?
2. Potential for MECP to approve the new process and issue a letter of conformance?
3. Are there other proven installations in Ontario?
4. Are there suitable sludge management options available?
5. Does the process maximize and optimize the use of existing infrastructure?
6. Will the process provide capacity to service growth and allow for expansion beyond the 20-year planning horizon?
7. Does the solution support the Strategic Needs and Official Plan direction of the Municipality?

Table Depicting Pass/Fail

Process	PASS / FAIL - Comments
Re-rating	**FAIL** – insufficient flow/load for future expansions.
SBR	**PASS** – carried forward for further evaluation.
SBR + filters	**PASS** – carried forward for further evaluation.
EA + filters	**FAIL** – Can have high construction cost, poor use of existing mechanical treatment plant infrastructure.
MBR	**FAIL** – Can have high construction cost, poor use of existing mechanical treatment plant infrastructure.

Alternative Design Concept 1

- New Sequencing Batch Reactor system (SBR) and an equalization tank to boost secondary treatment capacity.
- **Key Points:** Maintains existing processes where feasible, adds new infrastructure as needed, and preserves the current layout of the sanitary collection system.



Alternative 1: Sequencing Batch Reactor with Equalizer Tank Expansion

Alternative Design Concept 2

- New Sequencing Batch Reactor (SBR) system and a filtration system to handle higher influent concentrations and meet future effluent standards.
- **Key Points:** Enhances existing secondary treatment with additional filtration for tertiary treatment, reuses current infrastructure, and maintains the existing sanitary collection system layout.



Alternative 2: Sequencing Batch Reactor with EQ Tank and Filtration Expansion

Preferred Treatment Option

Alternative Design Alternatives 1 & 2 were assessed against the evaluation criteria to determine the preferred treatment option.

CRITERIA	Alternative 1: WWTP Sequencing Batch Reactor with Equalization Tank Upgrade	Alternative 2: WWTP Sequencing Batch Reactor with Equalization Tank and Filtration Upgrade
Socio-Economic Environment	Most Preferred	Most Preferred
Cultural Environment	Most Preferred	Most Preferred
Natural Environment	Least Preferred	Most Preferred
Technical Environment	Most Preferred	Least Preferred
Financial	Least Preferred	Least Preferred
OVERALL	**Most Preferred**	**Least Preferred**

Preliminary Preferred Alternative Design

The preliminary preferred alternative for WWTP expansion based on the detailed evaluation is: ***Alternative 1 - WWTP SBR*** with the following key advantages:

- Optimizes the use of existing infrastructure, including reusing of the existing SBRs
- Adds equalization tanks to buffer peak flows to reach effluent limits
- Ability to accommodate increased influent loadings.
- Ability to reach effluent limits regarding nutrients, organics, and solids
- Although the use of filters (Alternative 2) may provide some improvement to effluent quality, Alternative 1 will still operate within MECP guidelines
- Alternative 1 is less costly and the less complex to operate compared to Alternative 2



Preliminary Preferred Alternative (Alt 1): Sequencing Batch Reactor with Equalizer Tank Expansion

Potential Impacts and Proposed Mitigation Measures

Based on the anticipated impacts, preliminary mitigation measures have been recommended. Mitigation measures will be refined during the future detailed design phase and then implemented during and following construction, with appropriate monitoring programs in place.

Potential Impact	Proposed Mitigation Measures / Commitments to Future Work
Wildlife and Habitat	• No significant natural habitat features present for Species at Risk within the existing limits. • Adhere to timing windows to avoid migratory bird nesting. • Conduct a nest search for migratory birds and a search for Species at Risk during the detailed design phase prior to construction and before commencing work.
Aquatic Resources (Thames River)	• There is no change or modifications to the existing outfall to the Thames River for treated effluent. • Continue engagement with MECP regarding Environmental Compliance Approvals (ECA) to meet all established effluent compliance limits and objectives of the facility to avoid impacts to fish and fish habitat.
Upper Thames River Conservation Authority Regulatory Limits	• Two UTRCA Regulated Areas are present within the study area: 1) drainage ditch on-site, 2)Constructed waterbodies which are beyond the property limits. • Any development within these areas are anticipated to require approval from the UTRCA under Ontario Regulation 157/06 (Development, Interference with Wetlands and Alterations to Shorelines and Watercourses) under the *Conservation Authorities Act.* The regulation requires prior permission from UTRCA for any development or alteration within a floodplain, valleyland, wetland, or other hazardous land.
Traffic	• Construction staging and traffic management will be confirmed during the design phase.
Short-term Construction Impacts	• Noise, vibration, air (dust), traffic impacts are anticipated but will be temporary in nature and are largely unavoidable. With adequate controls, impacts can be minimized. • Mitigation measures are available by designing the building and equipment to minimize sound transmission
Source Water Protection	• There are no municipal wells in the study area. Significant Groundwater Recharge Areas, Highly Vulnerable Aquifers are present, but are identified as part of the Moderate and Low Threat Policy Area. • A Permit to Take Water (PTTW) or Environmental Activity Sector Registry (EASR) may be required during construction, and should be confirmed in detailed design.

Next Steps

- Review and respond to comments received at the PIC to confirm the preferred alternative
- Continue to engage Indigenous communities, the public and agencies.
- Prepare the Environmental Study Report for 30 day public review (Spring 2025)
- Proceed to detailed design and construction when capacity levels are reached

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 **October 4, 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

Appendix C Correspondence

C.1 Agency Correspondence

-----Original Message-----
From: SUN Hongxia <Susan.SUN@HydroOne.com> On Behalf Of SECONDARY LAND USE Department
Sent: Tuesday, January 2, 2024 11:23 AM
To: Jarrod Craven <JCraven@thamescentre.on.ca>
Cc: SECONDARY LAND USE Department <Department.SecondaryLandUse@hydroone.com>
Subject: Hydro One Response: 20240102-NoticeOfCommence-Thorndale Wastewater Treatment Plant Expansion

CAUTION: This email originated from outside of the Thames Centre email system. Please use caution when clicking links or opening attachments unless you recognize the sender and know the content is safe.

Please see the attached for Hydro One's Response.

Hydro One Networks Inc

SecondaryLandUse@HydroOne.com

Caution: This email originated from outside of Stantec. Please take extra precaution.

Attention: Ce courriel provient de l'extérieur de Stantec. Veuillez prendre des précautions supplémentaires.

Atención: Este correo electrónico proviene de fuera de Stantec. Por favor, tome precauciones adicionales.

Hydro One Networks Inc.

483 Bay Street
8th Floor South Tower
Toronto, Ontario M5G 2P5

HydroOne.com

January 02, 2024

Re: Thorndale Wastewater Treatment Plant Expansion

Attention:
Jarrod Craven
Director of Public Works
Municipality of Thames Centre

Thank you for sending us notification regarding (Thorndale Wastewater Treatment Plant Expansion). In our preliminary assessment, we confirm there are no existing Hydro One Transmission assets in the subject area. Please be advised that this is only a preliminary assessment based on current information.

If plans for the undertaking change or the study area expands beyond that shown, please contact Hydro One to assess impacts of existing or future planned electricity infrastructure.

Any future communications are sent to Secondarylanduse@hydroone.com.

Be advised that any changes to lot grading and/or drainage within proximity to Hydro One transmission corridor lands must be controlled and directed away from the transmission corridor.

Sent on behalf of,

Secondary Land Use
Asset Optimization
Strategy & Integrated Planning
Hydro One Networks Inc.

From: Shakespeare, Matthew (MNRF) <Matthew.Shakespeare@ontario.ca>
Sent: Wednesday, January 3, 2024 11:49 AM
To: Paul, Jeff <jeff.paul@stantec.com>
Subject: RE: Thorndale Wastewater Treatment Plant (WWTP) Expansion, Schedule C Municipal Class EA, Municipality of Thames Centre

You don't often get email from matthew.shakespeare@ontario.ca. Learn why this is important

Dear Jeff Paul,

The Ministry of Natural Resources and Forestry (MNRF) received your Notice of Study Commencement regarding the Thorndale Wastewater Treatment Plant Expansion. Thank you for circulating this to our office. Please see the attached for comments by the MNRF to support your project.

Matthew Shakespeare
Regional Lands Intern, Regional Resources Advisory Team
Ministry of Natural Resources and Forestry, Southern Region
(705) 772-9310
matthew.shakespeare@ontario.ca

As part of providing accessible customer service, please let me know if you have any accommodation needs or require communication supports or alternate formats.

January 3, 2024

Dear Jeff Paul

SUBJECT: Thorndale Wastewater Treatment Plant (WWTP) Expansion, Schedule C Municipal Class EA, Municipality of Thames Centre

---

The Ministry of Natural Resources and Forestry (MNRF) received the Notice of Study Commencement on December 21, 2023. Thank you for circulating this to our office. Please note that we have not completed a screening of natural heritage or other resource values for the project at this time. This response, however, does provide information to guide you in identifying and assessing natural features and resources as required by applicable policies and legislation, as well as engaging with the Ministry for advice as needed.

Please also note that it is the proponent's responsibility to be aware of, and comply with, all relevant federal or provincial legislation, municipal by-laws or other agency approvals.

Natural Heritage

MNRF's natural heritage and natural resources GIS data layers can be obtained through the Ministry's Land Information Ontario (LIO) website. You may also view natural heritage information online (e.g., Provincially Significant Wetlands, ANSI's, woodlands, etc.) using the Make a Map: Natural Heritage Areas tool.

We recommend that you use the above-noted sources of information during the review of your project proposal.

Natural Hazards

A series of natural hazard technical guides developed by MNRF are available to support municipalities and conservation authorities implement the natural hazard policies in the Provincial Policy Statement (PPS). For example, standards to address flood risks and the potential impacts and costs from riverine flooding are addressed in the *Technical Guide River and Stream Systems: Flooding Hazard Limit (2002)*. We recommend that you consider these technical guides as you assess specific improvement projects that can be undertaken to reduce the risk of flooding.

Petroleum Wells & Oil, Gas and Salt Resources Act

There may be petroleum wells within the proposed project area. Please consult the Ontario Oil, Gas and Salt Resources Library website (www.ogsrlibrary.com) or GeoHub for the best-known data on any wells recorded by MNRF. Please reference the 'Definitions and Terminology Guide' listed in the publications on the library website to better understand the well information available. Any oil and gas wells in your project area are regulated by the *Oil,*

Gas and Salt Resource Act, and the supporting regulations and operating standards. If any unanticipated wells are encountered during development of the project, or if the proponent has questions regarding petroleum operations, the proponent should contact the Petroleum Operations Section at POSRecords@ontario.ca or 519-873-4634.

Fish and Wildlife Conservation Act

Please note, that should the project require:

- The relocation of fish outside of the work area, a Licence to Collect Fish for Scientific Purposes under the *Fish and Wildlife Conservation Act* will be required.
- The relocation of wildlife outside of the work area (including amphibians, reptiles, and small mammals), a Wildlife Collector's Authorization under the *Fish and Wildlife Conservation Act* will be required.

Public Lands Act & Lakes and Rivers Improvement Act

Some Project may be subject to the provisions of the *Public Lands Act* or *Lakes and River Improvement Act*. Please review the information on MNRF's web pages provided below regarding when an approval is, or is not, required. Please note that many of the authorizations under the *Lakes and Rivers Improvement Act* are administered by the local Conservation Authority.

- For more information about the *Public Lands Act*: https://www.ontario.ca/page/crown-land-work-permits
- For more information about the *Lakes and Rivers Improvement Act*: https://www.ontario.ca/page/lakes-and-rivers-improvement-act-administrative-guide

After reviewing the information provided, if you have not identified any of MNRF's interests stated above, there is no need to circulate any subsequent notices to our office. If you have identified any of MNRF's interests and/or may require permit(s) or further technical advice, please direct your specific questions to matthew.shakespeare@ontario.ca.

If you have any questions or concerns, please feel free to contact me.

Best Regards,

[original signed by]

Matthew Shakespeare
Regional Lands Intern
Ministry of Natural Resources and Forestry (MNRF)
(705) 772 9310
matthew.shakespeare@ontario.ca

From:	Macki, Monika (MECP)
To:	Jcraven@thamescentre.on.ca; Paul, Jeff; Kielstra, David
Cc:	Grant, Adam (He/Him) (MECP); Badali, Mark (MECP); Adrien, Pierre (MECP)
Subject:	MECP Acknowledgement Letter of NOC - MEC Class EA Sch C - Municipality of Thames Centre Thorndale WWTP
Date:	Tuesday, January 16, 2024 11:08:22 AM
Attachments:	MECP Acknowledgement of NOC - MEA Class EA Sch C - Municipality of Thames Centre Thorndale WWTP.docx

Some people who received this message don't often get email from monika.macki@ontario.ca. Learn why this is important

Hello,

Please find the attached letter of acknowledgement and supporting attachments in response to the Notice of Commencement of the Thorndale Waste Water Treatment Plant Expansion being undertaken by the Municipality of Thames Centre in accordance with the Municipal Class Environmental Assessment (Schedule C).

Please ensure that all Notices moving forward must include the date the notice was issued in order to meet the minimum mandatory requirements outlined in section A.3.5.3 of the Municipal Class EA parent document.

Thanks,

Monika Macki
Environmental Resource Planner/Assessment Coordinator
Environmental Assessment Branch
Ministry of the Environment, Conservation and Parks
monika.macki@ontario.ca

From:	Badali, Mark (He/Him) (MECP)
To:	Kielstra, David
Cc:	Paul, Jeff; Jarrod Craven; Macki, Monika (MECP)
Subject:	RE: Notice of Public Information Centre 1 - Thorndale Wastewater Treatment Plant (WWTP) Expansion, Schedule C Municipal Class EA, Municipality of Thames Centre
Date:	Friday, January 19, 2024 10:13:00 AM
Attachments:	Notice_PIC1 - Thorndale_Wastewater_Treatment_Plant_Expansion_Class_EA.pdf

You don't often get email from mark.badali1@ontario.ca. Learn why this is important

Hi David,

Thank you for your email and for sharing the attached.

Please be advised that Monika Macki (copied here) is now responsible for coordinating streamlined EA projects in the ministry's Southwest Region, and has taken over as the assigned Regional Environmental Planner for this project and all other projects in this geographical area. Please remove me from the project contact list and direct all further correspondence with the ministry for this project to Monika.

Thank you,

Mark Badali (he/him) | Senior Project Evaluator
Environmental Assessment Program Support | Environmental Assessment Branch
Ontario Ministry of the Environment, Conservation and Parks
Mark.Badali1@ontario.ca | (416) 457-2155

From: Kielstra, David <David.Kielstra@stantec.com>
Sent: January 19, 2024 10:01 AM
Cc: Paul, Jeff <jeff.paul@stantec.com>; Jarrod Craven <JCraven@thamescentre.on.ca>
Subject: Notice of Public Information Centre 1 - Thorndale Wastewater Treatment Plant (WWTP) Expansion, Schedule C Municipal Class EA, Municipality of Thames Centre

CAUTION -- EXTERNAL E-MAIL - Do not click links or open attachments unless you recognize the sender.

Hello,

Please see the attached Notice of Public Information Centre #1 for the Thorndale Wastewater Treatment Plant (WWTP) Expansion project, on behalf of the Municipality of Thames Centre. The project is being undertaken as a Schedule 'C' project in accordance with the Municipal Engineers Association (MEA) Municipal Class Environmental Assessment (as amended in 2023).

An in-person Public Information Centre (PIC #1) is being held using a drop-in format, with members of the project team available to discuss the project and respond to any questions you may have.

Date: Thursday, January 25, 2024
Location: Thorndale Lions Community Centre, 265 Upper Queen Street, Thorndale, ON
Time: 5:00 pm - 7:00 pm

Presentation materials will also be available on the Municipality's website following the PIC at: www.thamescentre.on.ca/ThorndaleWWTPExpansion. Comments can be provided at the PIC or provided

by **February 2, 2024**.

Should you have any questions, please let me know or send comments to the individuals identified on the Notice.

Thank you,

David Kielstra MA, EP, MCIP, RPP
Environmental Planner

Direct: 905 381-3247
Fax: 905 385-3534
David.Kielstra@stantec.com

Stantec
200-835 Paramount Drive
Stoney Creek ON L8J 0B4



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Please consider the environment before printing this email.

From: Macki, Monika (MECP)
To: Kielstra, David
Subject: RE: Notice of Public Information Centre 1 - Thorndale Wastewater Treatment Plant (WWTP) Expansion, Schedule C Municipal Class EA, Municipality of Thames Centre
Date: Friday, January 19, 2024 2:15:50 PM

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Thanks David for the PIC.

For future reference, please ensure that the date the notice was issued is indicated on the notice. This goes for all types of notices, as per section A.3.5.3 of the Municipal Class EA document.

I see that it was posted on the website on Jan 12, 2024. So this date should be indicated on the actual notice itself.

Thank you!

Monika Macki
Environmental Resource Planner/Assessment Coordinator
Environmental Assessment Branch
Ministry of the Environment, Conservation and Parks
monika.macki@ontario.ca

From: Kielstra, David <David.Kielstra@stantec.com>
Sent: January 19, 2024 10:01 AM
Cc: Paul, Jeff <jeff.paul@stantec.com>; Jarrod Craven <JCraven@thamescentre.on.ca>
Subject: Notice of Public Information Centre 1 - Thorndale Wastewater Treatment Plant (WWTP) Expansion, Schedule C Municipal Class EA, Municipality of Thames Centre

CAUTION -- EXTERNAL E-MAIL - Do not click links or open attachments unless you recognize the sender.

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by **February 2, 2024**.

Should you have any questions, please let me know or send comments to the individuals identified on the Notice.

Thank you,

David Kielstra MA, EP, MCIP, RPP
Environmental Planner

Direct: 905 381-3247
Fax: 905 385-3534
David.Kielstra@stantec.com

Stantec
200-835 Paramount Drive
Stoney Creek ON L8J 0B4



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Please consider the environment before printing this email.

Ministry of the Environment, Conservation and Parks

Environmental Assessment Branch

7th Floor
135 St. Clair Avenue W
Toronto ON M4V 1P5
Tel.: 416 314-8001
Fax.: 416 314-8452

Ministère de l'Environnement, de la Protection de la nature et des Parcs

Direction des évaluations environnementales

7ème étage
135, avenue St. Clair Ouest
Toronto ON M4V 1P5
Tél. : 416 314-8001
Téléc. : 416 314-8452

January 16, 2024

Jarrod Craven
Director of Public Works
Municipality of Thames Centre
jcraven@thamescentre.on.ca

BY EMAIL ONLY

Re: **Thorndale Wastewater Treatment Plant Expansion**
Municipality of Thames Centre
Municipal Class Environmental Assessment, Schedule C
Acknowledgement of Notice of Commencement

Dear Jarrod Craven,

This letter is in response to the Notice of Commencement for the above noted project. The Ministry of the Environment, Conservation and Parks (MECP) acknowledges that the Municipality of Thames Centre (proponent) has indicated that the study is following the approved environmental planning process for a Schedule C project under the Municipal Class Environmental Assessment (Class EA).

The **updated (August 2022)** attached "Areas of Interest" document provides guidance regarding the ministry's interests with respect to the Class EA process. Please address all areas of interest in the EA documentation at an appropriate level for the EA study. Proponents who address all the applicable areas of interest can minimize potential delays to the project schedule. **Further information is provided at the end of the Areas of Interest document relating to recent changes to the Environmental Assessment Act through Bill 197, Covid-19 Economic Recovery Act 2020.**

The Crown has a legal duty to consult Aboriginal communities when it has knowledge, real or constructive, of the existence or potential existence of an Aboriginal or treaty right and contemplates conduct that may adversely impact that right. Before authorizing this project, the Crown must ensure that its duty to consult has been fulfilled, where such a duty is triggered. Although the duty to consult with Aboriginal peoples is a duty of the Crown, the Crown may delegate procedural aspects of this duty to project proponents while retaining oversight of the consultation process.

The proposed project may have the potential to affect Aboriginal or treaty rights protected under Section 35 of Canada's *Constitution Act* 1982. Where the Crown's duty to consult is triggered in relation to the proposed project**, the MECP is delegating the procedural aspects of rights-based consultation to the proponent through this letter.** The Crown intends to rely on the delegated consultation process in discharging its duty to consult and maintains the right to participate in the consultation process as it sees fit.

Based on information provided to date and the Crown`s preliminary assessment the proponent is required to consult with the following communities who have been identified as potentially affected by the proposed project:

- Aamjiwnaang First Nation
- Bkejwanong (Walpole Island)
- Caldwell First Nation
- Chippewas of Kettle and Stony Point
- Chippewas of the Thames First Nation
- Oneida Nation of the Thames

Steps that the proponent may need to take in relation to Aboriginal consultation for the proposed project are outlined in the "Code of Practice for Consultation in Ontario's Environmental Assessment Process". Additional information related to Ontario's Environmental Assessment Act is available online at: www.ontario.ca/environmentalassessments.

Please also refer to the attached document "A Proponent's Introduction to the Delegation of Procedural Aspects of consultation with Aboriginal Communities" for further information, including the MECP's expectations for EA report documentation related to consultation with communities.

The proponent must contact the Director of Environmental Assessment Branch (EABDirector@ontario.ca) under the following circumstances after initial discussions with the communities identified by the MECP:

- Aboriginal or treaty rights impacts are identified to you by the communities;
- You have reason to believe that your proposed project may adversely affect an Aboriginal or treaty right;

- Consultation with Indigenous communities or other stakeholders has reached an impasse; or
- A Section 16 Order request is expected based on impacts to Aboriginal or treaty rights

The MECP will then assess the extent of any Crown duty to consult for the circumstances and will consider whether additional steps should be taken, including what role you will be asked to play should additional steps and activities be required.

A draft copy of the report should be sent directly to me prior to the filing of the final report, allowing a minimum of 30 days for the ministry's technical reviewers to provide comments.

Please ensure a copy of the final notice is sent to the ministry's South West Region EA notification email account (eanotification.swregion@ontario.ca) after the draft report is reviewed and finalized.

Should you or any members of your project team have any questions regarding the material above, please contact me at monika.macki@ontario.ca.

Sincerely,

Monika Macki
Regional Environmental Planner – South West Region
Project Review Unit, Environmental Assessment Branch

Cc:
Adam Grant, London District Office, MECP

Enclosed: Areas of Interest

Attached: Client's Guide to Preliminary Screening for Species at Risk

A Proponent's Introduction to the Delegation of Procedural Aspects of Consultation with Aboriginal Communities

AREAS OF INTEREST (v. August 2022)

It is suggested that you check off each section after you have considered / addressed it.

Planning and Policy

- Applicable plans and policies should be identified in the report, and the proponent should describe how the proposed project adheres to the relevant policies in these plans.
    - Projects located in MECP Central, Eastern or West Central Region may be subject to **A Place to Grow: Growth Plan for the Greater Golden Horseshoe (2020)**.
    - Projects located in MECP Central or Eastern Region may be subject to the **Oak Ridges Moraine Conservation Plan (2017)** or the **Lake Simcoe Protection Plan (2014)**.
    - Projects located in MECP Central, Southwest or West Central Region may be subject to the **Niagara Escarpment Plan (2017)**.
    - Projects located in MECP Central, Eastern, Southwest or West Central Region may be subject to the **Greenbelt Plan (2017)**.
    - Projects located in MECP Northern Region may be subject to the **Growth Plan for Northern Ontario (2011).**

- The **Provincial Policy Statement (2020)** contains policies that protect Ontario's natural heritage and water resources. Applicable policies should be referenced in the report, and the proponent should describe how the proposed project is consistent with these policies.

- In addition to the provincial planning and policy level, the report should also discuss the planning context at the municipal and federal levels, as appropriate.

Source Water Protection

The *Clean Water Act*, 2006 (CWA) aims to protect existing and future sources of drinking water. To achieve this, several types of vulnerable areas have been delineated around surface water intakes and wellheads for every municipal residential drinking water system that is located in a source protection area. These vulnerable areas are known as a Wellhead Protection Areas (WHPAs) and surface water Intake Protection Zones (IPZs). Other vulnerable areas that have been delineated under the CWA include Highly Vulnerable Aquifers (HVAs), Significant Groundwater Recharge Areas (SGRAs), Event-based modelling areas (EBAs), and Issues Contributing Areas (ICAs). Source protection plans have been developed that include policies to address existing and future risks to sources of municipal drinking water within these vulnerable areas.

Projects that are subject to the Environmental Assessment Act that fall under a Class EA, or one of the Regulations, have the potential to impact sources of drinking water if they occur in designated vulnerable areas or in the vicinity of other at-risk drinking water systems (i.e. systems that are not municipal residential systems). MEA Class EA projects may include

activities that, if located in a vulnerable area, could be a threat to sources of drinking water (i.e. have the potential to adversely affect the quality or quantity of drinking water sources) and the activity could therefore be subject to policies in a source protection plan. Where an activity poses a risk to drinking water, policies in the local source protection plan may impact how or where that activity is undertaken. Policies may prohibit certain activities, or they may require risk management measures for these activities. Municipal Official Plans, planning decisions, Class EA projects (where the project includes an activity that is a threat to drinking water) and prescribed instruments must conform with policies that address significant risks to drinking water and must have regard for policies that address moderate or low risks.

- In October 2015, the MEA Parent Class EA document was amended to include reference to the Clean Water Act (Section A.2.10.6) and indicates that proponents undertaking a Municipal Class EA project must identify early in their process whether a project is or could potentially be occurring with a vulnerable area. **Given this requirement, please include a section in the report on source water protection.**

    - The proponent should identify the source protection area and should clearly document how the proximity of the project to sources of drinking water (municipal or other) and any delineated vulnerable areas was considered and assessed. Specifically, the report should discuss whether or not the project is located in a vulnerable area and provide applicable details about the area.

    - If located in a vulnerable area, proponents should document whether any project activities are prescribed drinking water threats and thus pose a risk to drinking water (this should be consulted on with the appropriate Source Protection Authority). Where an activity poses a risk to drinking water, the proponent must document and discuss in the report how the project adheres to or has regard to applicable policies in the local source protection plan. This section should then be used to inform and be reflected in other sections of the report, such as the identification of net positive/negative effects of alternatives, mitigation measures, evaluation of alternatives etc.

- While most source protection plans focused on including policies for significant drinking water threats in the WHPAs and IPZs it should be noted that even though source protection plan policies may not apply in HVAs, these are areas where aquifers are sensitive and at risk to impacts and within these areas, activities may impact the quality of sources of drinking water for systems other than municipal residential systems.

- In order to determine if this project is occurring within a vulnerable area, proponents can use Source Protection Information Atlas, which is an online mapping tool available to the public. Note that various layers (including WHPAs, WHPA-Q1 and WHPA-Q2, IPZs, HVAs, SGRAs, EBAs, ICAs) can be turned on through the “Map Legend” bar on the left. The mapping tool will also provide a link to the appropriate source protection plan in order to identify what policies may be applicable in the vulnerable area.

- For further information on the maps or source protection plan policies which may relate to their project, proponents must contact the appropriate source protection authority. **Please consult with the local source protection authority to discuss potential impacts on drinking water. Please document the results of that consultation within the report and include all communication documents/correspondence.**

More Information

For more information on the *Clean Water Act*, source protection areas and plans, including specific information on the vulnerable areas and drinking water threats, please refer to Conservation Ontario's website where you will also find links to the local source protection plan/assessment report.

A list of the prescribed drinking water threats can be found in section 1.1 of Ontario Regulation 287/07 made under the *Clean Water Act*. In addition to prescribed drinking water threats, some source protection plans may include policies to address additional "local" threat activities, as approved by the MECP.

Climate Change

The document "Considering Climate Change in the Environmental Assessment Process" (Guide) is now a part of the Environmental Assessment program's Guides and Codes of Practice. The Guide sets out the MECP's expectation for considering climate change in the preparation, execution and documentation of environmental assessment studies and processes. The guide provides examples, approaches, resources, and references to assist proponents with consideration of climate change in EA. Proponents should review this Guide in detail.

- **The MECP expects proponents of Class EA projects to:**

    1. Consider during the assessment of alternative solutions and alternative designs, the following:
        a. the project's expected production of greenhouse gas emissions and impacts on carbon sinks (climate change mitigation); and
        b. resilience or vulnerability of the undertaking to changing climatic conditions (climate change adaptation).
    2. Include a discrete section in the report detailing how climate change was considered in the EA.

How climate change is considered can be qualitative or quantitative in nature and should be scaled to the project's level of environmental effect. In all instances, both a project's impacts on climate change (mitigation) and impacts of climate change on a project (adaptation) should be considered.

- The MECP has also prepared another guide to support provincial land use planning direction related to the completion of energy and emission plans. The "Community Emissions Reduction Planning: A Guide for Municipalities" document is designed to educate stakeholders on the municipal opportunities to reduce energy and greenhouse gas emissions, and to provide guidance on methods and techniques to incorporate consideration of energy and greenhouse gas emissions into municipal activities of all types. We encourage you to review the Guide for information.

Air Quality, Dust and Noise

- If there are sensitive receptors in the surrounding area of this project, a quantitative air quality/odour impact assessment will be useful to evaluate alternatives, determine impacts and identify appropriate mitigation measures. The scope of the assessment can be determined based on the potential effects of the proposed alternatives, and typically includes source and receptor characterization and a quantification of local air quality impacts on the sensitive receptors and the environment in the study area. The assessment will compare to all applicable standards or guidelines for all contaminants of concern. **Please contact this office for further consultation on the level of Air Quality Impact Assessment required for this project if not already advised.**

- If a quantitative Air Quality Impact Assessment is not required for the project, the MECP expects that the report contain a qualitative assessment which includes:

    - A discussion of local air quality including existing activities/sources that significantly impact local air quality and how the project may impact existing conditions;
    - A discussion of the nearby sensitive receptors and the project's potential air quality impacts on present and future sensitive receptors;
    - A discussion of local air quality impacts that could arise from this project during both construction and operation; and
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- As a common practice, "air quality" should be used an evaluation criterion for all road projects.

- Dust and noise control measures should be addressed and included in the construction plans to ensure that nearby residential and other sensitive land uses within the study area are not adversely affected during construction activities.

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Ecosystem Protection and Restoration

- Any impacts to ecosystem form and function must be avoided where possible. The report should describe any proposed mitigation measures and how project planning will protect and enhance the local ecosystem.

- Natural heritage and hydrologic features should be identified and described in detail to assess potential impacts and to develop appropriate mitigation measures. The following sensitive environmental features may be located within or adjacent to the study area:
    - Key Natural Heritage Features: Habitat of endangered species and threatened species, fish habitat, wetlands, areas of natural and scientific interest (ANSIs), significant valleylands, significant woodlands; significant wildlife habitat (including habitat of special concern species); sand barrens, savannahs, and tallgrass prairies; and alvars.
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    - Other natural heritage features and areas such as: vegetation communities, rare species of flora or fauna, Environmentally Sensitive Areas, Environmentally Sensitive Policy Areas, federal and provincial parks and conservation reserves, Greenland systems etc.

We recommend consulting with the Ministry of Natural Resources and Forestry (MNRF), Fisheries and Oceans Canada (DFO) and your local conservation authority to determine if special measures or additional studies will be necessary to preserve and protect these sensitive features. In addition, for projects located in Central Region you may consider the provisions of the Rouge Park Management Plan if applicable.

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- The Ministry of the Environment, Conservation and Parks has now assumed responsibility of Ontario's Species at Risk program. Information, standards, guidelines, reference materials and technical resources to assist you are found at https://www.ontario.ca/page/species-risk.

- The Client's Guide to Preliminary Screening for Species at Risk (Draft May 2019) has been attached to the covering email for your reference and use. Please review this document for next steps.

- For any questions related to subsequent permit requirements, please contact SAROntario@ontario.ca.

Surface Water

- The report must include enough information to demonstrate that there will be no negative impacts on the natural features or ecological functions of any watercourses within the study area. Measures should be included in the planning and design process to ensure that any impacts to watercourses from construction or operational activities (e.g. spills, erosion, pollution) are mitigated as part of the proposed undertaking.

- Additional stormwater runoff from new pavement can impact receiving watercourses and flood conditions. Quality and quantity control measures to treat stormwater runoff should be considered for all new impervious areas and, where possible, existing surfaces. The ministry's Stormwater Management Planning and Design Manual (2003) should be referenced in the report and utilized when designing stormwater control methods. **A Stormwater Management Plan should be prepared as part of the Class EA process** that includes:

    - Strategies to address potential water quantity and erosion impacts related to stormwater draining into streams or other sensitive environmental features, and to ensure that adequate (enhanced) water quality is maintained
    - Watershed information, drainage conditions, and other relevant background information
    - Future drainage conditions, stormwater management options, information on erosion and sediment control during construction, and other details of the proposed works
    - Information on maintenance and monitoring commitments.

- Ontario Regulation 60/08 under the *Ontario Water Resources Act* (OWRA) applies to the Lake Simcoe Basin, which encompasses Lake Simcoe and the lands from which surface water drains into Lake Simcoe. If a proposed sewage treatment plant is listed in Table 1 of the regulation, the report should describe how the proposed project and its mitigation measures are consistent with the requirements of this regulation and the OWRA.

- Any potential approval requirements for surface water taking or discharge should be identified in the report. A Permit to Take Water (PTTW) under the OWRA will be required for any water takings that exceed 50,000 L/day, except for certain water taking activities that have been prescribed by the Water Taking EASR Regulation – *O. Reg. 63/16*. These prescribed water-taking activities require registration in the EASR instead of a PTTW. Please review the Water Taking User Guide for EASR for more information. Additionally, an

Environmental Compliance Approval under the OWRA is required for municipal stormwater management works.

Groundwater

- The status of, and potential impacts to any well water supplies should be addressed. If the project involves groundwater takings or changes to drainage patterns, the quantity and quality of groundwater may be affected due to drawdown effects or the redirection of existing contamination flows. In addition, project activities may infringe on existing wells such that they must be reconstructed or sealed and abandoned. Appropriate information to define existing groundwater conditions should be included in the report.

- If the potential construction or decommissioning of water wells is identified as an issue, the report should refer to Ontario Regulation 903, Wells, under the OWRA.

- Potential impacts to groundwater-dependent natural features should be addressed. Any changes to groundwater flow or quality from groundwater taking may interfere with the ecological processes of streams, wetlands or other surficial features. In addition, discharging contaminated or high volumes of groundwater to these features may have direct impacts on their function. Any potential effects should be identified, and appropriate mitigation measures should be recommended. The level of detail required will be dependent on the significance of the potential impacts.

- Any potential approval requirements for groundwater taking or discharge should be identified in the report. A Permit to Take Water (PTTW) under the OWRA will be required for any water takings that exceed 50,000 L/day, with the exception of certain water taking activities that have been prescribed by the Water Taking EASR Regulation – *O. Reg. 63/16*. These prescribed water-taking activities require registration in the EASR instead of a PTTW. Please review the Water Taking User Guide for EASR for more information.

- Consultation with the railroad authorities is necessary wherever there is a plan to use construction dewatering in the vicinity of railroad lines or where the zone of influence of the construction dewatering potentially intercepts railroad lines.

Excess Materials Management

- In December 2019, MECP released a new regulation under the Environmental Protection Act, titled "On-Site and Excess Soil Management" (O. Reg. 406/19) to support improved management of excess construction soil. This regulation is a key step to support proper management of excess soils, ensuring valuable resources don't go to waste and to provide clear rules on managing and reusing excess soil. New risk-based standards referenced by

this regulation help to facilitate local beneficial reuse which in turn will reduce greenhouse gas emissions from soil transportation, while ensuring strong protection of human health and the environment. The new regulation is being phased in over time, with the first phase in effect on January 1, 2021. For more information, please visit https://www.ontario.ca/page/handling-excess-soil.

- The report should reference that activities involving the management of excess soil should be completed in accordance with O. Reg. 406/19 and the MECP's current guidance document titled "Management of Excess Soil – A Guide for Best Management Practices" (2014).

- All waste generated during construction must be disposed of in accordance with ministry requirements.

Contaminated Sites

- Any current or historical waste disposal sites should be identified in the report. The status of these sites should be determined to confirm whether approval pursuant to Section 46 of the EPA may be required for land uses on former disposal sites. We recommend referring to the MECP's D-4 guideline for land use considerations near landfills and dumps.
    - Resources available may include regional/local municipal official plans and data; provincial data on large landfill sites and small landfill sites; Environmental Compliance Approval information for waste disposal sites on Access Environment.

- Other known contaminated sites (local, provincial, federal) in the study area should also be identified in the report (Note – information on federal contaminated sites is found on the Government of Canada's website).

- The location of any underground storage tanks should be investigated in the report. Measures should be identified to ensure the integrity of these tanks and to ensure an appropriate response in the event of a spill. The ministry's Spills Action Centre must be contacted in such an event.

- Since the removal or movement of soils may be required, appropriate tests to determine contaminant levels from previous land uses or dumping should be undertaken. If the soils are contaminated, you must determine how and where they are to be disposed of, consistent with *Part XV.1 of the Environmental Protection Act* (EPA) and Ontario Regulation 153/04, Records of Site Condition, which details the new requirements related to site assessment and clean up. Please contact the appropriate MECP District Office for further consultation if contaminated sites are present.

Servicing, Utilities and Facilities

- The report should identify any above or underground utilities in the study area such as transmission lines, telephone/internet, oil/gas etc. The owners should be consulted to discuss impacts to this infrastructure, including potential spills.

- The report should identify any servicing infrastructure in the study area such as wastewater, water, stormwater that may potentially be impacted by the project.

- Any facility that releases emissions to the atmosphere, discharges contaminants to ground or surface water, provides potable water supplies, or stores, transports or disposes of waste must have an Environmental Compliance Approval (ECA) before it can operate lawfully. Please consult with MECP's Environmental Permissions Branch to determine whether a new or amended ECA will be required for any proposed infrastructure.

- We recommend referring to the ministry's environmental land use planning guides to ensure that any potential land use conflicts are considered when planning for any infrastructure or facilities related to wastewater, pipelines, landfills or industrial uses.

Mitigation and Monitoring

- Contractors must be made aware of all environmental considerations so that all environmental standards and commitments for both construction and operation are met. Mitigation measures should be clearly referenced in the report and regularly monitored during the construction stage of the project. In addition, we encourage proponents to conduct post-construction monitoring to ensure all mitigation measures have been effective and are functioning properly.

- Design and construction reports and plans should be based on a best management approach that centres on the prevention of impacts, protection of the existing environment, and opportunities for rehabilitation and enhancement of any impacted areas.

- The proponent's construction and post-construction monitoring plans must be documented in the report, as outlined in Section A.2.5 and A.4.1 of the MEA Class EA parent document.

Consultation

- The report must demonstrate how the consultation provisions of the Class EA have been fulfilled, including documentation of all stakeholder consultation efforts undertaken during the planning process. This includes a discussion in the report that identifies concerns that were raised and **describes how they have been addressed by the proponent** throughout

the planning process. The report should also include copies of comments submitted on the project by interested stakeholders, and the proponent's responses to these comments (as directed by the Class EA to include full documentation).

- Please include the full stakeholder distribution/consultation list in the documentation.

Class EA Process

- If this project is a Master Plan: there are several different approaches that can be used to conduct a Master Plan, examples of which are outlined in Appendix 4 of the Class EA. **The Master Plan should clearly indicate the selected approach for conducting the plan**, by identifying whether the levels of assessment, consultation and documentation are sufficient to fulfill the requirements for Schedule B or C projects. Please note that any Schedule B or C projects identified in the plan would be subject to Part II Order Requests under the Environmental Assessment Act, although the plan itself would not be. **Please include a description of the approach being undertaken (use Appendix 4 as a reference).**

- If this project is a Master Plan: Any identified projects should also include information on the MCEA schedule associated with the project.

- The report should provide clear and complete documentation of the planning process in order to allow for transparency in decision-making.

- The Class EA requires the consideration of the effects of each alternative on all aspects of the environment (including planning, natural, social, cultural, economic, technical). The report should include a level of detail (e.g. hydrogeological investigations, terrestrial and aquatic assessments, cultural heritage assessments) such that all potential impacts can be identified, and appropriate mitigation measures can be developed. Any supporting studies conducted during the Class EA process should be referenced and included as part of the report.

- Please include in the report a list of all subsequent permits or approvals that may be required for the implementation of the preferred alternative, including but not limited to, MECP's PTTW, EASR Registrations and ECAs, conservation authority permits, species at risk permits, MTO permits and approvals under the *Impact Assessment Act*, 2019.

- Ministry guidelines and other information related to the issues above are available at http://www.ontario.ca/environment-and-energy/environment-and-energy. We encourage you to review all the available guides and to reference any relevant information in the report.

Amendments to the EAA through the Covid-19 Economic Recovery Act, 2020
Once the EA Report is finalized, the proponent must issue a Notice of Completion providing a minimum 30-day period during which documentation may be reviewed and comment and input can be submitted to the proponent. The Notice of Completion must be sent to the appropriate MECP Regional Office email address.

The public can request a higher level of assessment on a project if they are concerned about potential adverse impacts to constitutionally protected Aboriginal and treaty rights. In addition, the Minister may issue an order on his or her own initiative within a specified time period. The Director (of the Environmental Assessment Branch) will issue a Notice of Proposed Order to the proponent if the Minister is considering an order for the project within 30 days after the conclusion of the comment period on the Notice of Completion. At this time, the Director may request additional information from the proponent. Once the requested information has been received, the Minister will have 30 days within which to make a decision or impose conditions on your project.

Therefore, the proponent cannot proceed with the project until at least 30 days after the end of the comment period provided for in the Notice of Completion. Further, the proponent may not proceed after this time if:

- a Section 16 Order request has been submitted to the ministry regarding potential adverse impacts to constitutionally protected Aboriginal and treaty rights, or
- the Director has issued a Notice of Proposed order regarding the project.

Please ensure that the Notice of Completion advises that outstanding concerns are to be directed to the proponent for a response, and that in the event there are outstanding concerns regarding potential adverse impacts to constitutionally protected Aboriginal and treaty rights, Section 16 Order requests on those matters should be addressed in writing to:

Minister of the Environment, Conservation and Parks
Ministry of the Environment, Conservation and Parks
777 Bay Street, 5th Floor
Toronto ON M7A 2J3
minister.mecp@ontario.ca

and

Director, Environmental Assessment Branch
Ministry of the Environment, Conservation and Parks
135 St. Clair Ave. W, 1st Floor
Toronto ON, M4V 1P5
EABDirector@ontario.ca

Ministry of the Environment, Conservation and Parks

Environmental Assessment Branch

7th Floor
135 St. Clair Avenue W
Toronto ON M4V 1P5
Tel.: 416 314-8001
Fax.: 416 314-8452

Ministère de l'Environnement, de la Protection de la nature et des Parcs

Direction des évaluations environnementales

7ème étage
135, avenue St. Clair Ouest
Toronto ON M4V 1P5
Tél. : 416 314-8001
Téléc. : 416 314-8452

February 9, 2024

Jarrod Craven
Director of Public Works
Municipality of Thames Centre
jcraven@thamescentre.on.ca

BY EMAIL ONLY

Re: **Thorndale Wastewater Treatment Plant Expansion**
Municipality of Thames Centre
Municipal Class Environmental Assessment, Schedule C
Acknowledgement of Notice of Commencement

Dear Jarrod Craven,

This letter is in response to the Notice of Commencement for the above noted project. The Ministry of the Environment, Conservation and Parks (MECP) acknowledges that the Municipality of Thames Centre (proponent) has indicated that the study is following the approved environmental planning process for a Schedule C project under the Municipal Class Environmental Assessment (Class EA).

The **updated (August 2022)** attached "Areas of Interest" document provides guidance regarding the ministry's interests with respect to the Class EA process. Please address all areas of interest in the EA documentation at an appropriate level for the EA study. Proponents who address all the applicable areas of interest can minimize potential delays to the project schedule. **Further information is provided at the end of the Areas of Interest document relating to recent changes to the Environmental Assessment Act through Bill 197, Covid-19 Economic Recovery Act 2020.**

The Crown has a legal duty to consult Aboriginal communities when it has knowledge, real or constructive, of the existence or potential existence of an Aboriginal or treaty right and contemplates conduct that may adversely impact that right. Before authorizing this project, the Crown must ensure that its duty to consult has been fulfilled, where such a duty is triggered. Although the duty to consult with Aboriginal peoples is a duty of the Crown, the Crown may delegate procedural aspects of this duty to project proponents while retaining oversight of the consultation process.

The proposed project may have the potential to affect Aboriginal or treaty rights protected under Section 35 of Canada's *Constitution Act* 1982. Where the Crown's duty to consult is triggered in relation to the proposed project**, the MECP is delegating the procedural aspects of rights-based consultation to the proponent through this letter.** The Crown intends to rely on the delegated consultation process in discharging its duty to consult and maintains the right to participate in the consultation process as it sees fit.

Based on information provided to date and the Crown`s preliminary assessment the proponent is required to consult with the following communities who have been identified as potentially affected by the proposed project:

- Aamjiwnaang First Nation
- Bkejwanong (Walpole Island)
- Caldwell First Nation
- Chippewas of Kettle and Stony Point
- Chippewas of the Thames First Nation
- Oneida Nation of the Thames

Steps that the proponent may need to take in relation to Aboriginal consultation for the proposed project are outlined in the "Code of Practice for Consultation in Ontario's Environmental Assessment Process". Additional information related to Ontario's Environmental Assessment Act is available online at: www.ontario.ca/environmentalassessments.

Please also refer to the attached document "A Proponent's Introduction to the Delegation of Procedural Aspects of consultation with Aboriginal Communities" for further information, including the MECP's expectations for EA report documentation related to consultation with communities.

The proponent must contact the Director of Environmental Assessment Branch (EABDirector@ontario.ca) under the following circumstances after initial discussions with the communities identified by the MECP:

- Aboriginal or treaty rights impacts are identified to you by the communities;
- You have reason to believe that your proposed project may adversely affect an Aboriginal or treaty right;

- Consultation with Indigenous communities or other stakeholders has reached an impasse; or
- A Section 16 Order request is expected based on impacts to Aboriginal or treaty rights

The MECP will then assess the extent of any Crown duty to consult for the circumstances and will consider whether additional steps should be taken, including what role you will be asked to play should additional steps and activities be required.

A draft copy of the report should be sent directly to me prior to the filing of the final report, allowing a minimum of 30 days for the ministry's technical reviewers to provide comments.

Please ensure a copy of the final notice is sent to the ministry's South West Region EA notification email account (eanotification.swregion@ontario.ca) after the draft report is reviewed and finalized.

Should you or any members of your project team have any questions regarding the material above, please contact me at monika.macki@ontario.ca.

Sincerely,

Monika Macki
Regional Environmental Planner – South West Region
Project Review Unit, Environmental Assessment Branch

Cc:
Adam Grant, London District Office, MECP

Enclosed: Areas of Interest

Attached: Client's Guide to Preliminary Screening for Species at Risk

A Proponent's Introduction to the Delegation of Procedural Aspects of Consultation with Aboriginal Communities

AREAS OF INTEREST (v. August 2022)

It is suggested that you check off each section after you have considered / addressed it.

Planning and Policy

- Applicable plans and policies should be identified in the report, and the proponent should describe how the proposed project adheres to the relevant policies in these plans.
    - Projects located in MECP Central, Eastern or West Central Region may be subject to **A Place to Grow: Growth Plan for the Greater Golden Horseshoe (2020)**.
    - Projects located in MECP Central or Eastern Region may be subject to the **Oak Ridges Moraine Conservation Plan (2017)** or the **Lake Simcoe Protection Plan (2014)**.
    - Projects located in MECP Central, Southwest or West Central Region may be subject to the **Niagara Escarpment Plan (2017)**.
    - Projects located in MECP Central, Eastern, Southwest or West Central Region may be subject to the **Greenbelt Plan (2017)**.
    - Projects located in MECP Northern Region may be subject to the **Growth Plan for Northern Ontario (2011).**

- The **Provincial Policy Statement (2020)** contains policies that protect Ontario's natural heritage and water resources. Applicable policies should be referenced in the report, and the proponent should describe how the proposed project is consistent with these policies.

- In addition to the provincial planning and policy level, the report should also discuss the planning context at the municipal and federal levels, as appropriate.

Source Water Protection

The *Clean Water Act*, 2006 (CWA) aims to protect existing and future sources of drinking water. To achieve this, several types of vulnerable areas have been delineated around surface water intakes and wellheads for every municipal residential drinking water system that is located in a source protection area. These vulnerable areas are known as a Wellhead Protection Areas (WHPAs) and surface water Intake Protection Zones (IPZs). Other vulnerable areas that have been delineated under the CWA include Highly Vulnerable Aquifers (HVAs), Significant Groundwater Recharge Areas (SGRAs), Event-based modelling areas (EBAs), and Issues Contributing Areas (ICAs). Source protection plans have been developed that include policies to address existing and future risks to sources of municipal drinking water within these vulnerable areas.

Projects that are subject to the Environmental Assessment Act that fall under a Class EA, or one of the Regulations, have the potential to impact sources of drinking water if they occur in designated vulnerable areas or in the vicinity of other at-risk drinking water systems (i.e. systems that are not municipal residential systems). MEA Class EA projects may include

activities that, if located in a vulnerable area, could be a threat to sources of drinking water (i.e. have the potential to adversely affect the quality or quantity of drinking water sources) and the activity could therefore be subject to policies in a source protection plan. Where an activity poses a risk to drinking water, policies in the local source protection plan may impact how or where that activity is undertaken. Policies may prohibit certain activities, or they may require risk management measures for these activities. Municipal Official Plans, planning decisions, Class EA projects (where the project includes an activity that is a threat to drinking water) and prescribed instruments must conform with policies that address significant risks to drinking water and must have regard for policies that address moderate or low risks.

- In October 2015, the MEA Parent Class EA document was amended to include reference to the Clean Water Act (Section A.2.10.6) and indicates that proponents undertaking a Municipal Class EA project must identify early in their process whether a project is or could potentially be occurring with a vulnerable area. **Given this requirement, please include a section in the report on source water protection.**

    - The proponent should identify the source protection area and should clearly document how the proximity of the project to sources of drinking water (municipal or other) and any delineated vulnerable areas was considered and assessed. Specifically, the report should discuss whether or not the project is located in a vulnerable area and provide applicable details about the area.

    - If located in a vulnerable area, proponents should document whether any project activities are prescribed drinking water threats and thus pose a risk to drinking water (this should be consulted on with the appropriate Source Protection Authority). Where an activity poses a risk to drinking water, the proponent must document and discuss in the report how the project adheres to or has regard to applicable policies in the local source protection plan. This section should then be used to inform and be reflected in other sections of the report, such as the identification of net positive/negative effects of alternatives, mitigation measures, evaluation of alternatives etc.

- While most source protection plans focused on including policies for significant drinking water threats in the WHPAs and IPZs it should be noted that even though source protection plan policies may not apply in HVAs, these are areas where aquifers are sensitive and at risk to impacts and within these areas, activities may impact the quality of sources of drinking water for systems other than municipal residential systems.

- In order to determine if this project is occurring within a vulnerable area, proponents can use Source Protection Information Atlas, which is an online mapping tool available to the public. Note that various layers (including WHPAs, WHPA-Q1 and WHPA-Q2, IPZs, HVAs, SGRAs, EBAs, ICAs) can be turned on through the “Map Legend” bar on the left. The mapping tool will also provide a link to the appropriate source protection plan in order to identify what policies may be applicable in the vulnerable area.

- For further information on the maps or source protection plan policies which may relate to their project, proponents must contact the appropriate source protection authority. **Please consult with the local source protection authority to discuss potential impacts on drinking water. Please document the results of that consultation within the report and include all communication documents/correspondence.**

More Information

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- For any questions related to subsequent permit requirements, please contact SAROntario@ontario.ca.

Surface Water

- The report must include enough information to demonstrate that there will be no negative impacts on the natural features or ecological functions of any watercourses within the study area. Measures should be included in the planning and design process to ensure that any impacts to watercourses from construction or operational activities (e.g. spills, erosion, pollution) are mitigated as part of the proposed undertaking.

- Additional stormwater runoff from new pavement can impact receiving watercourses and flood conditions. Quality and quantity control measures to treat stormwater runoff should be considered for all new impervious areas and, where possible, existing surfaces. The ministry's Stormwater Management Planning and Design Manual (2003) should be referenced in the report and utilized when designing stormwater control methods. **A Stormwater Management Plan should be prepared as part of the Class EA process** that includes:

    - Strategies to address potential water quantity and erosion impacts related to stormwater draining into streams or other sensitive environmental features, and to ensure that adequate (enhanced) water quality is maintained
    - Watershed information, drainage conditions, and other relevant background information
    - Future drainage conditions, stormwater management options, information on erosion and sediment control during construction, and other details of the proposed works
    - Information on maintenance and monitoring commitments.

- Ontario Regulation 60/08 under the *Ontario Water Resources Act* (OWRA) applies to the Lake Simcoe Basin, which encompasses Lake Simcoe and the lands from which surface water drains into Lake Simcoe. If a proposed sewage treatment plant is listed in Table 1 of the regulation, the report should describe how the proposed project and its mitigation measures are consistent with the requirements of this regulation and the OWRA.

- Any potential approval requirements for surface water taking or discharge should be identified in the report. A Permit to Take Water (PTTW) under the OWRA will be required for any water takings that exceed 50,000 L/day, except for certain water taking activities that have been prescribed by the Water Taking EASR Regulation – *O. Reg. 63/16*. These prescribed water-taking activities require registration in the EASR instead of a PTTW. Please review the Water Taking User Guide for EASR for more information. Additionally, an

Environmental Compliance Approval under the OWRA is required for municipal stormwater management works.

Groundwater

- The status of, and potential impacts to any well water supplies should be addressed. If the project involves groundwater takings or changes to drainage patterns, the quantity and quality of groundwater may be affected due to drawdown effects or the redirection of existing contamination flows. In addition, project activities may infringe on existing wells such that they must be reconstructed or sealed and abandoned. Appropriate information to define existing groundwater conditions should be included in the report.

- If the potential construction or decommissioning of water wells is identified as an issue, the report should refer to Ontario Regulation 903, Wells, under the OWRA.

- Potential impacts to groundwater-dependent natural features should be addressed. Any changes to groundwater flow or quality from groundwater taking may interfere with the ecological processes of streams, wetlands or other surficial features. In addition, discharging contaminated or high volumes of groundwater to these features may have direct impacts on their function. Any potential effects should be identified, and appropriate mitigation measures should be recommended. The level of detail required will be dependent on the significance of the potential impacts.

- Any potential approval requirements for groundwater taking or discharge should be identified in the report. A Permit to Take Water (PTTW) under the OWRA will be required for any water takings that exceed 50,000 L/day, with the exception of certain water taking activities that have been prescribed by the Water Taking EASR Regulation – *O. Reg. 63/16*. These prescribed water-taking activities require registration in the EASR instead of a PTTW. Please review the Water Taking User Guide for EASR for more information.

- Consultation with the railroad authorities is necessary wherever there is a plan to use construction dewatering in the vicinity of railroad lines or where the zone of influence of the construction dewatering potentially intercepts railroad lines.

Excess Materials Management

- In December 2019, MECP released a new regulation under the Environmental Protection Act, titled "On-Site and Excess Soil Management" (O. Reg. 406/19) to support improved management of excess construction soil. This regulation is a key step to support proper management of excess soils, ensuring valuable resources don't go to waste and to provide clear rules on managing and reusing excess soil. New risk-based standards referenced by

this regulation help to facilitate local beneficial reuse which in turn will reduce greenhouse gas emissions from soil transportation, while ensuring strong protection of human health and the environment. The new regulation is being phased in over time, with the first phase in effect on January 1, 2021. For more information, please visit https://www.ontario.ca/page/handling-excess-soil.

- The report should reference that activities involving the management of excess soil should be completed in accordance with O. Reg. 406/19 and the MECP's current guidance document titled "Management of Excess Soil – A Guide for Best Management Practices" (2014).

- All waste generated during construction must be disposed of in accordance with ministry requirements.

Contaminated Sites

- Any current or historical waste disposal sites should be identified in the report. The status of these sites should be determined to confirm whether approval pursuant to Section 46 of the EPA may be required for land uses on former disposal sites. We recommend referring to the MECP's D-4 guideline for land use considerations near landfills and dumps.
    - Resources available may include regional/local municipal official plans and data; provincial data on large landfill sites and small landfill sites; Environmental Compliance Approval information for waste disposal sites on Access Environment.

- Other known contaminated sites (local, provincial, federal) in the study area should also be identified in the report (Note – information on federal contaminated sites is found on the Government of Canada's website).

- The location of any underground storage tanks should be investigated in the report. Measures should be identified to ensure the integrity of these tanks and to ensure an appropriate response in the event of a spill. The ministry's Spills Action Centre must be contacted in such an event.

- Since the removal or movement of soils may be required, appropriate tests to determine contaminant levels from previous land uses or dumping should be undertaken. If the soils are contaminated, you must determine how and where they are to be disposed of, consistent with *Part XV.1 of the Environmental Protection Act* (EPA) and Ontario Regulation 153/04, Records of Site Condition, which details the new requirements related to site assessment and clean up. Please contact the appropriate MECP District Office for further consultation if contaminated sites are present.

Servicing, Utilities and Facilities

- The report should identify any above or underground utilities in the study area such as transmission lines, telephone/internet, oil/gas etc. The owners should be consulted to discuss impacts to this infrastructure, including potential spills.

- The report should identify any servicing infrastructure in the study area such as wastewater, water, stormwater that may potentially be impacted by the project.

- Any facility that releases emissions to the atmosphere, discharges contaminants to ground or surface water, provides potable water supplies, or stores, transports or disposes of waste must have an Environmental Compliance Approval (ECA) before it can operate lawfully. Please consult with MECP's Environmental Permissions Branch to determine whether a new or amended ECA will be required for any proposed infrastructure.

- We recommend referring to the ministry's environmental land use planning guides to ensure that any potential land use conflicts are considered when planning for any infrastructure or facilities related to wastewater, pipelines, landfills or industrial uses.

Mitigation and Monitoring

- Contractors must be made aware of all environmental considerations so that all environmental standards and commitments for both construction and operation are met. Mitigation measures should be clearly referenced in the report and regularly monitored during the construction stage of the project. In addition, we encourage proponents to conduct post-construction monitoring to ensure all mitigation measures have been effective and are functioning properly.

- Design and construction reports and plans should be based on a best management approach that centres on the prevention of impacts, protection of the existing environment, and opportunities for rehabilitation and enhancement of any impacted areas.

- The proponent's construction and post-construction monitoring plans must be documented in the report, as outlined in Section A.2.5 and A.4.1 of the MEA Class EA parent document.

Consultation

- The report must demonstrate how the consultation provisions of the Class EA have been fulfilled, including documentation of all stakeholder consultation efforts undertaken during the planning process. This includes a discussion in the report that identifies concerns that were raised and **describes how they have been addressed by the proponent** throughout

the planning process. The report should also include copies of comments submitted on the project by interested stakeholders, and the proponent's responses to these comments (as directed by the Class EA to include full documentation).

- Please include the full stakeholder distribution/consultation list in the documentation.

Class EA Process

- If this project is a Master Plan: there are several different approaches that can be used to conduct a Master Plan, examples of which are outlined in Appendix 4 of the Class EA. **The Master Plan should clearly indicate the selected approach for conducting the plan**, by identifying whether the levels of assessment, consultation and documentation are sufficient to fulfill the requirements for Schedule B or C projects. Please note that any Schedule B or C projects identified in the plan would be subject to Part II Order Requests under the Environmental Assessment Act, although the plan itself would not be. **Please include a description of the approach being undertaken (use Appendix 4 as a reference).**

- If this project is a Master Plan: Any identified projects should also include information on the MCEA schedule associated with the project.

- The report should provide clear and complete documentation of the planning process in order to allow for transparency in decision-making.

- The Class EA requires the consideration of the effects of each alternative on all aspects of the environment (including planning, natural, social, cultural, economic, technical). The report should include a level of detail (e.g. hydrogeological investigations, terrestrial and aquatic assessments, cultural heritage assessments) such that all potential impacts can be identified, and appropriate mitigation measures can be developed. Any supporting studies conducted during the Class EA process should be referenced and included as part of the report.

- Please include in the report a list of all subsequent permits or approvals that may be required for the implementation of the preferred alternative, including but not limited to, MECP's PTTW, EASR Registrations and ECAs, conservation authority permits, species at risk permits, MTO permits and approvals under the *Impact Assessment Act*, 2019.

- Ministry guidelines and other information related to the issues above are available at http://www.ontario.ca/environment-and-energy/environment-and-energy. We encourage you to review all the available guides and to reference any relevant information in the report.

Amendments to the EAA through the Covid-19 Economic Recovery Act, 2020
Once the EA Report is finalized, the proponent must issue a Notice of Completion providing a minimum 30-day period during which documentation may be reviewed and comment and input can be submitted to the proponent. The Notice of Completion must be sent to the appropriate MECP Regional Office email address.

The public can request a higher level of assessment on a project if they are concerned about potential adverse impacts to constitutionally protected Aboriginal and treaty rights. In addition, the Minister may issue an order on his or her own initiative within a specified time period. The Director (of the Environmental Assessment Branch) will issue a Notice of Proposed Order to the proponent if the Minister is considering an order for the project within 30 days after the conclusion of the comment period on the Notice of Completion. At this time, the Director may request additional information from the proponent. Once the requested information has been received, the Minister will have 30 days within which to make a decision or impose conditions on your project.

Therefore, the proponent cannot proceed with the project until at least 30 days after the end of the comment period provided for in the Notice of Completion. Further, the proponent may not proceed after this time if:

- a Section 16 Order request has been submitted to the ministry regarding potential adverse impacts to constitutionally protected Aboriginal and treaty rights, or
- the Director has issued a Notice of Proposed order regarding the project.

Please ensure that the Notice of Completion advises that outstanding concerns are to be directed to the proponent for a response, and that in the event there are outstanding concerns regarding potential adverse impacts to constitutionally protected Aboriginal and treaty rights, Section 16 Order requests on those matters should be addressed in writing to:

Minister of the Environment, Conservation and Parks
Ministry of the Environment, Conservation and Parks
777 Bay Street, 5th Floor
Toronto ON M7A 2J3
minister.mecp@ontario.ca

and

Director, Environmental Assessment Branch
Ministry of the Environment, Conservation and Parks
135 St. Clair Ave. W, 1st Floor
Toronto ON, M4V 1P5
EABDirector@ontario.ca

From: Kielstra, David
To: Macki, Monika (MECP)
Cc: Jcraven@thamescentre.on.ca; Paul, Jeff
Subject: RE: MEC Class EA Sch C - Municipality of Thames Centre Thorndale WWTP- ESR for MECP review
Date: Wednesday, May 14, 2025 3:57:00 PM
Attachments: image001.png

Hello Monika,

The Municipality of Thames Centre Thorndale Wastewater Treatment Plant Expansion draft Environmental Study Report (ESR) has been prepared. The project team is writing to you as per your letter dated January 16, 2024 where MECP requested a copy of the ESR for a 30 day review to provide comments prior to finalizing the report. Two files are provided in a OneDrive link due to their size:

- Text copy of the draft ESR report
- ESR Appendix document, combined

One Drive: ThorndaleESR_MECP

The Municipality of Thames Centre requests that the MECP comments are provided before June 13, 2025 (30 days) so that the public review period may proceed following MECP's review.

Should you have any questions, please let our team know.

Regards,

David Kielstra MA, EP, MCIP, RPP
Environmental Planner

Direct: 905 381-3247
Fax: 905 385-3534
David.Kielstra@stantec.com

Stantec
200-835 Paramount Drive
Stoney Creek ON L8J 0B4

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From: Macki, Monika (MECP) <Monika.MacKi@ontario.ca>
Sent: Tuesday, January 16, 2024 11:45 AM
To: Jcraven@thamescentre.on.ca; Paul, Jeff <jeff.paul@stantec.com>; Kielstra, David

<David.Kielstra@stantec.com>
Cc: Grant, Adam (He/Him) (MECP) <Adam.Grant@ontario.ca>; Badali, Mark (MECP) <mark.badali1@ontario.ca>; Adrien, Pierre (MECP) <Pierre.Adrien@ontario.ca>
Subject: RE: MECP Acknowledgement Letter of NOC - MEC Class EA Sch C - Municipality of Thames Centre Thorndale WWTP

> Some people who received this message don't often get email from monika.macki@ontario.ca. Learn why this is important

Hello,

Further to my previous email, please find attached supporting documents, including the proponent's intro to delegation of procedural aspects of consultation with aboriginal communities and the species at risk guide to preliminary screening.

Thank you,

Monika Macki
Environmental Resource Planner/Assessment Coordinator
Environmental Assessment Branch
Ministry of the Environment, Conservation and Parks
monika.macki@ontario.ca

From: Macki, Monika (MECP)
Sent: Tuesday, January 16, 2024 11:07 AM
To: Jcraven@thamescentre.on.ca; Jeff.Paul@stantec.com; David.Kielstra@stantec.com
Cc: Grant, Adam (He/Him) (MECP) <Adam.Grant@ontario.ca>; Badali, Mark (He/Him) (MECP) <Mark.Badali1@ontario.ca>; Adrien, Pierre (MECP) <Pierre.Adrien@ontario.ca>
Subject: MECP Acknowledgement Letter of NOC - MEC Class EA Sch C - Municipality of Thames Centre Thorndale WWTP

Hello,

Please find the attached letter of acknowledgement and supporting attachments in response to the Notice of Commencement of the Thorndale Waste Water Treatment Plant Expansion being undertaken by the Municipality of Thames Centre in accordance with the Municipal Class Environmental Assessment (Schedule C).

Please ensure that all Notices moving forward must include the date the notice was issued in order to meet the minimum mandatory requirements outlined in section A.3.5.3 of the Municipal Class EA parent document.

Thanks,

Monika Macki
Environmental Resource Planner/Assessment Coordinator
Environmental Assessment Branch
Ministry of the Environment, Conservation and Parks
monika.macki@ontario.ca

Ministry of the Environment, Conservation and Parks

Environmental Assessment Branch

1st Floor
135 St. Clair Avenue W
Toronto ON M4V 1P5
Tel.: 416 314-8001
Fax.: 416 314-8452

Ministère de l'Environnement, de la Protection de la nature et des Parcs

Direction des évaluations environnementales

Rez-de-chaussée
135, avenue St. Clair Ouest
Toronto ON M4V 1P5
Tél. : 416 314-8001
Téléc. : 416 314-8452

Via E-mail Only

June 16, 2025

Jarrod Craven
Director of Public Works
Municipality of Thames Centre
jcraven@thamescentre.on.ca

Re: Thorndale Wastewater Treatment Plant Expansion
Municipality of Thames Centre
Municipal Class Environmental Assessment – C
Project Review Unit Comments – Draft Environmental Study Report

Dear Jarrod,

Thank you for providing the ministry with an opportunity to comment on the draft Environmental Study Report (Report/ESR) for the above noted Class Environmental Assessment (EA) project. The Ministry of the Environment, Conservation and Parks (ministry) provides the following comments for your consideration.

Planning and Policy

1) A discussion of the provincial planning and policy context, particularly of the Provincial Policy Statement (PPS), 2024, is missing from the Report. The **Provincial Policy Statement (2024)** contains policies that protect Ontario's natural heritage and water resources. As noted in the Municipal Class EA document, the PPS is a key consideration for identifying land-use planning objectives and evaluating alternative solutions in Phase of the 2 Class EA process. Applicable policies should be referenced in the report, and the proponent should describe how the proposed project is consistent with these policies. The ministry recommends revising the Report to include a discussion of the PPS.

Air Quality and Odour

2) The MECP expects that the report contain a qualitative air assessment, which should includes:

    a. A discussion of local air quality including existing activities/sources that significantly impact local air quality and how the project may impact existing conditions;
    b. A discussion of the nearby sensitive receptors and the project's potential air quality impacts on present and future sensitive receptors;
    c. A discussion of local air quality impacts that could arise from this project during both construction and operation; and
    d. A discussion of potential mitigation measures.

Species at Risk

3) Section 8.6.1.4 (Protection of Species at Risk) – Mitigation measures for any proposed construction should include appropriate site management (e.g., grading stockpile faces to avoid nesting), given that Bank Swallow (threatened) is known to occur in the general area of the project. The Best Management Practices for the Protection, Creation and Maintenance of Bank Swallow Habitat in Ontario should be followed during construction activities.

4) Section 9.1.6 states that a Permit to Take Water (PTTW) for construction dewatering in excess of 400,000 L/day, or an Environmental Activity and Sector Registry (EASR) may be required for a determination of for construction dewatering between 50,000 and 400,000 L/day, if required. The source for the PTTW is not identified; however, if water is being taken from the adjacent Thames River, impacts to aquatic SAR and their habitat will need to be considered.

Surface Water

5) Since 2009, The Canada Ontario Lake Erie Action Plan has been developed with sections pertinent to the Thames River and to the performance capabilities of the Thorndale WWTP plant. These sections namely: 1) Section 1.4 – Establishing the Thames River as a Priority Watershed for Phosphorus reduction initiatives. And 2) recognition that plants with tertiary treatment can achieve 0.5 mg/l as established in Section 3.3.2.

    The Canada Ontario Lake Erie Action Plan is available at the following website. Canada Ontario Lake Erie Action Plan.

    In support of the Action Plan, a review of legacy performance of the current Thorndale facility demonstrates that the plant can easily achieve a 0.5 mg/l TP limit as a monthly

average. As such the Phosphorus monthly concentration limit will be amended from the current ECA limit of 0.65 mg/l to 0.5 mg/l in line with the Action Plan. All other current effluent limits in the current ECA can remain in place as per the 2009 assimilative study.

Thank you for circulating this draft Report for the ministry's consideration. Please document the provision of the draft Report to the ministry as well as this Project Review Unit Comments letter in the final report, and please provide an accompanying response letter to support our review of the final report. A copy of the final Notice should be sent to the ministry's Southwest Region EA notification email account (eanotification.swregion@ontario.ca).

Should you or any members of your project team have any questions regarding the material above, please contact me at monika.macki@ontario.ca.

Sincerely,

Monika Macki

Monika Macki
Environmental Resource Planner / EA Coordinator
Environmental Assessment Program Support, Environmental Assessment Branch
Ontario Ministry of the Environment, Conservation and Parks

From:	Paul, Jeff
To:	Macki, Monika (MECP)
Cc:	Kielstra, David; Kevin Willson; Jarrod Craven; Geurts, Hugh (MECP); Vitone, Kevin
Subject:	RE: MEC Class EA Sch C - Municipality of Thames Centre Thorndale WWTP- ESR for MECP review
Date:	Wednesday, September 3, 2025 2:11:38 PM
Attachments:	image001.png image002.png image003.png image004.png image005.png image006.png image007.jpg

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Monika,

Thanks for your comments. We have had a chance to discuss internally. As you are aware, we were looking to set up a meeting to discuss further but have been able to accomplish that discussion with off-line discussions with Hugh and Jarrod in the past couple of weeks which I can summarize below.

We understand that MECP is under a directive to reduce TP to 0.5 mg/l under the Lake Erie Action Plan (LEAP). We accept that, in spite of the fact that there was a previously accepted Assimilative Capacity Study, that the LEAP requirements take precedent and that the Thorndale WWTP will need to move to this requirement in future. After undertaking a subsequent review of the recommendations of the Class EA and with further discussion with Thames Centre, we feel that the technology proposed will be capable of meeting this limit and that the additional measures recommended (equalization storage and TP filters) can be implemented to further mitigate any exceedances. Notwithstanding our confidence in the technology and the ability of Thames Centre operations staff to stay below this limit, our concern has been how MECP would handle exceedances and the timeframe the Municipality would be allowed to enact remedial measures, particularly if those remedial measures involved construction of additional works. Based on discussions with Hugh, we are reassured that the Municipality would be afforded reasonable time to investigate and enact remedial measures as long as they continue to act in good faith.

Accordingly, we will revise the ESR to reflect the required TP limit, noting that this limit will come into effect when the plant is expanded and a new ECA application is put forward. Thanks for working through this with us and please feel free to reach out if you have any questions or concerns.

Thanks,

Jeff Paul P.Eng.
Managing Senior Principal, Water

Direct: 519 675-6604
Mobile: 519 319-5806
Fax: 519 645-6575
jeff.paul@stantec.com

Stantec
400-1305 Riverbend Road
London, Ontario N6K 0J5

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From: Macki, Monika (MECP) <Monika.MacKi@ontario.ca>
Sent: Friday, July 11, 2025 1:59 PM

To: Jarrod Craven <jcraven@thamescentre.on.ca>
Cc: Paul, Jeff <jeff.paul@stantec.com>; Kielstra, David <David.Kielstra@stantec.com>; Kevin Willson <kwillson@thamescentre.on.ca>
Subject: RE: MEC Class EA Sch C - Municipality of Thames Centre Thorndale WWTP- ESR for MECP review

Hi Jarrod, thank you for your email.

MECP understands that the plant is already hitting 0.5 mg/l limits now. The municipality is proposing to add the same technology.

MECP cannot defend allowing 0.65 mg/l while we hold the rest of the Thames to such high standards when the municipality proposes upgrades/expansion – especially with all the Federal Initiatives going on in the Thames now.

It is to our understanding, that the municipality wants to spread out the timing, with installation of the equipment with the equalization tank going first . If understanding the Municipality's concern properly , the planned installation of the equalization tank and subsequent deferral of cost/installation of the third SBR will strain the existing 2 SBR's, so 0.5 mg/l may not be possible.

Provided the municipality stay committed to moving towards a 0.5 mg/l in the near future (it is unclear when the third SBR would be going in), MECP could work out a condition that the 0.50 mg/l can be deferred until the third SBR actually goes in (may also involve MECP's approvals branch for conditions in the ECA). This would be contingent on when the SBR would be operational. Does the municipality have a timeline?

Thanks,

Monika Macki
Environmental Resource Planner/Environmental Assessment Coordinator
Environmental Assessment Branch
Ministry of the Environment, Conservation and Parks
monika.macki@ontario.ca

From: Jarrod Craven <jcraven@thamescentre.on.ca>
Sent: Wednesday, July 9, 2025 10:01 AM
To: Macki, Monika (MECP) <Monika.MacKi@ontario.ca>
Cc: Paul, Jeff <jeff.paul@stantec.com>; Kielstra, David <David.Kielstra@stantec.com>; Kevin Willson <kwillson@thamescentre.on.ca>
Subject: RE: MEC Class EA Sch C - Municipality of Thames Centre Thorndale WWTP- ESR for MECP review

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Hi Monika,

Thank you for your review and questions. We would like to respectfully request the following clarifications.

The project team is seeking clarification on the applicability of the 0.5 mg/L TP effluent limit referenced in the Surface Water section, particularly in relation to the statement that "plants with tertiary treatment can achieve 0.5 mg/L," as cited from The Canada-Ontario Lake Erie Action Plan (Sections 1.4, 2, and 3.3.2). We wish to confirm that the Thorndale WWTP does not currently include tertiary treatment, and we are looking to better understand how this reference applies to the facility's current and planned configuration.

Specifically, we are requesting clarification on the following:

1. Would MECP consider including a special condition—similar to the one in the current ECA—that allows the Owner to evaluate and demonstrate the performance of the Works without reducing the effluent limits, unless the plant is no longer able to meet the existing 0.65 mg/L TP monthly average?
2. Is it MECP's position that the 0.5 mg/L TP limit will be imposed regardless of the current treatment configuration and the effluent limits and objectives established in the amended ECA?
3. Will the overall TP load limit be further reduced from the current 0.44 kg/d monthly average to 0.4 kg/d?

We appreciate that MECP has already provided recent input on the facility's capacity through the amended ECA. The project team has concluded that a phased upgrade approach—beginning with equalization storage and followed by expansion of the SBR and sludge handling systems—would allow the plant to achieve the current effluent limit of 0.65 mg/L TP without the need for tertiary treatment.
Imposing a 0.5 mg/L limit at this stage would likely necessitate tertiary treatment in the initial phase, reducing the municipality's ability to amortize capital costs at a time when limited wastewater reserve and development charge reserve funds pose significant challenges. The special conditions in the current ECA support a more incremental approach to upgrades and investment, which we believe remains appropriate.

Following the proposed expansion to 741 m^3/d, the facility would be operating at approximately 0.48 kg/d TP (monthly average) while maintaining the 0.65 mg/L limit. This would align with the Canada-Ontario Lake Erie Action Plan objective of a 40% TP load reduction from 2008 levels, particularly considering that the original ACS supported a maximum TP load of 0.84 kg/d without impacting the receiver's baseline TP concentration.
We will also be updating the Environmental Study Report (ESR) based on the other comments

received. However, we wanted to seek clarification on this TP issue prior to finalizing those edits.

Once again, thank you for your time and consideration. We look forward to your guidance.

Jarrod Craven
Director of Public Works
Municipality of Thames Centre |
jcraven@thamescentre.on.ca
4305 Hamilton Road, | Dorchester, ON, N0L 1G3
Tel: 519.268.7334 Ext. 245 | Fax: 519.268.3928

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From: Macki, Monika (MECP) <Monika.MacKi@ontario.ca>
Sent: Monday, June 16, 2025 3:49 PM
To: Kielstra, David <David.Kielstra@stantec.com>; Jarrod Craven <jcraven@thamescentre.on.ca>
Cc: Paul, Jeff <jeff.paul@stantec.com>
Subject: RE: MEC Class EA Sch C - Municipality of Thames Centre Thorndale WWTP- ESR for MECP review

Hi Jarrod, David,

Please find attached MECP comments on the Thorndale WWTP Expansion, Schedule C MCEA project.

Looking forward to your response,

Monika Macki
Environmental Resource Planner/Environmental Assessment Coordinator
Environmental Assessment Branch
Ministry of the Environment, Conservation and Parks
monika.macki@ontario.ca

From: Macki, Monika (MECP)
Sent: Friday, June 13, 2025 4:04 PM
To: Kielstra, David <David.Kielstra@stantec.com>
Cc: Jcraven@thamescentre.on.ca; Paul, Jeff <jeff.paul@stantec.com>
Subject: RE: MEC Class EA Sch C - Municipality of Thames Centre Thorndale WWTP- ESR for MECP review

Hi David,

We're close to finalizing the review, I hope to have it sent to you next week.

Thank you for your patience,

Monika Macki
Environmental Resource Planner/Environmental Assessment Coordinator
Environmental Assessment Branch
Ministry of the Environment, Conservation and Parks
monika.macki@ontario.ca

From: Kielstra, David <David.Kielstra@stantec.com>
Sent: Wednesday, May 14, 2025 4:00 PM
To: Macki, Monika (MECP) <Monika.MacKi@ontario.ca>
Cc: Jcraven@thamescentre.on.ca; Paul, Jeff <jeff.paul@stantec.com>
Subject: RE: MEC Class EA Sch C - Municipality of Thames Centre Thorndale WWTP- ESR for MECP review

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Hello Monika,

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- ESR Appendix document, combined

One Drive: ThorndaleESR_MECP

The Municipality of Thames Centre requests that the MECP comments are provided before June 13, 2025 (30 days) so that the public review period may proceed following MECP's review.

Should you have any questions, please let our team know.

Regards,

David Kielstra MA, EP, MCIP, RPP
Environmental Planner

Direct: 905 381-3247
Fax: 905 385-3534
David.Kielstra@stantec.com

Stantec
200-835 Paramount Drive
Stoney Creek ON L8J 0B4

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From: Macki, Monika (MECP) <Monika.MacKi@ontario.ca>
Sent: Tuesday, January 16, 2024 11:45 AM
To: Jcraven@thamescentre.on.ca; Paul, Jeff <jeff.paul@stantec.com>; Kielstra, David <David.Kielstra@stantec.com>
Cc: Grant, Adam (He/Him) (MECP) <Adam.Grant@ontario.ca>; Badali, Mark (MECP) <mark.badali1@ontario.ca>; Adrien, Pierre (MECP) <Pierre.Adrien@ontario.ca>
Subject: RE: MECP Acknowledgement Letter of NOC - MEC Class EA Sch C - Municipality of Thames Centre Thorndale WWTP

Some people who received this message don't often get email from monika.macki@ontario.ca. Learn why this is important

Hello,

Further to my previous email, please find attached supporting documents, including the proponent's intro to delegation of procedural aspects of consultation with aboriginal communities and the species at risk guide to preliminary screening.

Thank you,

Monika Macki
Environmental Resource Planner/Assessment Coordinator
Environmental Assessment Branch
Ministry of the Environment, Conservation and Parks
monika.macki@ontario.ca

From: Macki, Monika (MECP)
Sent: Tuesday, January 16, 2024 11:07 AM

To: Jcraven@thamescentre.on.ca; Jeff.Paul@stantec.com; David.Kielstra@stantec.com
Cc: Grant, Adam (He/Him) (MECP) <Adam.Grant@ontario.ca>; Badali, Mark (He/Him) (MECP) <Mark.Badali1@ontario.ca>; Adrien, Pierre (MECP) <Pierre.Adrien@ontario.ca>
Subject: MECP Acknowledgement Letter of NOC - MEC Class EA Sch C - Municipality of Thames Centre Thorndale WWTP

Hello,

Please find the attached letter of acknowledgement and supporting attachments in response to the Notice of Commencement of the Thorndale Waste Water Treatment Plant Expansion being undertaken by the Municipality of Thames Centre in accordance with the Municipal Class Environmental Assessment (Schedule C).

Please ensure that all Notices moving forward must include the date the notice was issued in order to meet the minimum mandatory requirements outlined in section A.3.5.3 of the Municipal Class EA parent document.

Thanks,

Monika Macki
Environmental Resource Planner/Assessment Coordinator
Environmental Assessment Branch
Ministry of the Environment, Conservation and Parks
monika.macki@ontario.ca

UPPER THAMES RIVER
CONSERVATION AUTHORITY

Thames
Canadian Heritage River

"Inspiring a Healthy Environment"

February 13, 2024

Stantec Consulting Limited
400-1305 Riverbend Road
London, ON
N6K 0J5

Municipality of Thames Centre
4305 Hamilton Road
Dorchester, ON
N0L 1G3

Attention: **Jeff Paul -** (sent via e-mail: Jeff.Paul@stantec.com)
Jarrod Craven – (sent via e-mail: Jcraven@thamescentre.on.ca)

Re: **Notice of Study Commencement, Notice of PIC #1**
Thorndale Wastewater Treatment Plant Expansion (1135 Ideal Drive)
Schedule C Municipal Class Environmental Assessment Study
Municipality of Thames Centre

Upper Thames River Conservation Authority (UTRCA) staff are in receipt of the Notice of Study Commencement and the Notice of Public Information Centre #1 for the proposed Thorndale Wastewater Treatment Plant (WWTP) Schedule C Municipal Class Environmental Assessment Study. We are of the understanding the WWTP located at 1135 Ideal Drive in the Municipality of Thames Centre provides municipal wastewater treatment to Thorndale and that expansion alternatives will be developed to address current needs and to consider anticipated community growth.

Aside from being a Regulatory Authority for water related Natural Hazards and Drinking Water Source Protection, UTRCA is also an affected property owner with the current WWTP outlet situated on Conservation Authority owned lands through the Fanshawe Conservation Area. We offer the following comments under these separate, but related, areas of interest:

A) Regulatory Comments

We note regulatory comments are provided under Ontario Regulation 157/06 and our responsibilities as a commenting agency providing technical review and advisement related to water resources, pollution prevention and natural hazard management pursuant to relevant legislation and policies set out in the UTRCA Planning Policy Manual (June 28, 2006):

General Comments

1) We would appreciate the opportunity for our technical staff to review and provide comments on any upcoming draft documents and proposed alternatives including any draft Environmental Study Reports (ESRs) and any Assimilative Capacity Reports. Please note that our scope of review is based on the policies set out in the Upper Thames River Conservation Authority Planning Policy Manual (June 28, 2006). EA and subsequent detail design project review for any WWTP expansion would generally be guided by, but not limited to, water resources, natural hazard and pollution prevention areas of concern for lands regulated within our jurisdiction.

Conservation Authority Regulated Areas

2) The UTRCA regulates development within the Regulation Limit in accordance with Ontario Regulation 157/06 made pursuant to Section 28 of the *Conservation Authorities Act*. This regulation requires proponents to obtain written approval from the UTRCA prior to undertaking any works in the regulated area including filling, grading, construction, alteration to a watercourse and/or interference with a wetland (including the removal of wetland vegetation).

3) Portions of the study area are regulated by the UTRCA due to the presence of riverine flood and erosion hazard lands associated with an unnamed watercourse tributary to the North Thames River as well as the North Thames River itself. Mapping is attached which outlines the approximate location of the UTRCA regulated lands in the study area.

   (Please note mapping should be printed landscape on legal size (8 ½ x 14 inch) paper for scales to be accurate.)

   It should be noted that the Regulation is “text-based”. In the case of a discrepancy between the mapping and what is actually present on site, the text of the regulation shall prevail over the areas shown as being regulated on the mapping. We caution that in the absence of appropriate studies to confirm the extent of natural hazard on the property the flood hazard, the erosion hazard and/or the wetland hazard may be much larger than what our mapping currently suggests.

Digital Mapping

4) Our staff can provide digital mapping which outlines the boundaries of the natural hazard features, Drinking Water Source Protection Areas, and UTRCA owned lands present within the study area. Our digital mapping may be obtained by contacting our GIS department (contact: Phil Simm, 519-451-2800 x 247). Generally the fee involved with obtaining digital mapping of our natural hazard features is $100 but this fee will be waived as the mapping is intended for use by one of our member municipalities for a Municipal Class EA.

1424 Clarke Road, London, Ont. N5V 5B9 · Phone: 519.451.2800 · Fax: 519.451.1188 · Email: infoline@thamesriver.on.ca · www.thamesriver.on.ca

Comments Specific to Stormwater Management

5) The existing WWTP is located within the Thorndale Industrial Subdivision lands. It is our understanding there is currently no legal outlet for stormwater at this location. We have concerns with new development and/or the expansion of any existing development proceeding until such time as a favourable stormwater management plan can be implemented to service the site.

6) The lack of a legal stormwater outlet for the study area, and potential solutions, should be addressed as part of the EA studies.

7) Please note the UTRCA takes the 1: 250 Year Storm as our regulatory storm event standard. The UTRCA requires quantity controls on all future stormwater management (SWM) facilities to ensure that post-development flows will be controlled to pre-development flows for all storm events up to and including the Regulatory (1: 250) Year Storm;

8) If any pond is proposed to outlet to an existing storm sewer, then the pond should be designed to the capacity of the receiving storm sewer up to and including the 250-year storm under the post-development conditions.

9) Any proposed SWM outlets discharging to open watercourses should be sized to handle the Regulatory (1: 250) Year Storm.

10) Enhanced Water Quality Control control (80% long-term average TSS removal), as per MECP's SWM Planning and Design Manual, is recommended for all future stormwater management facilities.

Geotechnical Considerations

11) Depending on project specifics a favourable geotechnical assessment may be required for any potential alteration to the wastewater treatment plant outfall, headwall or any other expansion works that may be affected by the erosion hazard at the river.

Drinking Water Source Protection

12) This EA is the best time to consider regulatory requirements of the Ontario *Clean Water Act* and local Source Protection Plans as well as designated vulnerable areas. The EA process offers an excellent opportunity to document how these factors have been considered in assessing alternatives through the planning process.

13) The establishment, operation or maintenance of a system which collects, stores, transmits or disposes of sewage can be a threat to drinking water sources. Based on the mapping provided, it appears the WWTP is not within or adjacent to a Wellhead Protection Area. However, the WWTP and/or outfall locations are located within areas identified as Highly Vulnerable Aquifers (HVA) and Significant Groundwater Recharge Areas (SGRA). This should be considered in the assessment of alternatives and any eventual design modifications. The proponent may wish to consult with the MOECC as

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to how this may be reflected in their approvals under the ECA process. The EA provides an important opportunity to document how this vulnerability and the resulting low or moderate threats to drinking water have been considered through the EA.

14) The municipality is required by s. 27(3) of O. Reg. 287/07 to notify the CA of the creation of, or modification of any transport pathways.

15) If the proponents have questions on how source protection and the local plan may affect the proposed alternatives they may contact UTRCA Drinking Water Source Protection (DWSP) staff or their municipal Risk Management Official (RMO).

B) Landowner Comments:

General Comments

16) The existing WWTP outlet, headwall and a portion of the pipe is situated on lands owned by the UTRCA within the Fanshawe Conservation Area (FCA). Mapping is attached which outlines the approximate location of UTRCA owned land associated with the study area.

17) UTRCA requires that any/all municipal representatives/agents/consultants obtain written permission to enter UTRCA owned lands and Fanshawe Conservation Area property by way of a short access agreement with corresponding insurance and WSIB prior to the continuation of any/all field surveys and/or field studies (geotechnical, biological, etc.) at the location of WWTP pipe, outlet and headwall, (Lot 15, 16, Conc. 2, Municipality of Thames Centre – previously, Township West Nissouri). Access agreements are required for reasons of safety, liability and to ensure proper scheduling of potentially conflicting park events and/or our own construction or maintenance activities.

18) To discuss details and requirements of our access agreements please contact Jason Belfry, Land Management Supervisor (x 280 or belfryj@thamesriver.on.ca).

19) Given the potential for impacts to our property and/or the river and FCA reservoir we encourage communication with yourselves and our staff at relevant stages of the project. We would like to be part of discussions regarding any potential construction impacts and/or potential changes to effluent flows through the reservoir.

Potential Recreational Impacts

20) In general, given the recreational land use in the area surrounding the existing WWTP outfall, and ongoing concerns with water quality in the Fanshawe Conservation Area Reservoir, we have a vested interest in the effect that the effluent from this proposed plant could have on the receiving body and any downstream waters.

21) We recommend the study consider impacts and potential mitigations for phosphorous loading from the existing WWTP and any proposed expansion. While phosphorus

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concentrations have improved over the long term at the Thorndale Bridge (but still remain above the PWQO), phosphorus accumulated in the bottom sediments of the Fanshawe reservoir continue to result in algae blooms each summer which has impacted the recreational use of the Conservation Area.

22) We recommend the study also consider impacts and potential mitigations for nitrate loading given the recreational use of the reservoir and that nitrate concentrations are of concern for both aquatic life and human health.

Summary

Please note that given the broad concept proposal at this time, we are unable to provide detailed technical comments regarding the project. However, we appreciate being contacted early in the process and are always open to meeting with you to discuss and work through any concerns or complications along the way.

Our office would like to be included in future circulations regarding this project. We would appreciate receiving information and reports as they become available in order to ensure that we can meet the project deadlines with our comments.

If you have any questions regarding the above information, please contact the undersigned.

Yours truly,
UPPER THAMES RIVER CONSERVATION AUTHORITY

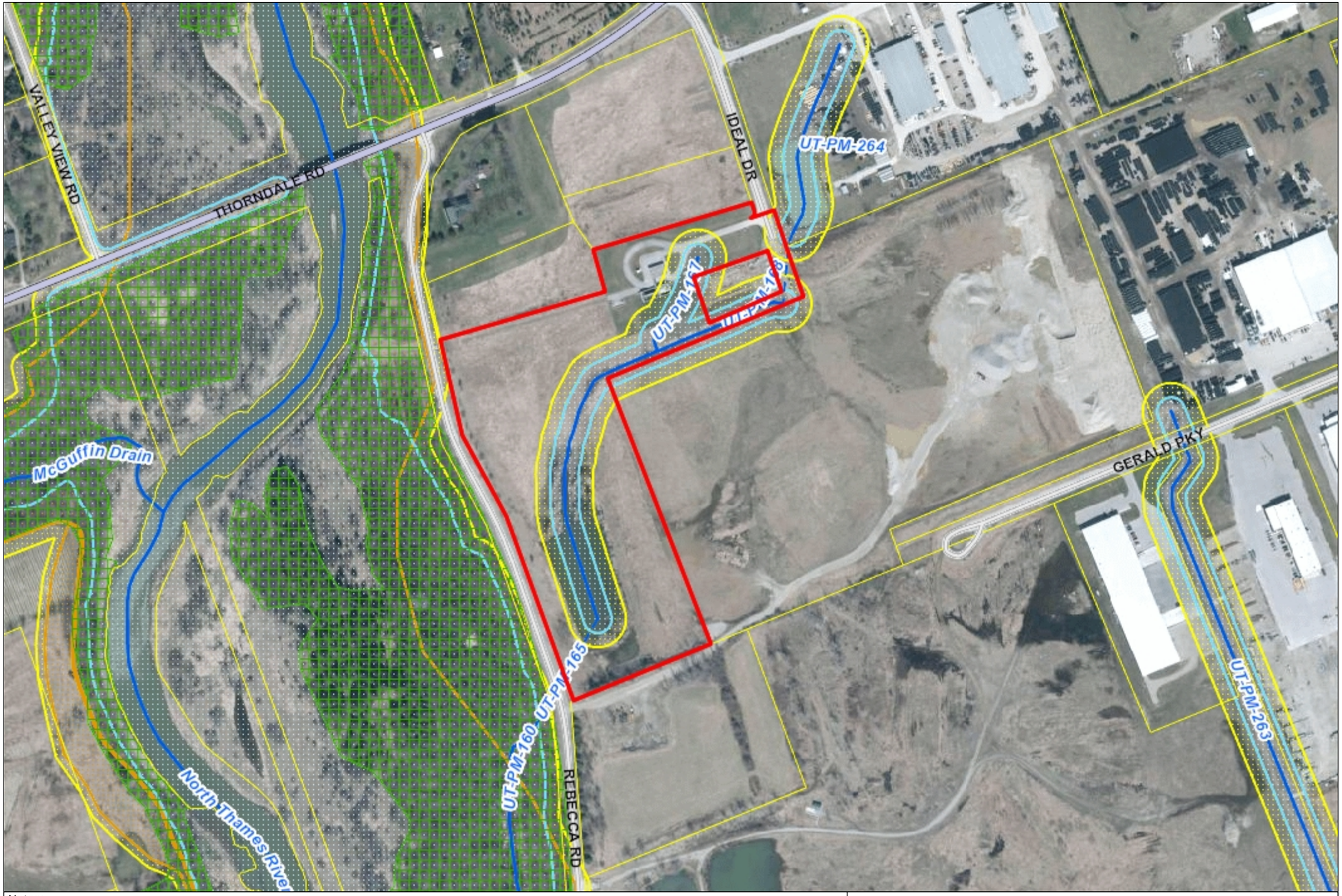
Karen M. Winfield

Karen Winfield
Land Use Regulations Officer
JW/IS/KW/kw

Enc.: UTRCA Regulation Limit mapping in the vicinity of the Thorndale WWTP.
DWSP Mapping in the vicinity of the Thorndale WWTP.
Mapping of UTRCA owned lands in the vicinity of the Thorndale WWTP.
(Please note all mapping should be printed landscape on legal size (8 ½ x 14 inch) paper for scales to be accurate)

c.c. – David Kielstra, Stantec Consulting – (via e-mail: David.Kielstra@stantec.com)
Brent Verscheure, UTRCA
Brandon Williamson, UTRCA
Damian Schofield, UTRCA
Jason Belfry, UTRCA
Laura Biancolin, UTRCA
Eric Gaskin, UTRCA
Cari Ramsey, UTRCA
Julie Welker, UTRCA

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Regulated Areas

Regulation under s.28 of the *Conservation Authorities Act*

Development, interference with wetlands, and alterations to shorelines and watercourses. O.Reg 157/06, 97/04.

Legend

- UTRCA Watershed (2017 LiDAR)
- Assessment Parcel (MPAC)
- Watercourse (UTRCA)
  - Open
  - Tiled
- Middlesex NHSS Woodland (2014)
  - Candidate for Ecologically Important
  - Ecologically Important
  - Significant Ecologically Important
- Regulated Wetland
- Flooding Hazard Limit
- Erosion Hazard Limit
- Regulation Limit 2021

The mapping is for information screening purposes only, and shows the approximate regulation limits. The text of Ontario Regulation 157/06 supersedes the mapping as represented by this data layer. This mapping is subject to change. A site specific determination may be made by the UTRCA.

This layer is the approximate limit for areas regulated under Ontario Regulation 157/06 - Upper Thames River Conservation Authority: Development, Interference with Wetlands and Alterations to Shorelines and Watercourses, which came into effect May 4, 2006.

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Notes:

Thorndale WWTP, 1135 Ideal Drive, Municipality of Thames Centre (Map 1 of 3 - outlining lands regulated by the UTRCA)

Created By: KMW January 5, 2024

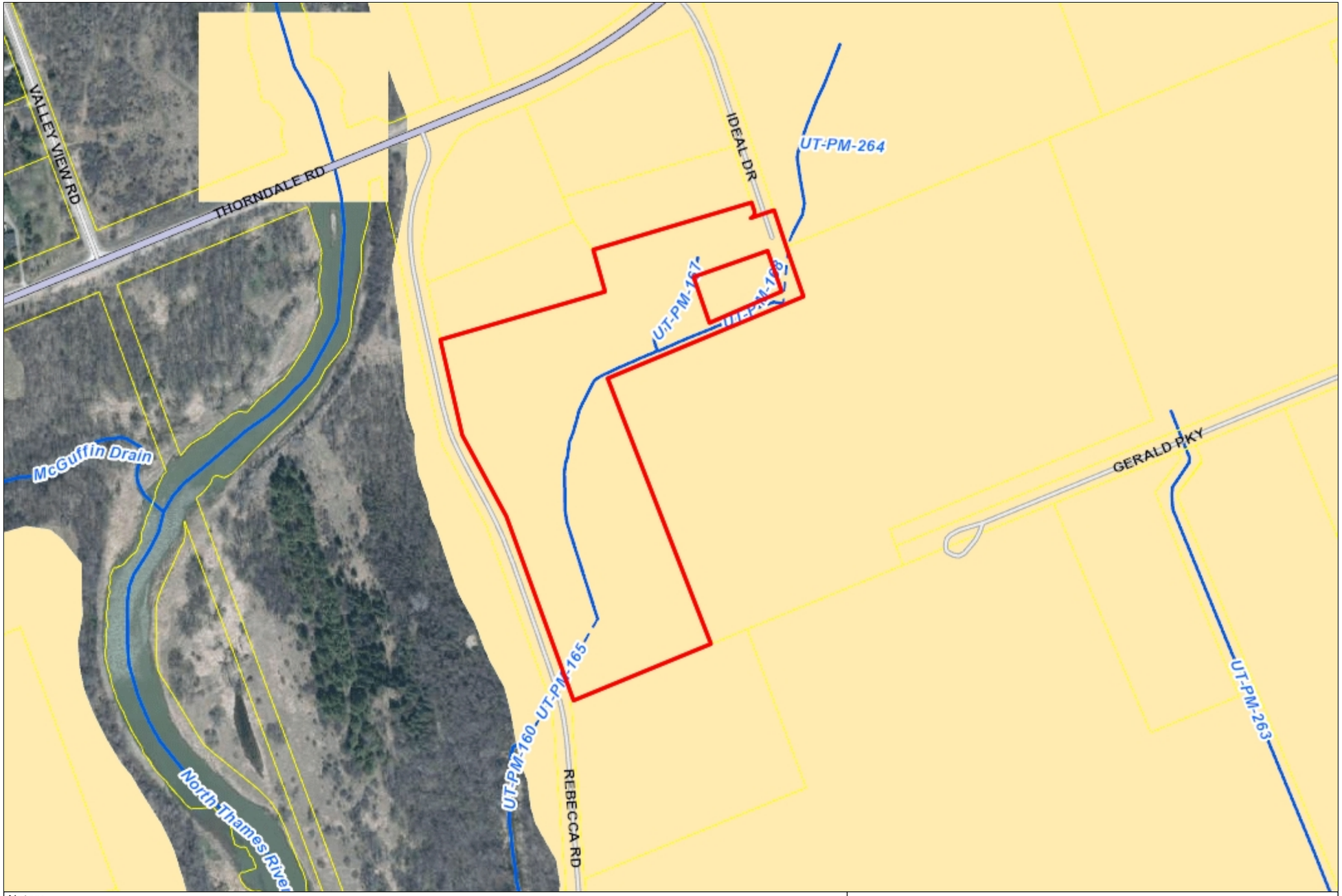
* Please note: Any reference to scale on this map is only appropriate when it is printed landscape on legal-sized (8.5" x 14") paper.

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metres

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Regulated Areas

Regulation under s.28 of the Conservation Authorities Act

Development, interference with wetlands, and alterations to shorelines and watercourses. O.Reg 157/06, 97/04.

Legend

- UTRCA Watershed (2017 LiDAR)
- Assessment Parcel (MPAC)
- Watercourse (UTRCA)
  - Open
  - Tiled

Designated Vulnerable Areas

- Activities may be Significant Threats
- Activities may be Moderate and Low Threat
- Other Vulnerable Areas
- See Essex Region SPA for Details

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Notes:

Thorndale WWTP, 1135 Ideal Drive, Municipality of Thames Centre (Map 2 of 3 - outlining lands identified as Highly Vulnerable Aquifers and/or Significant Groundwater Recharge Areas)

Created By: KMW January 5, 2024

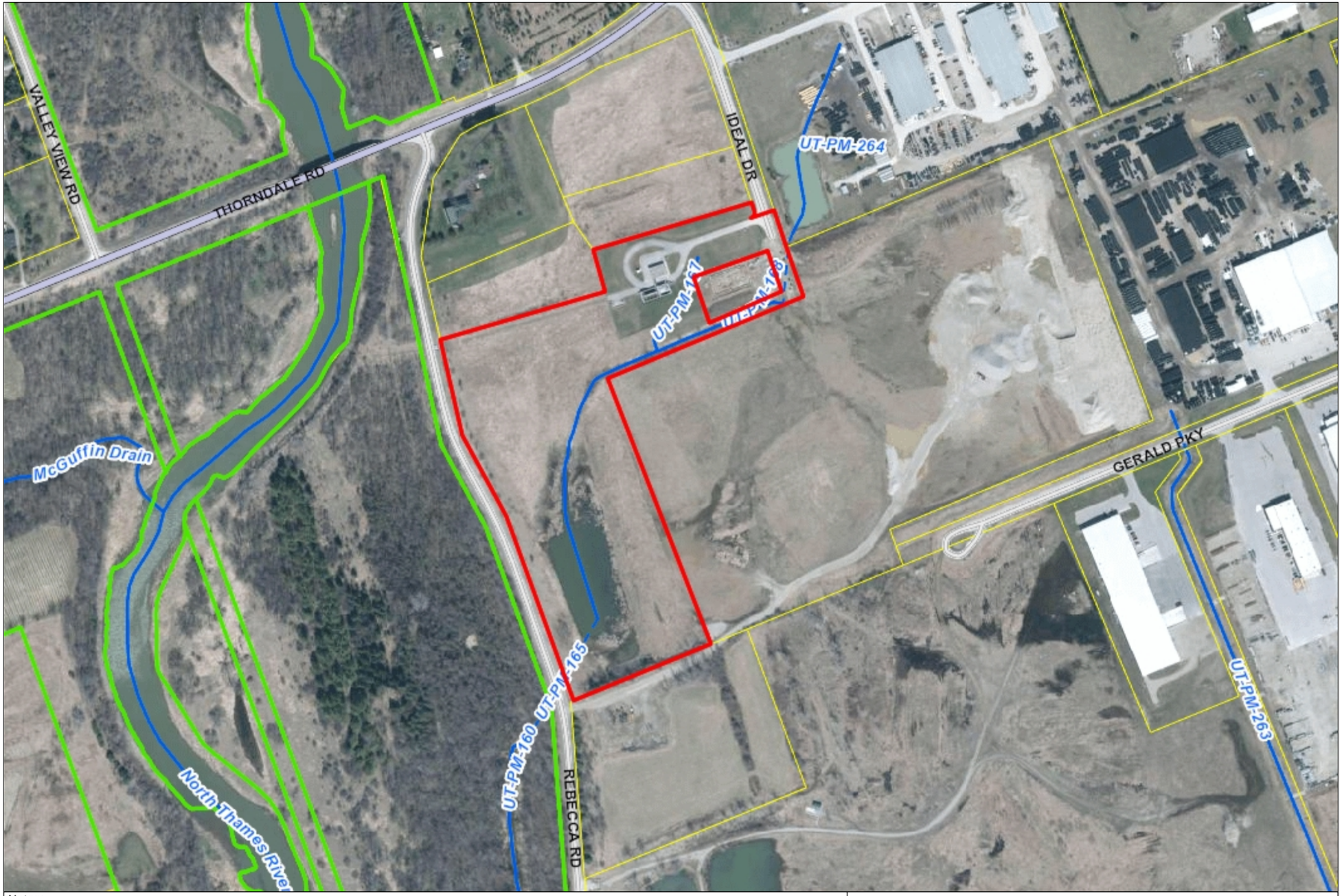
* Please note: Any reference to scale on this map is only appropriate when it is printed landscape on legal-sized (8.5" x 14") paper.

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Regulated Areas

Regulation under s.28 of the Conservation Authorities Act

Development, interference with wetlands, and alterations to shorelines and watercourses. O.Reg 157/06, 97/04.

Legend

- UTRCA Watershed (2017 LiDAR)
- UTRCA Property
- Assessment Parcel (MPAC)
- Watercourse (UTRCA)
  - Open
  - Tiled

The mapping is for information screening purposes only, and shows the approximate regulation limits. The text of Ontario Regulation 157/06 supersedes the mapping as represented by this data layer. This mapping is subject to change. A site specific determination may be made by the UTRCA.

This layer is the approximate limit for areas regulated under Ontario Regulation 157/06 - Upper Thames River Conservation Authority: Development, Interference with Wetlands and Alterations to Shorelines and Watercourses, which came into effect May 4, 2006.

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Notes:

Thorndale WWTP, 1135 Ideal Drive, Municipality of Thames Centre (Map 3 of 3 - outlining approximate location of lands owned by the UTRCA)

Created By: KMW January 5, 2024

* Please note: Any reference to scale on this map is only appropriate when it is printed landscape on legal-sized (8.5" x 14") paper.

0 100 200 400

metres

1:5,000

N

Stantec Consulting Ltd.
100-300 Hagey Boulevard
Waterloo ON N2L 0A4

June 13, 2024

Project/File: 165630251

Karen Winfield
Land Use Regulations Officer
winfieldk@thamesriver.on.ca
infoline@thamesriver.on.ca

Dear Karen Winfield,

Reference: Response to UTRCA comments Thorndale Wastewater Treatment Plant Expansion (1135 Ideal Drive) Municipality of Thames Centre
Schedule C Municipal Class Environmental Assessment Study

Thank you for your letter dated February 13, 2024, and your interest in the Thorndale Wastewater Treatment Plant (WWTP) expansion study. This project is underway at the existing WWTP on Ideal Drive on behalf of the Municipality of Thames Centre.

The comments from your regulatory and property owner perspective are appreciated. The comments responses are included below.

A) Regulatory Comments

General Comments/ Conservation Authority Regulated Areas/Digital Mapping

Thank you for the information on your status as a Regulatory Authority under Ontario Regulation 157/06 and for the regulatory mapping. The mapping is being reviewed, along with our review of natural features, sourcewater protection, and natural hazards. These features will be considered in the evaluation of Alternatives. Requirements for obtaining permits under Ontario Regulation 157/06 will be noted in the evaluation and final Environmental Study Report (ESR) if there are requirements for filling, grading, construction, alteration to a watercourse and/or interference with a wetland (including removal of wetland vegetation).

Your status as a Regulatory Authority and status as a property owner at the current WWTP outlet is noted, along with its proximity to the Fanshawe Conservation Area.

Stormwater Management

This EA covers the proposed expansion of the existing Thorndale WWTP. The Municipality is currently undertaking a separate stormwater study in this industrial business park area which should address the stormwater outlet elements for the industrial lands.

The EA will review whether there are any changes needed to the WWTP site outlet, however stormwater servicing for the industrial lands should be treated separately outside the EA. Comments related to stormwater management will be provided to the consultant completing that work to consider the issues raised.

Geotechnical Considerations

Thank you for the comment. The project work is anticipated to occur at the existing WWTP location. Work at the outfall within the erosion hazard limit beyond Rebecca Road is not anticipated at this time. If required, a geotechnical assessment may be recommended for detailed design.

Drinking Water Source Protection

Thank you for your comments on sourcewater protection. We are reviewing the sourcewater protection plan and will include information such as evaluation of alternatives in the ESR.

B) Landowner Comments

General Comments

The mapping reveals that the existing site is on municipal property, subject to local government regulations. However, the outfall is within CA lands. Understanding and adhering to both sets of regulations is imperative to ensure compliance and secure any required permits or approvals for activities within these respective areas.

We currently have no plans to access the CA lands, but should the need arise, we will respectfully request permission to enter the area.

The outlet size is being reviewed as part of the EA. Currently we are assessing the outlet size to ensure that it is compatible and can accommodate any changes on the site. The review will be incorporated into the evaluation. If modifications are required to the outlet, the project team can discuss further with the Conservation Authority.

Potential Recreational Impacts

Thank you for the information about the outlet opening ownership. No modifications to the outlet on Conservation Authority lands are anticipated at this time. We will continue to keep you informed if any modifications are planned to the outlet.

The study has conducted a review of effluent water quality under existing flows and will be considering effluent water quality under the projected increased flows. This data is will then be compared to the MECP water quality criteria provided for this facility to ensure the effluent water quality under these conditions falls below these criteria. This work and our recommendations will be documented in the Environmental Study Report.

Next Steps

We will continue to consult with Upper Thames River Conservation Authority throughout the study processes as we work to select a preferred alternative. Your contact information has been added to our project mailing list and you will be notified of project updates and consultation opportunities as the study progresses.

Please don't hesitate to contact me should you have any further comments or questions regarding the study. There will be an opportunity for further engagement with an additional PIC# 2 meeting anticipated in the fall 2024 and an Environmental Study Report (ESR) will be prepared for agency and public review at the end of the project.

Sincerely,

STANTEC CONSULTING LTD.



David Kielstra MA, EP, MCIP, RPP
Environmental Planner
David.Kielstra@stantec.com

CC
Jarrod Craven Municipality of Thames Centre
Jeff Paul, Stantec Consulting Ltd.
Brent Verscheure, Brandon Williamson, Damian Schofield, Jason Belfry, Laura Biancolin, Eric Gaskin, Cari Ramsey, Julie Welker - UTRCA

From:	Karen Winfield
To:	Kielstra, David
Cc:	Cari Ramsey; Jarrod Craven; Paul, Jeff
Subject:	RE: Notice of PIC 2 - Thorndale Wastewater Treatment Plant (WWTP) Expansion
Date:	Tuesday, October 1, 2024 10:30:28 AM
Attachments:	ATT00002.png ATT00003.jpg ATT00004.png ATT00001

Hi David,

Thank-you so much for providing the slide deck. From a cursory review I don't think we have any new comments at this time but please reach out to us at the detail design stage.

As previously mentioned we have a concern with any new development or expansion of existing development until such time as legal stormwater outlet is provided for the lands in the vicinity of the WWTP and Industrial Subdivision. Currently stormwater is being directed to existing aggregate pits that have no outlet. Which means water is likely going subsurface and heading under Rebecca Road towards the river… which is concurrent with a slope failure on the west side of the road in the vicinity of one of the aggregate pits.

Karen Winfield
Planning & Regulations Resource Specialist
1424 Clarke Road London, Ontario, N5V 5B9
519.451.2800 Ext. 237 | Fax: 519.451.1188
winfieldk@thamesriver.on.ca

>>> "Kielstra, David" <David.Kielstra@stantec.com> 10/1/2024 9:41 AM >>>
Good morning Karen,

Thank you for your message. The displays are attached from the PIC2 last week, and I'll follow up to make sure they get online as well.

Regards,

David Kielstra MA, EP, MCIP, RPP
Environmental Planner

Direct: 905 381-3247
Fax: 905 385-3534
David.Kielstra@stantec.com

Stantec
200-835 Paramount Drive
Stoney Creek ON L8J 0B4

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From: Karen Winfield <Winfieldk@thamesriver.on.ca>
Sent: Monday, September 30, 2024 3:43 PM
To: Kielstra, David <David.Kielstra@stantec.com>
Cc: Cari Ramsey <RamseyC@thamesriver.on.ca>; Jarrod Craven <JCraven@thamescentre.on.ca>; Paul, Jeff <jeff.paul@stantec.com>
Subject: Re: Notice of PIC 2 - Thorndale Wastewater Treatment Plant (WWTP) Expansion

Hi David,

The notice says comments are due October 4th and that the PIC #2 presentation materials will be available on the website but I can only find PIC #1.

Can you please provide us with the website link for the PIC #2 presentation materials?

Thank-you,

Karen Winfield
Planning & Regulations Resource Specialist
1424 Clarke Road London, Ontario, N5V 5B9
519.451.2800 Ext. 237 | Fax: 519.451.1188
winfieldk@thamesriver.on.ca

>>> "Kielstra, David" <David.Kielstra@stantec.com> 2024-09-18 1:27 PM >>>
Hello,

Please see the attached Notice of Public Information Centre #2 for the Thorndale Wastewater Treatment Plant (WWTP) Expansion project, on behalf of the Municipality of Thames Centre. The project is being undertaken as a Schedule 'C' project in accordance with the Municipal Engineers Association (MEA) Municipal Class Environmental Assessment (as amended in 2023). Wastewater treatment capacity expansion alternatives have been identified and evaluated, and they are being provided for public comment. The preliminary preferred alternative includes capacity expansion on the existing site.

An in-person Public Information Centre (PIC #2) is being held using a drop-in format, with members of the project team available to discuss the project and respond to any questions you may have.

Date: Thursday, September 26, 2024
Location: Thorndale Lions Community Centre, 265 Upper Queen Street, Thorndale, ON
Time: 5:00 pm - 7:00 pm

Presentation materials will also be available on the Municipality's website following the PIC at: www.thamescentre.on.ca. Comments can be provided at the PIC or provided by **October 4, 2024**.

Should you have any questions, please let me know or send comments to the individuals identified on the

Notice.

Thank you,

David Kielstra MA, EP, MCIP, RPP
Environmental Planner

Direct: 905 381-3247
Fax: 905 385-3534
David.Kielstra@stantec.com

Stantec
200-835 Paramount Drive
Stoney Creek ON L8J 0B4

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From:	Leclerc, Erika (MCM)
To:	Kielstra, David
Cc:	Paul, Jeff; Jarrod Craven; Barboza, Karla (She/Her) (MCM); Harvey, Joseph (MCM)
Subject:	MCM Response - Thorndale Wastewater Treatment Plant (WWTP) Expansion, Schedule C Municipal Class EA, Municipality of Thames Centre
Date:	Monday, January 8, 2024 3:27:03 PM
Attachments:	2024-01-08 ThorndaleWWTPExpansion_MCMInitialLetter.pdf 2023-12-21 NofCommencement_Thorndale_WastewaterTreatmentPlantExpansion.pdf

Some people who received this message don't often get email from erika.leclerc2@ontario.ca. Learn why this is important

Sent on behalf of Joseph Harvey, Heritage Planner, Ministry of Citizenship and Multiculturalism

Dear David Kielstra,

Thank you for sending the Notice of Study Commencement for the above-mentioned project to the Ministry of Citizenship and Multiculturalism (MCM). Please find attached MCM's initial letter on this project.

Please do not hesitate to contact us if you have any questions.

Kind regards,

Erika Leclerc (she/her)
Heritage Planner, Heritage Planning Unit
Ministry of Citizenship and Multiculturalism
416.305.0757
erika.leclerc2@ontario.ca

From: Kielstra, David <David.Kielstra@stantec.com>
Sent: December 21, 2023 12:01 PM
Cc: Paul, Jeff <jeff.paul@stantec.com>; Jarrod Craven <JCraven@thamescentre.on.ca>
Subject: Thorndale Wastewater Treatment Plant (WWTP) Expansion, Schedule C Municipal Class EA, Municipality of Thames Centre

CAUTION -- EXTERNAL E-MAIL - Do not click links or open attachments unless you recognize the sender.

Hello,

Please see the attached Notice of Study Commencement for the Thorndale Wastewater Treatment Plant (WWTP) Expansion project, on behalf of the Municipality of Thames Centre. The project is being undertaken as a Schedule 'C' project in accordance with the Municipal Engineers Association (MEA) Municipal Class Environmental Assessment (as amended in 2023).

Should you have any questions, please let me know or send comments to the individuals identified on the

Notice.

Thank you,

David Kielstra MA, EP, MCIP, RPP
Environmental Planner

Direct: 905 381-3247
Fax: 905 385-3534
David.Kielstra@stantec.com

Stantec
200-835 Paramount Drive
Stoney Creek ON L8J 0B4

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Ministry of Citizenship and Multiculturalism

Heritage Planning Unit
Heritage Branch
Citizenship, Inclusion and Heritage Division
5th Flr, 400 University Ave
Tel.: 613-242-3743

Ministère des Affaires civiques et du Multiculturalisme

Unité de la planification relative au patrimoine
Direction du patrimoine
Division des affaires civiques, de l'inclusion et du patrimoine
Tél.: 613-242-3743

January 8, 2024

EMAIL ONLY

Jarrod Craven
Director of Public Works
Municipality of Thames Centre
4305 Hamilton Road
Dorchester, ON N0L 1G3
Jcraven@thamescentre.on.ca

MCM File	**:**	**0020920**
Proponent	**:**	**Municipality of Thames Centre**
Subject	**:**	**Municipal Class Environmental Assessment – Schedule C – Notice of Study Commencement**
Project	**:**	**Thorndale Wastewater Treatment Plant Expansion**
Location	**:**	**Municipality of Thames Centre, Middlesex County**

Dear Jarrod Craven:

Thank you for providing the Ministry of Citizenship and Multiculturalism (MCM) with the Notice of Study Commencement for the above-referenced project.

MCM's interest in this project relates to its mandate of conserving Ontario's cultural heritage, which includes:

- archaeological resources, including land and marine;
- built heritage resources, including bridges and monuments; and
- cultural heritage landscapes.

Under the Environmental Assessment (EA) process, the proponent is required to determine a project's potential impact on known (previously recognized) and potential cultural heritage resources.

Project Summary
The Municipality of Thames Centre has retained Stantec Consulting Ltd. to complete a Municipal Class EA to identify options for expansion of the Thorndale Wastewater Treatment Plant (WWTP), located at 1135 Ideal Drive. The Thorndale WWTP provides municipal wastewater treatment to Thorndale. Expansion alternatives will be developed to address current needs and consider anticipated community growth.

The project will be undertaken in accordance with the Municipal Engineers Association (MEA) Municipal Class EA document (as amended in 2007, 2011, 2015 and 2023) and will address the requirements of a Schedule 'C' EA.

Identifying Cultural Heritage Resources
While some cultural heritage resources may have already been formally identified, others may be identified through screening and evaluation.

Archaeological Resources
This EA project may impact archaeological resources and should be screened using the Ministry's *Criteria for Evaluating Archaeological Potential* to determine if an archaeological assessment is needed. MCM archaeological sites data are available at *archaeology@ontario.ca*.

If the EA project area exhibits archaeological potential, then an archaeological assessment (AA) shall be undertaken by an archaeologist licenced under the *Ontario Heritage Act (OHA)*, who is responsible for submitting the report directly to MCM for review.

Built Heritage Resources and Cultural Heritage Landscapes
The Ministry's *Criteria for Evaluating Potential for Built Heritage Resources and Cultural Heritage Landscapes* should be completed to help determine whether this EA project may impact known or potential built heritage resources and/or cultural heritage landscapes.

If there is potential for built heritage resources and/or cultural heritage landscapes on the property or within the project area, a Cultural Heritage Evaluation Report (CHER) should be undertaken by a qualified person to determine the cultural heritage value or interest of the property (or project area). If the property (or project area) is determined to be of cultural heritage value or interest and alterations or development is proposed, MCM recommends that a Heritage Impact Assessment (HIA), prepared by a qualified consultant, be completed to assess potential project impacts. Please send the HIA to MCM for review and comment and make it available to local organizations or individuals who have expressed interest in review.

Community input should be sought to identify locally recognized and potential cultural heritage resources. Sources include, but are not limited to, municipal heritage committees, historical societies and other local heritage organizations.

Cultural heritage resources are often of critical importance to Indigenous communities. Indigenous communities may have knowledge that can contribute to the identification of cultural heritage resources, and we suggest that any engagement with Indigenous communities includes a discussion about known or potential cultural heritage resources that are of value to them.

Environmental Assessment Reporting
All technical cultural heritage studies and their recommendations are to be addressed and incorporated into EA projects. Please advise MCM whether any technical cultural heritage studies will be completed for this EA project and provide them to MCM before issuing a Notice of Completion or commencing any work on the site. If screening has identified no known or potential cultural heritage resources, or no impacts to these resources, please include the completed checklists and supporting documentation in the EA report or file.

Please note that the responsibility for administration of the *Ontario Heritage Act* and matters related to cultural heritage have been transferred from the Ministry of Tourism, Culture and Sport (MTCS) to the Ministry of Citizenship and Multiculturalism (MCM). Individual staff roles and contact information remain unchanged. Please continue to send any notices, report and/or documentation **via email only** to both Karla Barboza and Joseph Harvey.

- Karla Barboza, Team Lead - Heritage | Heritage Planning Unit (Citizenship and Multiculturalism) | 416-660-1027 | karla.barboza@ontario.ca
- Joseph Harvey, Heritage Planner | Heritage Planning Unit (Citizenship and Multiculturalism) | 613-242-3743 | joseph.harvey@ontario.ca

Thank you for consulting MCM on this project and please continue to do so throughout the EA process. If you have any questions or require clarification, please do not hesitate to contact me.

Sincerely,

Erika Leclerc
On behalf of

Joseph Harvey
Heritage Planner
Joseph.harvey@ontario.ca

Copied to: Jeff Paul, Project Manager, Stantec Consulting Ltd.
David Kielstra, Environmental Planner, Stantec Consulting Ltd.
Karla Barboza, Team Lead – Heritage Planning Unit, MCM

It is the sole responsibility of proponents to ensure that any information and documentation submitted as part of their EA report or file is accurate. The Ministry of Citizenship and Multiculturalism (MCM) makes no representation or warranty as to the completeness, accuracy or quality of the any checklists, reports or supporting documentation submitted as part of the EA process, and in no way shall MCM be liable for any harm, damages, costs, expenses, losses, claims or actions that may result if any checklists, reports or supporting documents are discovered to be inaccurate, incomplete, misleading or fraudulent.

Should previously undocumented archaeological resources be discovered, they may be a new archaeological site and therefore subject to Section 48(1) of the *Ontario Heritage Act*. The proponent or person discovering the archaeological resources must cease alteration of the site immediately and engage a licensed consultant archaeologist to carry out an archaeological assessment, in compliance with Section 48(1) of the *Ontario Heritage Act*.

The *Funeral, Burial and Cremation Services Act, 2002, S.O. 2002, c.33* requires that any person discovering human remains must cease all activities immediately and notify the police or coroner. If the coroner does not suspect foul play in the disposition of the remains, in accordance with *Ontario Regulation 30/11* the coroner shall notify the Registrar, Ontario Ministry of Public and Business Service Delivery, which administers provisions of that Act related to burial sites. In situations where human remains are associated with archaeological resources, the Ministry of Citizenship and Multiculturalism should also be notified (at archaeology@ontario.ca) to ensure that the archaeological site is not subject to unlicensed alterations which would be a contravention of the *Ontario Heritage Act*.

From:	Harvey, Joseph (MCM)
To:	Kielstra, David
Cc:	Paul, Jeff; Jarrod Craven
Subject:	FW: File 0020920: Notice of Public Information Centre 2 - Thorndale Wastewater Treatment Plant (WWTP) Expansion, Schedule C Municipal Class EA, Municipality of Thames Centre
Date:	Tuesday, October 1, 2024 1:23:05 PM
Attachments:	image001.png Notice_PIC2_Thorndale_Wastewater_Treatment_Plant_Expansion_Class_EA_Sept2024.pdf

David Kielstra,

Thanks for providing us with the attached notice for the above the second public information centre (PIC), held on Thursday, September 26, 2024, for the above referenced undertaking. We have reviewed the PIC presentation slides made available on the municipalitieis website and have the following comments and observations.

Sldie 6 indicates that a Stage 1 archaeological assessment has been undertaken within the study area. To assist us in tracking archaeological assessment reports, please provide us with the Project Information Form (PIF) number(s) of any archaeological assessments prepared in support of this project.

Please let us know if the project has been screened for impacts to known (previously recognized) or potential built heritage resources and cultural heritage landscapes using the Ministy checklist *Criteria for Evaluating Potential for Built Heritage Resources and Cultural Heritage Landscapes.* Please submit the completed checklist to MCM along with any supporting documentation. The completed checklist will help to determine if technical cultural heritage studies (e.g., Cultural Heritage Evaluation Reports, Heritage Impact Assessments etc.) are required. All technical cultural heritage studies should be sent for our review as part of the environmental assessment process.

Thanks,

Joseph Harvey
Heritage Planner | Heritage Branch | Citizenship Inclusion and Heritage Division
Ministry of Citizenship and Multiculturalism | Ontario Public Service
613.242.3743 | Joseph.Harvey@ontario.ca

From: Kielstra, David <David.Kielstra@stantec.com>
Sent: Wednesday, September 18, 2024 1:27 PM
Cc: Paul, Jeff <jeff.paul@stantec.com>; Jarrod Craven <JCraven@thamescentre.on.ca>
Subject: Notice of Public Information Centre 2 - Thorndale Wastewater Treatment Plant (WWTP) Expansion, Schedule C Municipal Class EA, Municipality of Thames Centre

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recognize the sender.

Hello,

Please see the attached Notice of Public Information Centre #2 for the Thorndale Wastewater Treatment Plant (WWTP) Expansion project, on behalf of the Municipality of Thames Centre. The project is being undertaken as a Schedule 'C' project in accordance with the Municipal Engineers Association (MEA) Municipal Class Environmental Assessment (as amended in 2023). Wastewater treatment capacity expansion alternatives have been identified and evaluated, and they are being provided for public comment. The preliminary preferred alternative includes capacity expansion on the existing site.

An in-person Public Information Centre (PIC #2) is being held using a drop-in format, with members of the project team available to discuss the project and respond to any questions you may have.

Date:	Thursday, September 26, 2024
Location:	Thorndale Lions Community Centre, 265 Upper Queen Street, Thorndale, ON
Time:	5:00 pm - 7:00 pm

Presentation materials will also be available on the Municipality's website following the PIC at: www.thamescentre.on.ca. Comments can be provided at the PIC or provided by **October 4, 2024**.

Should you have any questions, please let me know or send comments to the individuals identified on the Notice.

Thank you,

David Kielstra MA, EP, MCIP, RPP
Environmental Planner

Direct: 905 381-3247
Fax: 905 385-3534
David.Kielstra@stantec.com

Stantec
200-835 Paramount Drive
Stoney Creek ON L8J 0B4

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From:	Harvey, Joseph (MCM)
To:	Kielstra, David
Cc:	Paul, Jeff; Jarrod Craven; Barboza, Karla (She/Her) (MCM)
Subject:	FW: MCM Thorndale WWTP [MCM file 0020920]
Date:	Friday, December 20, 2024 10:12:06 AM
Attachments:	image001.png image002.jpg 2024-12-20_ThorndaleWWTP_BHR-CHL-MEMO_Comments.pdf

Hi David,

Please find attached our comments on the Cultural Hertiage Screening Memo prepared for the above referenced undertaking.

Please do not hesitate to contact me with any questions or concerns.

Regards,

Joseph Harvey
Heritage Planner | Heritage Branch | Citizenship Inclusion and Heritage Division
Ministry of Citizenship and Multiculturalism | Ontario Public Service
613.242.3743 | Joseph.Harvey@ontario.ca

From: Harvey, Joseph (MCM)
Sent: Tuesday, November 26, 2024 4:27 PM
To: Kielstra, David <David.Kielstra@stantec.com>
Cc: Paul, Jeff <jeff.paul@stantec.com>; Jarrod Craven <JCraven@thamescentre.on.ca>; Barboza, Karla (She/Her) (MCM) <Karla.Barboza@ontario.ca>
Subject: FW: MCM Thorndale WWTP [MCM file 0020920]

Hi David,

Thanks for providing us with this additional information.

We will review the Heritage Memo and provide comments, as appropriate, by mid December.

We can confirm that the Stage 1 archaeological assessment (AA – under Project Information Form number P001-634-2010) was entered into the Ontario Public Register of Archaeological Reports. The Stage 1 AA recommended Stage 2 assessment for parts of the study area, however this excludes the proposed location of the Thorndale Wastewater Treatment Plant project. Therefore, no further assessment is required for the proposed location of the treatment plant.

Thanks,

Joseph Harvey
Heritage Planner | Heritage Branch | Citizenship Inclusion and Heritage Division
Ministry of Citizenship and Multiculturalism | Ontario Public Service
613.242.3743 | Joseph.Harvey@ontario.ca

From: Kielstra, David <David.Kielstra@stantec.com>
Sent: Monday, November 4, 2024 9:39 AM
To: Harvey, Joseph (MCM) <Joseph.Harvey@ontario.ca>
Cc: Paul, Jeff <jeff.paul@stantec.com>; Jarrod Craven <JCraven@thamescentre.on.ca>
Subject: MCM Thorndale WWTP

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Hello Joseph,

Thank you for your email following Public Information Centre #2 for the Thorndale Wastewater Treatment Plant project. Please see the attached Thorndale cultural heritage screening for your comments.

A Stage 1 archaeological assessment was completed in 2010 for the industrial park in Thorndale where the WWTP is currently situated. The Stage 1 assessment identified that a significant portion of the industrial park study area had been previously disturbed by aggregate activities and areas of previous disturbance have no potential for the recovery of intact archaeological deposits. The remaining areas (shaded on the attached map) not previously impacted by aggregate extraction required a Stage 2 archaeological assessment in advance of any additional ground disturbance.

The area that would become the WWTP is not within the shaded area that required further archaeological assessment. As requested, the PIF numbers are provided below.

STAGE 1 ARCHAEOLOGICAL ASSESSMENT
Proposed Thorndale Business Park
Concession 2, Part of Lots 14 & 15
Former Township of West Nissouri
Middlesex County, Ontario
PIF Number: P001-634-2010
August 2010

STAGE 2 ARCHAEOLOGICAL ASSESSMENT
Proposed Thorndale Business Park
Concession 2, Part of Lots 14 &15
Former Township of West Nissouri
Middlesex County, Ontario
PIF Number: P001-639-2010

Should you have any questions regarding the heritage memo, please let our team know.

Thank you,

David Kielstra MA, EP, MCIP, RPP
Environmental Planner

Direct: 905 381-3247

Fax: 905 385-3534
David.Kielstra@stantec.com

Stantec
200-835 Paramount Drive
Stoney Creek ON L8J 0B4

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Ministry of Citizenship and Multiculturalism

Heritage Planning Unit
Heritage Operations Branch
Citizenship, Inclusion and Heritage Division
5th Flr, 400 University Ave
Toronto, ON M5G 1S7
Tel.: 613-242-3743

Ministère des Affaires civiques et du Multiculturalisme

Planification relative au patrimoine
Opérations relatives au patrimoine
Division des affaires civiques, de l'inclusion et du patrimoine
5e étage, 400, av. University
Toronto, ON M5G 1S7
Tél.: 613-242-3743

December 20, 2024

EMAIL ONLY

David Kielstra MCIP, RPP
Environmental Planner
Stantec
200-835 Paramount Drive
Stoney Creek ON L8J 0B4
David.Kielstra@stantec.com

MCM File	**:**	**0020920**
Proponent	**:**	**Municipality of Thames Centre**
Subject	**:**	**Municipal Class Environmental Assessment – Schedule C – Cultural Heritage Screening Memo**
Project	**:**	**Thorndale Wastewater Treatment Plant Expansion**
Location	**:**	**Municipality of Thames Centre, Middlesex County**

Dear David Kielstra:

Thank you for providing the Ministry of Citizenship and Multiculturalism (MCM) with the Cultural Heritage Screening Memo (dated October 21, 2024, prepared by Stantec Consulting Ltd.) for the above-referenced project.

MCM's interest in this project relates to its mandate of conserving Ontario's cultural heritage.

Project Summary
The Municipality of Thames Centre has retained Stantec Consulting Ltd. to complete a Municipal Class Environmental Assessment (EA) to identify options for expansion of the Thorndale Wastewater Treatment Plant (WWTP), located at 1135 Ideal Drive. The Thorndale WWTP provides municipal wastewater treatment to Thorndale. Expansion alternatives will be developed to address current needs and consider anticipated community growth.

The project will be undertaken in accordance with the Municipal Engineers Association (MEA) Municipal Class EA document (as amended in 2007, 2011, 2015 and 2023) and will address the requirements of a Schedule 'C' EA.

Comments:
We have reviewed the above referenced Cultural Heritage Screening Memo and have the following comments and observations:

- Section 1 (Introduction) – The 3rd paragraph should be revised to align with purpose of the screening checklist as follows: "(…) provides a tool to identify known ~~or~~ **(previously** recognized**) or potential** built heritage resources and cultural heritage landscapes in the project area from desktop sources, **the community input program**, (…). See also reference to community input under Section 2 (Methodology).
- Section 1 (Introduction) – The document should clarify how it was determined that a buffer of 50m from the Site Boundary is sufficient to capture the potential for direct and indirect impacts to all identified (known and potential) BHRs/CHLs. Please note that impacts to physical structures are just one of the many ways in which the cultural heritage value of a property could be impacted. Additional impacts may include indirect impacts such as shadows, vibration, and the disruption of significant views.
- Figure 1 (Study Area) – We recommend that the map depicting the known and potential BHRs/CHLs by including an identifier for each property. The map should also identify the construction footprint for each of the proposed alternatives.
- Section 3 (Desktop Review) – We recommend updating this section to include a table with a written and visual description of all known and potential BHR/CHL within and adjacent to the study area.
- Section 3.2.1 (Review of Historic Mapping) – We recommend updating the Cultural Heritage Screening to include copies of the maps referenced in this section.
- Section 4 (Community Input) – This sections title should be updated to reflect that it was part of information gathering (which is different from engagement).

  A new section should be included which provides a brief summary of the groups and individuals who were engaged, how and when community engagement was undertaken and the results of the engagement, including responses, comments or concerns expressed and how these were considered (a detailed summary can be attached as an appendix).

  Please clarify whether Indigenous communities and/or heritage organizations were (or will be) contacted. Cultural heritage resources are often of importance to Indigenous communities. Indigenous communities may have knowledge that can contribute to the identification of cultural heritage resources, and we suggest that any engagement with Indigenous communities includes a discussion about known or potential cultural heritage resources that are of value to them.

  We also recommend that information about the community input program in Section 2 (Methodology) be expanded to explain what that entails and refer to Section 4, as appropriate.

- Section 5 (Results) – This section should be revised. At this time, it is not clear whether potential BHRs/CHLs have been identified with in the project area under Section 3, and whether Indigenous communities and municipal staff identified any potential resources. The tables do not align with MCM's guidance or best practice, and it is not clear how it supports the recommendations on Section 6. For example, it states that there is one potential BHR located next to a Canadian Heritage River, but no maps or description of that potential resource in relation to the project area was included.

Thank you for providing us with a copy of the Cultural Heritage Screening Memo. If you have any questions or require clarification, please do not hesitate to contact me.

Sincerely,

Joseph Harvey
Heritage Planner
Joseph.harvey@Ontario.ca

Copied to: Karla Barboza, Team Lead, Heritage Planning Unit, MCM
Jeff Paul, Project Manager, Stantec Consulting Ltd.
Jarrod Craven. Director of Public Works, Municipality of Thames Centre

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Should previously undocumented archaeological resources be discovered, they may be a new archaeological site and therefore subject to Section 48(1) of the *Ontario Heritage Act*. The proponent or person discovering the archaeological resources must cease alteration of the site immediately and engage a licensed consultant archaeologist to carry out an archaeological assessment, in compliance with Section 48(1) of the *Ontario Heritage Act*.

The *Funeral, Burial and Cremation Services Act, 2002, S.O. 2002, c.33* requires that any person discovering human remains must cease all activities immediately and notify the police or coroner. If the coroner does not suspect foul play in the disposition of the remains, in accordance with *Ontario Regulation 30/11* the coroner shall notify the Registrar, Ontario Ministry of Public and Business Service Delivery and Procurement, which administers provisions of that Act related to burial sites. In situations where human remains are associated with archaeological resources, the Ministry of Citizenship and Multiculturalism should also be notified (at archaeology@ontario.ca) to ensure that the archaeological site is not subject to unlicensed alterations which would be a contravention of the *Ontario Heritage Act*.

C.2 Indigenous Correspondence

Chippewas of the Thames First Nation

COTTFN – Notice of Study Commencement December 2023 - Submitted to NationsConnect December 2023, submitted by NationsConnect January, 2024

ThorndaleWWTP: **Municipality of Thames Centre: Thorndale WWTP Expansion**

Report generated on February 27, 2025 by David Kielstra



Details

Distributed: January 5, 2024

Project description

Expansion of the existing Thorndale Wastewater Treatment Plant

Information

Consulting organization	Primary contacts
Stantec	David Kielstra
Region	**Consultation stream**
Ontario	Water
Project type	**Consultation identifiers**
Sanitary & storm waste water	Project ID: ThorndaleWWTP
Project access requirements	**Requested response date**
Uses existing access	2023-01-30
Planned project start date	**Planned project end date**
2025-05-01	2026-11-01
Project area	**Area of new cut (disturbance)**
2.61 hectares	2.61 hectares

Location description

Thorndale - existing WWTP. Proposed expansion of the WWTP within the existing site or adjacent property.

Supplemental organizations

Municipality of Thames Centre (Contacts: Jarrod Craven)

Documentation

Project web page links

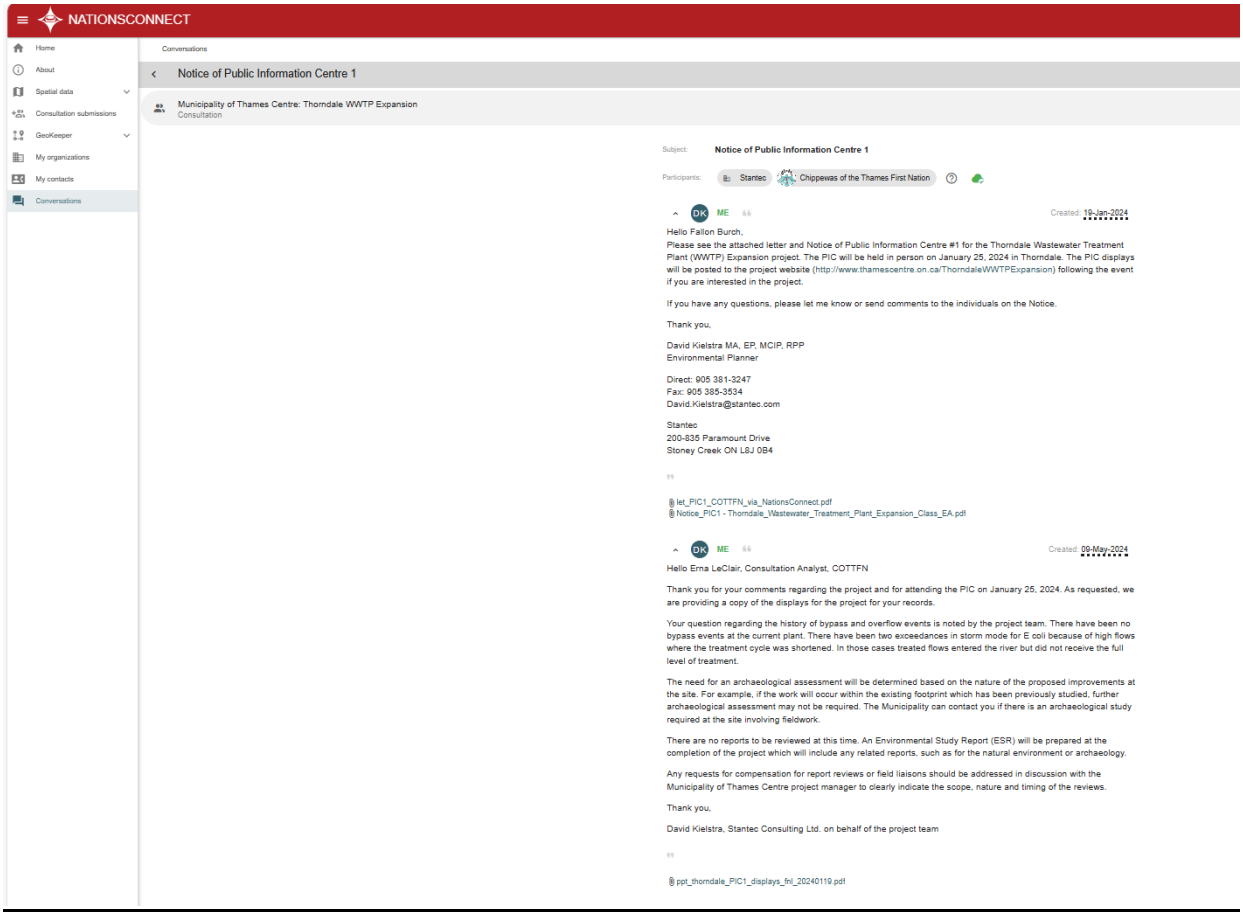
Thorndale WWTP: https://www.thamescentre.on.ca/ThorndaleWWTPExpansion

Spatial files	Attachments
Thorndale WWTP.kmz	Notice_Thorndale_Wastewater_Treatment_Plant_Expansion_Class_EA_dec2023.pdf

Attachments for Chippewas of the Thames First Nation

let_ind_comm_0251_nosc_COTTFN_nationsconnect.pdf

COTTFN – Notice of Public Information Centre 1 - January 2024



Deshkan Ziibiing
Chippewas of the Thames
First Nation Treaties, Lands
and Environment

320 Chippewa Road
Muncey, ON, N0L 1Y0
Tel: 519-289-5555
Fax: 519-289-2230
info@cottfn.com

Project Name:
Municipality of Thames Centre: Thorndale WWTP Expansion

FN Consultation ID:
ThorndaleWWTP

Consulting Org Contact:
David Kielstra

Consulting Organization:
Stantec

Date Received:
Friday, January 5, 2024

January 26, 2024

Dear: David Kielstra

We have received information concerning the Thorndale WWTP Expansion, dated January 5, 2024. The proposed project is located within the Huron Tract Treaty. It is also located within the Big Bear Creek Additions to Reserve (ATR) land selection area, as well as COTTFN Traditional Territory. Deshkan Ziibi (AKA the Thames River) holds a profound importance to COTTFN and is deeply woven into their ancestral connections and traditional way of life. Across generations, the Thames River has served as a source of sustenance, offering not only essential drinking water but also standing as a vital resource for fishing—an integral practice that shapes the core of Anishinaabe culture. Its' riverbanks bear witness to sacred ceremonies, and the flowing waters are intimately intertwined with the spiritual beliefs of the Anishinaabe. Beyond their practical and spiritual dimensions, Deshkan Ziibi has acted as conduits for cultural exchange and trade, playing a pivotal role in the historical interconnectedness of Indigenous communities. The health of the water in Deshkan Ziibi is paramount for COTTFN. Therefore, after gathering more information by attending the PIC on January 25 2024 and screening this project, we have identified it to be of moderate concern. As this time, COTTFN is requesting to be kept informed on any updates in regards to this project. When there are updates, please upload any new documents to NationsConnect. If significant updates occur, please reach out and request a meeting.

Some initial questions/comments:
- The capacity of this current plant is at 45%. What is the history of Bypass and Overflow events of this current plant?
- As a reminder, if there is an Archaeology Assessment conducted for this expansion, we require notification and the opportunity to actively participate by sending First Nation Field Liaisons on behalf of this First Nation

We look forward to continuing this open line of communication. To implement meaningful consultation, COTTFN has developed its own protocols - a document and a process that will guide positive working relationships. We would be happy to meet with you to review COTTFN's Consultation Protocols. As per ‘Appendix C’ of the Wiindmaagewin, we will be sending an invoice based on our time to review the documentation. The invoice will come from COTTFN's Finance Department. Please do not hesitate to contact me if you need further clarification of this letter.

Sincerely,

_____
Original Signed
Erna Leclair
Consultation Analyst

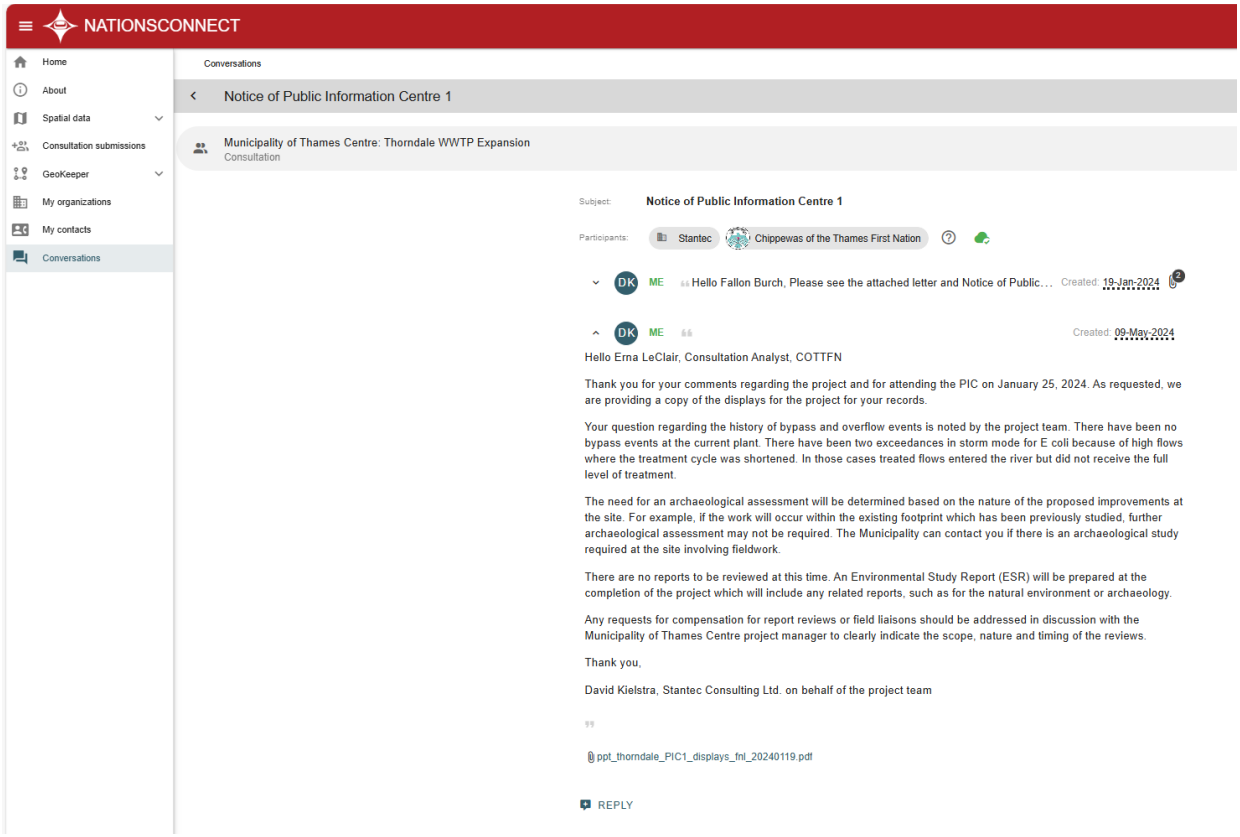
Chippewa of the Thames First Nation
320 Chippewa Road, Muncey, ON, N0L 1Y0
(519) 289-5555
emleclair@cottfn.com OR consultation@cottfn.com

From:	Chippewas of the Thames First Nation
To:	fburch@cottfn.com; jmills@cottfn.com; emleclair@cottfn.com; Kielstra, David; jcraven@thamescentre.on.ca
Subject:	Decision regarding consultation: ThorndaleWWTP - Municipality of Thames Centre: Thorndale WWTP Expansion
Date:	Monday, January 29, 2024 10:06:06 AM
Attachments:	consultation-response-34373-thorndalewwtp-20240129-0955.pdf wiindmaagewin-consultation-protocol-120623-approved.pdf

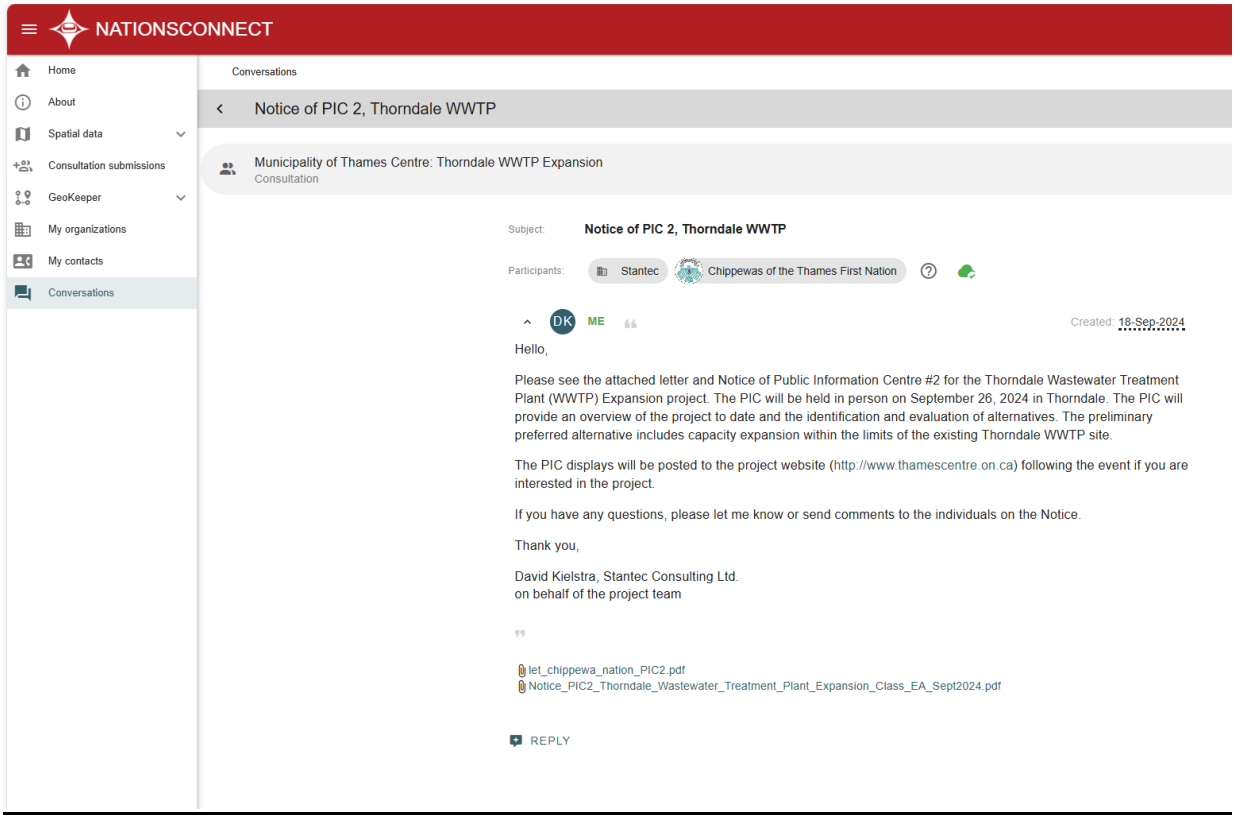
You don't often get email from no-reply-cottfn@knowledgekeeper.ca. Learn why this is important

Please see attached PDF response letter. As per ‘Appendix C’ of the Wiindmaagewin Consultation Protocol, we will be sending an invoice based on our time to engage in the consultation process. The invoice will be sent from COTTFN's Finance Department.

COTTFN – Notice of Public Information Centre 1 Response – May 2024



COTTFN – Notice of Public Information Centre 2 – September 2024



<u>Caldwell First Nation</u>

Notice of Study Commencement and Notice of Public Information Centre 1 letters and notices sent by email, December 2023 and January 2024

ThordaleWWTP: **Thorndale Wastewater Treatment Plant Caldwell First Nation**

Report generated on February 27, 2025 by David Kielstra



Details

Distributed: May 9, 2024

Project description

Municipal Class EA for a proposed expansion of the Thorndale WWTP, anticipated on the same site

Information

Consulting organization	Primary contacts
Stantec	David Kielstra
Region	**Consultation stream**
Ontario	Water
Project type	**Consultation identifiers**
Sanitary & storm waste water	Project ID: ThordaleWWTP
Project access requirements	**Requested response date**
Uses existing access	2024-05-17
Planned project start date	**Planned project end date**
2025-01-01	2025-12-01
Project area	**Area of new cut (disturbance)**
0 hectares	0 hectares

Location description

Existing WWTP on Ideal Drive in Thorndale, Municipality of Thames Centre

Supplemental organizations

Municipality of Thames Centre (Contacts: Jarrod Craven)

Documentation

Project web page links

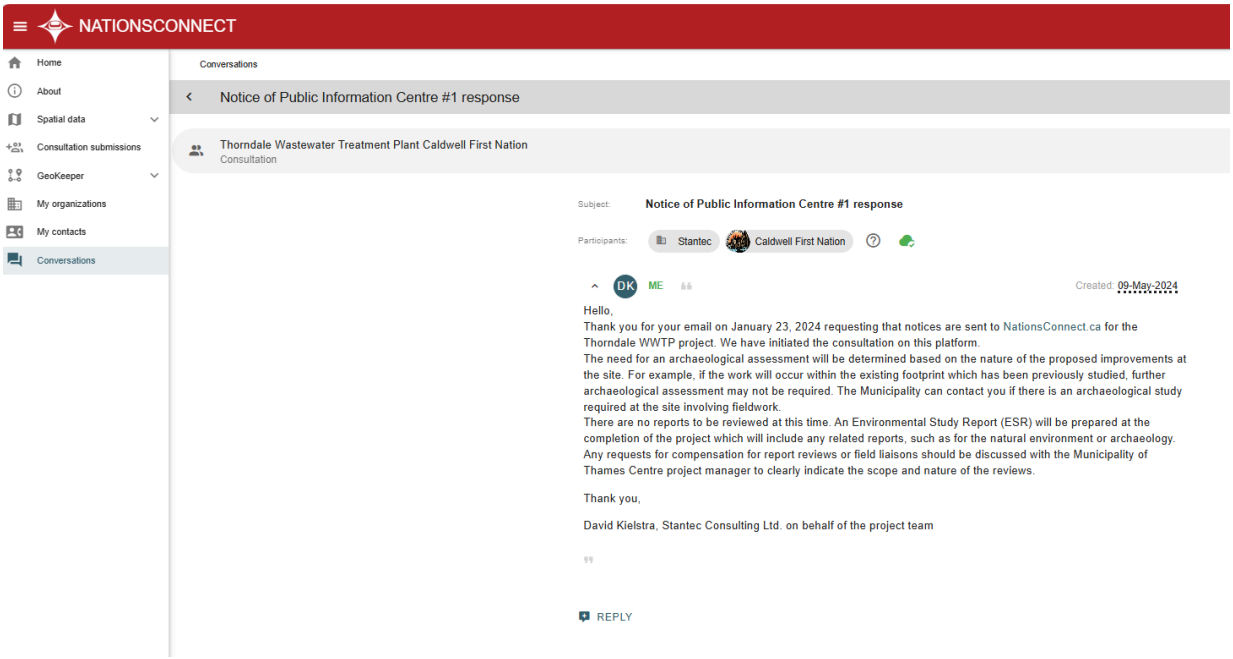
PIC 1 link: https://www.thamescentre.on.ca/articles/notice-public-information-centre-1-thorndale-wastewater-treatment-plant-expansion

Spatial files	Attachments
Thorndale WWTP.kmz	ad_NOSC - Thorndale_Wastewater_Treatment_Plant_Expansion_Class_EA_dec2023_fnl_AODA.pdf

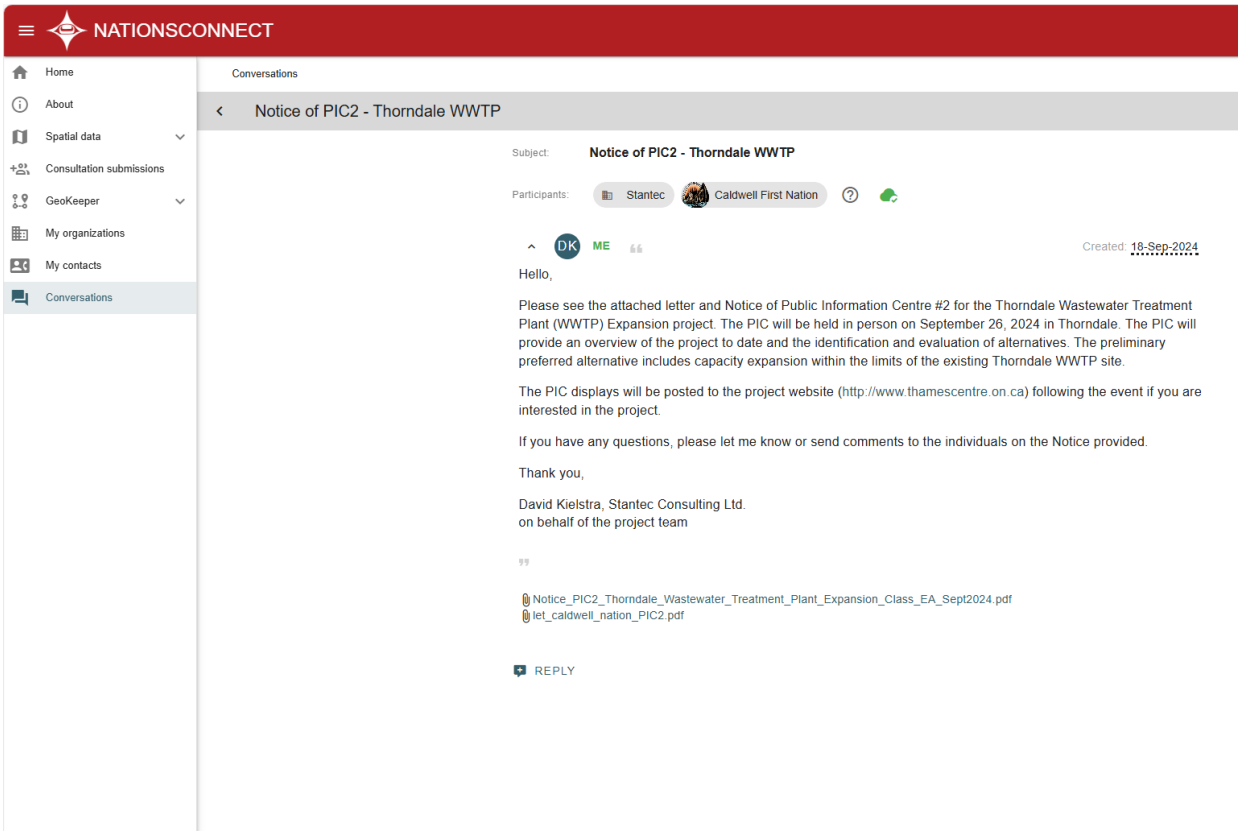
Attachments for Caldwell First Nation

let_ind_comm_0251_nosc_caldwell.pdf

Caldwell First Nation – Notice of Study Commencement/Public Information Centre 1 Response (requesting to consult through NationsConnect.ca) – May 2024



Caldwell First Nation – Notice of Public Information Centre 2 – September 2024



From:	Jenna Maidment
To:	Kielstra, David
Cc:	Zack Hamm; Paul, Jeff; jcraven@thamescentre.on.ca
Subject:	Caldwell First Nation Environment and Consultation Department Interest RE: Notice of Study Commencement - Thorndale Wastewater Treatment Plant (WWTP) Expansion, Schedule C Municipal Class EA, Municipality of Thames Centre
Date:	Friday, January 26, 2024 3:07:19 PM
Attachments:	Technical Review Agreement General Template May 2023.docx Fieldwork Participation Agreement Template May 2023 (3).docx

You don't often get email from landguardian@caldwellfirstnation.ca. Learn why this is important

Boozhoo/Hello David,

I have recently received a forwarded email in regards to the Notice of Study Commencement for the Thorndale WWTP Expansion project sent by yourself on behalf of the Municipality of Thames Centre.

Due to the high volume of projects and correspondence our department receives, we request that you submit your engagement requests to our consultation portal, consultwithcaldwell.ca, if you have not already done so. This portal also contains our Consultation Protocols, which will help you understand our process.

Caldwell First Nation Environment and Consultation Department will be interested in participating in this Schedule C Municipal Class Environmental Assessment. To begin this process it is necessary to sign the attached agreements for any associated fieldwork, meetings, phone calls and for the review of project materials. Please see the attached agreements, adjust them with your project information, and send them back for our approval and to begin signing. Once that is complete we will be able to move forward with engagement on your project.

Let me know if you have any questions.

Miigwech,

Jenna Maidment *(she/her)*

Land Guardian *- Environment and Consultation Coordinator*

Environment and Consultation Department (ECD)

Caldwell First Nation

14 Orange Street

Leamington | ON | N8H 1P5

Fieldwork Participation Agreement

between

Caldwell First Nation ('CFN') and

PROPONENT NAME (or Consultant)

Section 1: Context

1) The "Proponent" is conducting (Nature of work described i.e.. A Master Plan Feasibility Study, as part of its proposed expansion of ……("The Project").

2) The Proponent is required to undertake a (Describe work i.e. Stage 2 archeological assessment) in connection with the Project which is located within the Treaty and traditional territory of the Caldwell First Nation (CFN) and has engaged (the Consultant) to complete the same.

3) CFN, as part of the Anishinaabeg Nation and the Council of the Three Fires has maintained its own laws and government, distinctive language, culture and spirituality within their territory that pre-dates the establishment of Canada;

4) CFN has inherent, Aboriginal and treaty rights; they are connected to the land and committed to the conservation of their resources so future generations can share the same connections;

This agreement's primary role is to ensure CFN receives adequate capacity resources for their representatives to participate in fieldwork associated with the Project,so as to build internal capacity and to provide meaningful input on the Project.

5) Whereas the Proponent (and Consultant) acknowledge(s) the value of engaging CFN and its representatives, including Field Liaison Representatives (FLRs) and their supervisors, to participate in and monitor Project-related assessments. Additionally, the FLRs' primary mandate is to secure the consideration of CFN's views and goals while enabling CFN to meaningfully engage with the Project through field work, comment and discussion.
6) The Proponent agrees to supply the CFN Environment and Consultation Department (ECD) with any available supplementary materials necessary to participate in the fieldwork, such as prior reports, data, and mapping.
7) Any archaeological work associated with any project in CFN's Treaty or Traditional Territory must adhere to the *Ontario Heritage Act*, and specifically the Province of Ontario's *Standards and Guidelines for Consultant Archaeologists* (2011), *Terms and*

Conditions for Archaeological Licences and *Engaging Aboriginal Communities in Archaeology* (2011) (hereinafter, the 2011 Standards). As other guidelines or bulletins from the Province appear, CFN may insist on meeting their standards.

Section 2 – Legal Status

8) This Agreement does not abrogate, derogate or otherwise restrict any CFN rights.
9) Nothing in this Agreement may be construed to limit any consultation, engagement, or accommodation obligations owed to CFN by the Crown or any Proponent.
10) CFN retains the right to challenge by way of judicial review or any legal or other process, any Activity within their Traditional Territory.

Section 3 – Proponent Costs

11) The Proponent, whether directly or through its designates, will compensate CFN at a rate of $165/h in capacity funding for each FLR for every task in relation to the Project, including but not limited to:
    a. Time that an FLR spends in the field while monitoring an ongoing assessment or Project-related construction activities that are predetermined;
    b. Time that an FLR spends working alongside the Proponent's consultants on identifying, analysing, processing, and interpreting artifacts;
    c. Time that an FLR spends traveling at the beginning and end of each fieldwork day;
    d. Time that an FLR spends recording field notes during the regular fieldwork day;
    e. Time that an FLR spends on standby as a result of instructions, action, or inaction on the part of the Proponent or their consultants; and
    f. Time that an FLR spends completing any training deemed necessary by the Proponent or their designated representatives.
12) The Proponent will reimburse CFN for mileage and meals according to the current Treasury Board of Canada rates. Mileage amounts are determined from the FLRs' home address as a point of departure.
13) The Proponent will compensate CFN per FLR for a minimum of 4 hours in addition to actual travel time, mileage, and meal allowance rates on any day during which the Proponent or their designates cancels fieldwork while FLRs are travelling to the work site or following the cancelation of fieldwork while on a work site. On the Monday of each week, the Proponent must provide notice to CFN's Environment and Consultation Department (ECD) on the previous business day or compensate CFN for 4 hours per FLR.
14) The Proponent will compensate CFN per FLR at the standard rate for an 8-hour work day in the event that a statutory holiday occurs on a day with scheduled fieldwork on the previous business day and on the following business day. In the event that the Proponent chooses to deploy field staff during a statutory holiday for project-related activities for which CFN deems FLR presence necessary, CFN will charge 1.5x the standard FLR rate for that fieldwork day.

15) If both Parties deem overnight accommodations necessary, the Proponent agrees to compensate CFN for the expense of any FLRs who are participating in fieldwork in excess of 90 minutes travel time from their home address. CFN requires an additional Incidental Allowance during overnight schedules, outlined in Schedule B.
16) The Proponent agrees that, for Projects with fieldwork exceeding 3 standard days, CFN may opt to conduct a supervisor site visit up to once per week, billed at $200/h for a minimum of 4 hours, accompanied by the same compensation for meals and mileage that apply to FLRs in this Agreement.

Section 4 – Supplementary

17) The Parties together agree that the Project takes place within CFN's Treaty or Traditional Territory and agree that the Proponent is responsible for supplying CFN with capacity funding during the Project for CFN's participation in Project-related fieldwork.
18) The Proponent agrees that one FLR will be on each Project-related worksite while activities are taking place within CFN's Treaty or Traditional Territory, as outlined in Schedule A.
19) In scenarios where the Proponent or their consultant fields 10 or more individual staff on a single worksite, the Proponent agrees to provide CFN with capacity funding for a total of 2 FLRs. The Proponent acknowledges that in cases where Project-related activities are expansive, more FLRs may be required at the mutual agreement of both Parties.
20) FLR's shall record, in reasonable detail, their activities and time worked and shall submit invoices for reimbursable expenses and time sheets within 30 days of the fieldwork date.
21) The Parties acknowledge that CFN's ECD staff, including FLRs, will collaborate to record and verify field staff hours, and, whenever possible, inform the Proponent's consultants as to the recorded hours of CFN's FLRs at the end of each fieldwork day. When a conflict occurs in recorded hours, the ECD and the Proponent or their consultants will mutually agree on the appropriate number.
22) In the scenario that Project-related activities encounter archaeological resources, work must immediately cease wherever Project-related activities may disturb said resources. In tandem, the Proponent must inform CFN's ECD, and thereafter the Parties must collaborate to mitigate and minimize any impacts to the resources, maintaining respectful treatment of archaeological resources in a manner deemed appropriate by CFN.
23) In circumstances where CFN's Traditional Knowledge, intellectual property or proprietary information is required by the project, the parties shall meet to discuss the nature of same and whether it is culturally sensitive. In this instance CFN shall be solely responsible for determining whether the culturally sensitive information may be shared and if so the nature and extent of disclosure. In this instance CFN and the Consultant

may meet to further discuss and determine measures for the protection of this Intellectual Property as appropriate.

24) The Parties agree that any found human remains of Indigenous origin should be left in situ and be accompanied by appropriate mitigation and protection measures. In the case that Project-related activities encounter human remains of Indigenous origin at any juncture, the following steps must be followed:
    a. Cease all Project-related activities (e.g., excavation) that could disrupt the archaeological site hosting the human remains, as well as secure the area to protect the site and prevent any trespassing or public access;
    b. Supplementary to the *Funeral, Burial, and Cremation Services Act, 2002,* SO 2002, C 33, the Proponent must contact CFN's ECD immediately;
    c. At their own discretion, CFN will conduct any cultural activities on the site that it deems necessary, such as ceremonies;
    d. The Proponent and any parties, including Crown authorities, involved in the Project must consult CFN regarding every step of the investigation and any decisions pertaining to the human remains in question.

Section 5 – FLR Coordination

25) Each Party consents that the FLRs are bound to follow the Proponent or their consultants' reasonable instructions with regards to safety practices. FLRs will also attend in-field safety meetings and briefings.
26) Contacts for Project-related activities:
    a. Project Manager(s):
        i. Name, title
        ii. Phone
        iii. Email
    b. Fieldwork Manager(s):
        i. Name, title
        ii. Phone
        iii. Email
27) The contact person for the Proponent's consultant(s) is responsible for coordinating site meeting locations and times to both CFN's ECD staff and the FLR they designate to the Project. Contact information for the ECD is as follows:
    a. Department Administrator
        i. Michael McMaster
        ii. 226-936-1081
        iii. ecd.assistant@caldwellfirstnation.ca
    b. Department Manager
        i. Zack Hamm
        ii. 226-936-2940

iii. ecd.manager@caldwellfirstnation.ca

Section 6 – FLR Status

28) At CFN's discretion, FLRs will receive appropriate orientation and training for the fieldwork associated with the Project and display aptitude in bridging Indigenous and Western perspectives.
29) Both Parties agree that CFN staff, including FLRs, are not contractors, sub-contractors, or employees of the Proponent or their designates. Additionally, FLRs are responsible for their own personal protective equipment (PPE) including safety glasses, hardhats, gloves, and safety boots, unless unique PPE is otherwise specified by the Proponent, at which time the Proponent will reimburse CFN for the cost of said equipment.
30) All CFN FLRs take their directions from CFN's ECD staff.
31) CFN will maintain a minimum of the following insurance and limits of liability: Workers' Compensation – Statutory; Automobile Liability, covering all automobiles owned, rented, hired, or used by CFN or on behalf of CFN at $1,000,000 each accident; and Commercial General Liability, equivalent to or broader than ISO from CF 00 01 12 04 at $1,000,000 per occurrence/$2,000,000 aggregate. CFN pays Workplace Safety and Insurance Board (WSIB) contributions in respect of the FLRs.
32) CFN will provide evidence of the above insurance to the Proponent at their request.
33) CFN FLRs will perform their work safely, competently, and in compliance with all applicable laws, regulations, and guidelines.
34) CFN's expectation is that the Proponent and all of their designates comply with the *Occupational health and Safety Act*, R.S.O 1990, C. 01, the Ontario *Human Rights Code*, R.S.O. 1990, c. H. 19, as well as maintain harassment-free and safe work environment for all those on and offsite during Project-related activities.

Section 7 – Method of Payment

35) The Proponent must pay the rates associated with capacity funding to CFN by bank transfer or cheque within 30 days following CFN's submission of an invoice to the Proponent. CFN may submit digital invoices using the following information:

Email: EMAIL ADDRESS

Attention: NAME

PROPONENT

PROPONENT PHONE NUMBER

FULL ADDRESS OF PROPONENT

36) The Proponent should make any payments to CFN using the following information:

Email: jfa@caldwellfirstnation.ca
Attention: Monica Dobetsberger
14 Orange Street
Leamington, Ontario
N8H 1P5

37) Should the invoice be unpaid after 30 days of CFN's submission via email, CFN will charge 5% compounded interest monthly on any outstanding invoice. 180 days following submission of an invoice, CFN will charge 20% compounded interest monthly on any outstanding invoice.

Section 7 – Disclaimer

38) Capacity funding paid through this Agreement will only be used for capacity building purposes and will not be paid to any individual for inappropriate personal gain or any other activity that may fall under Canadian anticorruption law.
39) CFN and the Proponent may execute the current Agreement in counterparts using physical or electronic signature.
40) This Agreement legally binds the Proponent and CFN.
41) This Agreement goes into effect as of the date of its execution. If Project-related activities exceed 365 days following the date of the Agreement's execution, the Parties must conclude a new agreement to continue CFN's participation in the Project.

[The remainder of the current page is purposefully left empty]

Signed this DATE day of MONTH, 2022.

_____

Authorized Signatory on behalf of Caldwell First Nation

Allen Deleary
Chief Administrative Officer
Caldwell First Nation

_____

Authorized Signatory on behalf of Proponent

NAME OF SIGNATORY
JOB TITLE
NAME OF PROPONENT

_____

Witness

Zack Hamm
Consultation Coordinator
Environment & Consultation
Caldwell First Nation

_____

Witness

NAME
JOB TITLE
DEPARTMENT
NAME OF PROPONENT

Schedule A



Figure 1: Approximate outline of CFN Traditional Territory as of 2022, encompassing Treaty 2, in addition to Longpoint beyond Catfish Creek, and Pelee Island

Schedule B

Meal Allowance	Rate	Ineligibility (cannot claim expense when)
Breakfast:	$21.90	Leave after 8am, return before 7:30am
Lunch:	$22.15	Leave after 1:15pm; return before 12:15pm
Dinner:	$54.50	Leave after 7pm; return before 6:30pm
Incidentals:	$17.50	Not staying overnight
Nighttime	$54.40	
Mileage: $0.575		

Based on Treasury Board of Canada rates (2022), updated on a yearly basis

Technical Review Agreement

between

Caldwell First Nation ('CFN') and

PROPONENT NAME

Section 1: Context

1) This agreement's primary role is to ensure Caldwell First Nation (hereafter, 'CFN') receives adequate capacity resources for participating in the technical review of documents, materials, and coordination with project staff associated with [PROJECT NAME] (hereafter, 'the Project') located at [ADDRESS] in [TOWNSHIP/CITY], Ontario, owned by [PROPONENT NAME], (hereafter, 'the Proponent').
2) CFN's representatives in the Environment and Consultation Department (hereafter, 'ECD') will execute meaningful and timely engagement with the Project at the ECD's discretion.
3) The Proponent or their designates must supply all materials to CFN's ECD for comment and review through CFN's Consultation Tool (consultwithcaldwell.ca) and email, in a timely manner and before submitting such drafts to other authorities. This Agreement constitutes the Proponent's consent to supply reasonable time in the amount of at least 30 days for the ECD to adequately review and comment upon documents or projects.
4) The Proponent agrees to supply the ECD with any available supplementary materials necessary to review of the project, as well as a full Indigenous Engagement report alongside the project draft report itself. The Indigenous Engagement Report must fully account for CFN's involvement in the project.
5) The Proponent agrees that they will conduct no new fieldwork until such time that the ECD has completed its review and offered comments on the current stage of the project.
6) CFN will ensure that its representatives have an adequate level of education for conducting reviews and experience in both Indigenous and Western perspectives pertaining to the work at hand, as well as bridging gaps between them.

Section 2 – Legal Status

7) This Agreement does not abrogate, derogate or otherwise restrict any CFN rights.
8) Nothing in this Agreement may be construed to limit any consultation, engagement, or accommodation obligations owed to CFN by the Crown or any Proponent.
9) CFN retains the right to challenge by way of judicial review or any legal or other process, any Activity within their Traditional Territory.

Section 3 – Proponent Costs

10) The Proponent, whether directly or through its designates, will compensate CFN at a rate of $200/h in capacity funding for every task in relation to reviewing the Project, including but not limited to examining reports, materials, developing summaries, taking phone calls and meetings, etc. See Schedule B for a regular break-down of technical review costs.
11) If CFN, whether initially or later in the process of technical review, determines that its existing staff in the ECD cannot adequately complete a review of the Project in question, the Proponent must compensate CFN for incurred costs in retaining an external expert. The selection of the expert will exclusively be at the discretion of CFN and its ECD staff, and that expert's work will only begin following both Parties consent to a budget estimate from the expert/consultant.

Section 4 – Supplementary

12) The Proponent must make every effort to avoid and protect indigenous cultural heritage, including archaeological sites, artifacts, features, and cultural landscapes.

Section 5 – Method of Payment

13) The Proponent must pay the rates associated with capacity funding to CFN by bank transfer or cheque within 30 days following CFN's submission of an invoice to the Proponent. CFN may submit digital invoices using the following information:

    Email: EMAIL ADDRESS

    Attention: NAME

    PROPONENT

    PROPONENT PHONE NUMBER

    FULL ADDRESS OF PROPONENT

14) The Proponent should make any payments to CFN using the following information:
    Email: jfa@caldwellfirstnation.ca
    Attention: Monica Dobetsberger
    14 Orange Street
    Leamington, Ontario
    N8H 1P5
15) 30 standard days after CFN's submission of an invoice, CFN will charge 5% compounded interest monthly on any outstanding invoice. 180 days following submission of an invoice, CFN will charge 20% compounded interest monthly on any outstanding invoice.

Section 6 – Disclaimer

16) Capacity funding paid through this Agreement will only be used for capacity building purposes and will not be paid to any individual for inappropriate personal gain or any other activity that may fall under Canadian anticorruption law.
17) CFN and the Proponent may execute the current Agreement in counterparts using physical or electronic signature.
18) This Agreement legally binds the Proponent and CFN.
19) This Agreement goes into effect as of the date of its execution. If Project-related activities exceed 365 days following the date of the Agreement's execution, the Parties must conclude a new agreement to continue CFN's participation in the Project.

Signed this DATE day of MONTH, 2022.

_____

Authorized Signatory on behalf of Caldwell First Nation

Allen Deleary
Chief Administrative Officer
Caldwell First Nation

_____

Authorized Signatory on behalf of Proponent

NAME OF SIGNATORY
JOB TITLE
NAME OF PROPONENT

_____

Witness

Zack Hamm
Department Manager
Environment & Consultation
Caldwell First Nation

_____

Witness

NAME
JOB TITLE
DEPARTMENT
NAME OF PROPONENT

Schedule A



Figure 1: Approximate outline of CFN Traditional Territory as of 2022, encompassing Treaty 2, in addition to Longpoint beyond Catfish Creek, and Pelee Island

Schedule B

Technical Review Cost Example: Environment document review

(Reference Only)

Activity	Number of Hours	Rate	Contingency (20%)	Total
Technical Review of Environmental Screening Report	10	$2000	$400	$2400
Meetings/Phone calls	2	$400	$80	$480

From: DOCA
To: Kielstra, David
Cc: Mark LaForme
Subject: RE: Notice of Public Information Centre 2 - Thorndale Wastewater Treatment Plant (WWTP) Expansion, Schedule C Municipal Class EA, Municipality of Thames Centre
Date: Thursday, September 19, 2024 2:41:12 PM
Attachments: image001.png

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Thank you, David.

We appreciate your obliging our request and understanding during this period of growth for Mississauga's of the Credit First Nations Department of Consultation and Accommodation.

Miigwech, have a good afternoon.

Heather Jamieson *[She/Her]*
Administrative Support
Department of Consultation and Accommodation [DOCA]
Mississaugas of the Credit First Nation [MCFN]
Phone: (905) 768–4260
Location: 4065 Highway 6, Hagersville ON. N0A 1H0
Mail: 2789 Mississauga Rd. Hagersville ON. N0A 1H0
Web: https://mncfn.ca/doca-2/
Visit Link Below:
Mississaugas of the Credit First Nations Treaty Territories Map

---

From: Kielstra, David <David.Kielstra@stantec.com>
Sent: Wednesday, September 18, 2024 4:18 PM
To: DOCA <DOCA@mncfn.ca>
Cc: Mark LaForme <Mark.LaForme@mncfn.ca>
Subject: RE: Notice of Public Information Centre 2 - Thorndale Wastewater Treatment Plant (WWTP) Expansion, Schedule C Municipal Class EA, Municipality of Thames Centre

Hello,

Thank you for the information and the new contact information. We will update our mailing list accordingly.

Regards.

David Kielstra MA, EP, MCIP, RPP
Environmental Planner

Direct: 905 381-3247
Fax: 905 385-3534
David.Kielstra@stantec.com

Stantec
200-835 Paramount Drive
Stoney Creek ON L8J 0B4

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Please consider the environment before printing this email.

From: DOCA <DOCA@mncfn.ca>
Sent: Wednesday, September 18, 2024 3:37 PM
To: Kielstra, David <David.Kielstra@stantec.com>
Cc: Mark LaForme <Mark.LaForme@mncfn.ca>
Subject: RE: Notice of Public Information Centre 2 - Thorndale Wastewater Treatment Plant (WWTP) Expansion, Schedule C Municipal Class EA, Municipality of Thames Centre

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Good afternoon, David.

Your inquiry has reached the intended recipients regarding the Thorndale Wastewater Treatment Plant (WWTP) Expansion project. As administration here in the Department of Consultation and Accommodation, I will forward the inquiry to our Consultation Staff.

MCFN Communications has forward your message to us, and it will not be necessary to include communciations@mmncfn.ca in emails moving forward. I kindly ask that you replace the contact information when you have a spare moment, as our DOCA.Admin@ address has been discontinued and replaced with the account I am using to respond to you now (DOCA@mncfn.ca)

Miigwech/ Thank you, and have a good afternoon

Heather Jamieson *[She/Her]*

Administrative Support

Department of Consultation and Accommodation [DOCA]
Mississaugas of the Credit First Nation [MCFN]
Phone: (905) 768–4260
Location: 4065 Highway 6, Hagersville ON. N0A 1H0
Mail: 2789 Mississauga Rd. Hagersville ON. N0A 1H0
Web: https://mncfn.ca/doca-2/
Visit Link Below:
Mississaugas of the Credit First Nations Treaty Territories Map

From: Jarrod Craven
To: Paul, Jeff; Kielstra, David
Cc: Kevin Willson; Tanner Stanton
Subject: FW: Munsee-Delaware Nation Contact Correction
Date: Monday, September 23, 2024 12:04:19 PM
Attachments: image001.jpg
image002.png
image003.png
image004.png
image005.png
image006.png
image007.png

Hi Jeff/David,

I just received the following update from **Munsee-Delaware Nation** and replied back advised that we would update our files accordingly.

Thanks,

Jarrod Craven
Director of Public Works
Municipality of Thames Centre |
jcraven@thamescentre.on.ca
4305 Hamilton Road, | Dorchester, ON, N0L 1G3
Tel: 519.268.7334 Ext. 245 | Fax: 519.268.3928

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From: Receptionist <reception@munsee.ca>
Sent: Monday, September 23, 2024 11:58 AM
To: Jarrod Craven <jcraven@thamescentre.on.ca>
Cc: Rick Peters <rick@munsee.ca>; Chief Roger Thomas <chief@munsee.ca>
Subject: Munsee-Delaware Nation Contact Correction

CAUTION: This email originated from outside of the Thames Centre email system. Please use caution when clicking links or opening attachments unless you recognize the sender and know the content is safe.

Good morning,

We have received your letter about Project/File: 165630251 and am informing you of the update of the Chief and the Nation Manager contact information:

- Chief Roger Thomas
  chief@munsee.ca
- Rick Peters, Nation Manager
  rick@munsee.ca

From:	Kielstra, David
To:	"lrosales@aamjiwnaang.ca"
Cc:	Paul, Jeff; "Jarrod Craven"; "jnahmabin@aamjiwnaang.ca"
Subject:	RE: Notice of Public Information Centre 2 - Thorndale Wastewater Treatment Plant (WWTP) Expansion, Schedule C Municipal Class EA, Municipality of Thames Centre
Date:	Wednesday, September 18, 2024 4:11:00 PM
Attachments:	let_aamjiwnaang_nation_PIC2.pdf Notice_PIC2_Thorndale_Wastewater_Treatment_Plant_Expansion_Class_EA_Sept2024.pdf

Hello Lynn,

I am forwarding this email as we received an automatic reply that Cathleen O'brien is no longer with your community administration and Chief Plain is now the Anishinabek Nation Deputy Grand Chief. This is a great honour for him! We will update our mailing list accordingly. Should you have any questions regarding this letter or notice regarding this project, please let us know.

Thank you,

David Kielstra MA, EP, MCIP, RPP
Environmental Planner

Direct: 905 381-3247
Fax: 905 385-3534
David.Kielstra@stantec.com

Stantec
200-835 Paramount Drive
Stoney Creek ON L8J 0B4

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Please consider the environment before printing this email.

From: Kielstra, David
Sent: Wednesday, September 18, 2024 3:01 PM
To: 'chief.plain@aamjiwnaang.ca' <chief.plain@aamjiwnaang.ca>
Cc: Paul, Jeff <jeff.paul@stantec.com>; 'Jarrod Craven' <JCraven@thamescentre.on.ca>; 'cobrien@aamjiwnaang.ca' <cobrien@aamjiwnaang.ca>
Subject: RE: Notice of Public Information Centre 2 - Thorndale Wastewater Treatment Plant (WWTP) Expansion, Schedule C Municipal Class EA, Municipality of Thames Centre

Hello Chief Plain and staff,

Please see the attached letter and Notice of Public Information Centre #2 for the Thorndale Wastewater Treatment Plant (WWTP) Expansion project. The PIC will be held in person on September 26, 2024 in Thorndale. The PIC displays will be posted to the project website (http://www.thamescentre.on.ca) following the event if you are interested in the project.

If you have any questions, please let me know or send comments to the individuals on the Notice.

Thank you,

David Kielstra MA, EP, MCIP, RPP
Environmental Planner

Direct: 905 381-3247
Fax: 905 385-3534
David.Kielstra@stantec.com

Stantec
200-835 Paramount Drive
Stoney Creek ON L8J 0B4

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From: Kielstra, David
Sent: Friday, January 19, 2024 4:03 PM
To: chief.plain@aamjiwnaang.ca
Cc: Paul, Jeff <jeff.paul@stantec.com>; Jarrod Craven <JCraven@thamescentre.on.ca>; cobrien@aamjiwnaang.ca
Subject: Notice of Public Information Centre 1 - Thorndale Wastewater Treatment Plant (WWTP) Expansion, Schedule C Municipal Class EA, Municipality of Thames Centre

Hello Chief Plain and staff,

Please see the attached letter and Notice of Public Information Centre #1 for the Thorndale Wastewater Treatment Plant (WWTP) Expansion project. The PIC will be held in person on January 25, 2024 in Thorndale. The PIC displays will be posted to the project website (http://www.thamescentre.on.ca/ThorndaleWWTPExpansion) following the event if you are interested in the project.

If you have any questions, please let me know or send comments to the individuals on the Notice.

Thank you,

David Kielstra MA, EP, MCIP, RPP
Environmental Planner

Direct: 905 381-3247
Fax: 905 385-3534
David.Kielstra@stantec.com

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C.3 Public and Groups Correspondence

From: Kielstra, David
Sent: Tuesday, January 23, 2024 3:10 PM
To:
Subject: FW: Notice of Public Information Centre 1 - Thorndale Wastewater Treatment Plant (WWTP) Expansion, Schedule C Municipal Class EA, Municipality of Thames Centre
Attachments: Notice_PIC1 - Thorndale_Wastewater_Treatment_Plant_Expansion_Class_EA.pdf

Hello Mr.

The email below was sent for an upcoming Public Information Centre on Thursday evening. I am attempting to send the message a second time since the original was undeliverable.

Thank you,

David Kielstra MA, EP, MCIP, RPP
Environmental Planner

Direct: 905 381-3247
Fax: 905 385-3534
David.Kielstra@stantec.com

Stantec
200-835 Paramount Drive
Stoney Creek ON L8J 0B4



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From: Kielstra, David
Sent: Friday, January 19, 2024 4:41 PM
To:
Cc: Jarrod Craven ; Paul, Jeff
Subject: Notice of Public Information Centre 1 - Thorndale Wastewater Treatment Plant (WWTP) Expansion, Schedule C Municipal Class EA, Municipality of Thames Centre

Good afternoon Mr.

Stantec Consulting Ltd. has been retained by the Municipality of Thames Centre to undertake a Municipal Class Environmental Assessment for the Thorndale Wastewater Treatment Plant (WWTP) Expansion project. As a nearby resident of the plant on Ideal Drive, the project team is reaching out to you to introduce the project, and let you know about an upcoming Public Information Centre.

Please see the attached Notice of Public Information Centre 1, which include as a study area map and a description of the project. The purpose of the project is to consider how best to expand the capacity of the WWTP to address sanitary servicing needs of the community and local growth. PIC 1 is the first of two planned for the project.

The in-person Public Information Centre (PIC #1) is being held using a drop-in format, with members of the project team available to discuss the project and respond to any questions you may have.

Date: Thursday, January 25, 2024

Location: Thorndale Lions Community Centre, 265 Upper Queen Street, Thorndale, ON
Time: 5:00 pm - 7:00 pm

Presentation materials will also be available on the Municipality's website following the PIC at: www.thamescentre.on.ca/ThorndaleWWTPExpansion. Comments can be provided at the PIC or provided by **February 2, 2024**.

Should you have any questions, please let me know or send comments to the individuals identified on the Notice.

Thank you,

David Kielstra MA, EP, MCIP, RPP
Environmental Planner

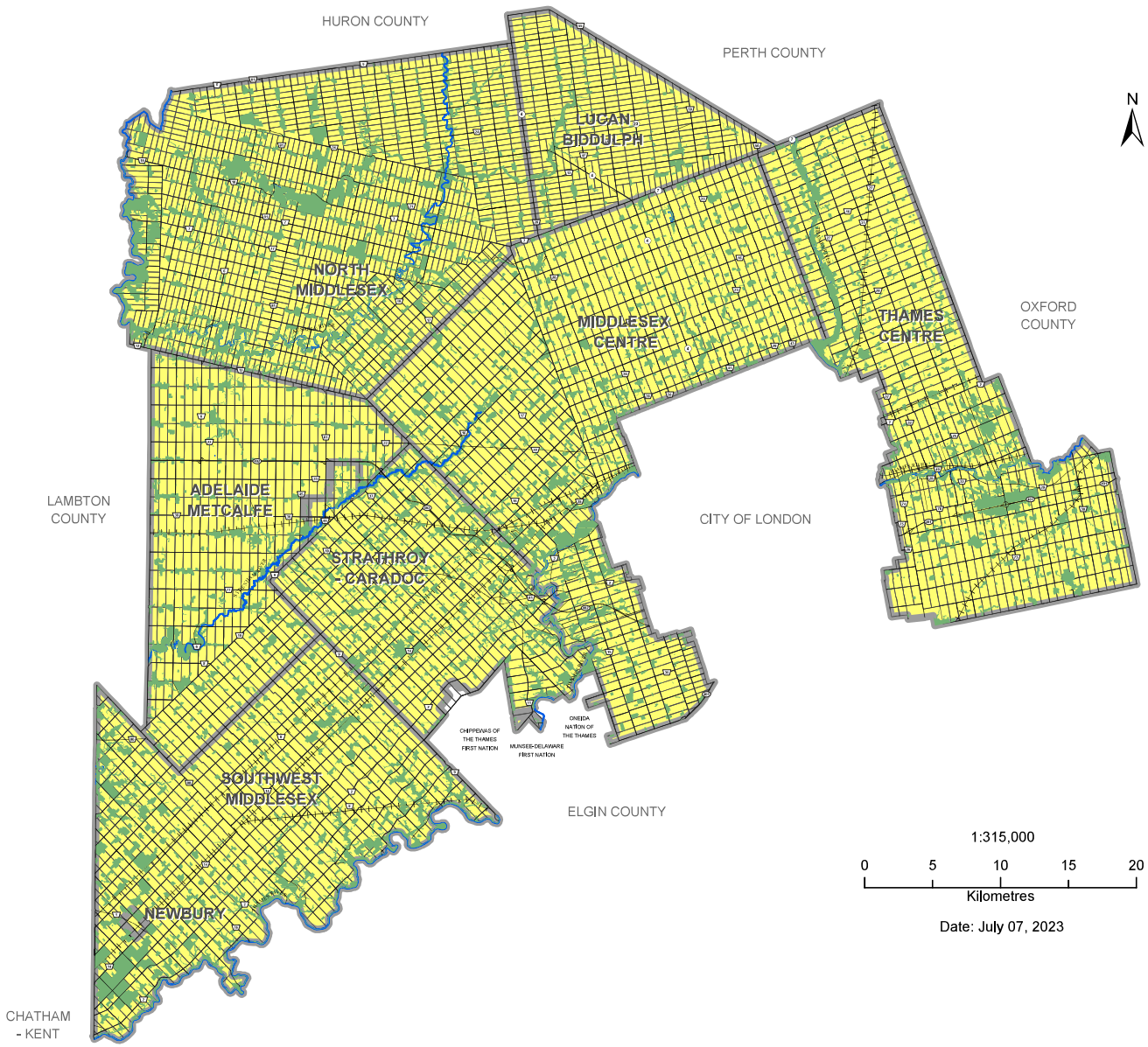
Direct: 905 381-3247
Fax: 905 385-3534
David.Kielstra@stantec.com

Stantec
200-835 Paramount Drive
Stoney Creek ON L8J 0B4



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Appendix D
Official Plan and Sourcewater Protection Mapping



middlesex county

COUNTY OF MIDDLESEX OFFICIAL PLAN

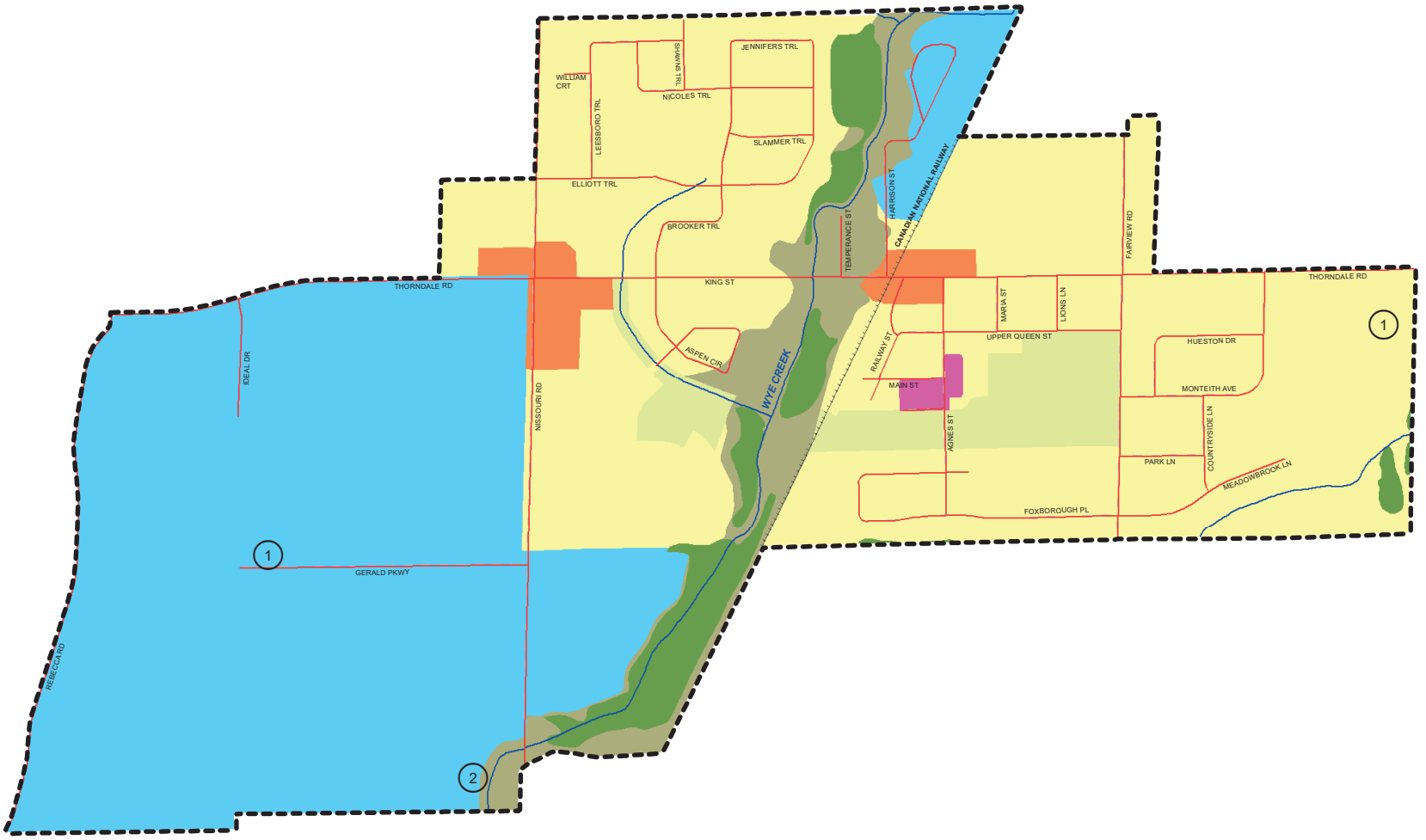
SCHEDULE C NATURAL HERITAGE SYSTEM

Notations:

Due to the size and scale of the Schedules, the boundaries of features may not appear to be precise; therefore, the limits of these features should be determined through consultation with the County, appropriate Conservation Authority, local municipality and/or the Province.

Copyright 2023 County of Middlesex.

Natural Heritage System



LEGEND

- RESIDENTIAL
- MOBILE HOME PARK
- GENERAL COMMERCIAL
- SETTLEMENT INDUSTRIAL
- PROTECTION AREA
- NATURAL HAZARD OVERLAY
- URBAN SETTLEMENT AREA BOUNDARY
- (#) SPECIAL POLICY AREA

BASE FEATURES

- ROADS
- RAIL LINE
- STREAM
- LAKE OR RIVER

All lands adjacent to streams shown on this Schedule may be potentially affected by flooding and erosion. Please refer to Appendix 1 (Part A) Maximum Hazard Limit to determine the lands affected. Development may be restricted in these areas.

Data Source: County of Middlesex

MUNICIPALITY OF Thames Centre

SCHEDULE 'B-2'

LAND USE PLAN - THORNDALE SETTLEMENT AREA

MUNICIPALITY OF THAMES CENTRE

OFFICIAL PLAN

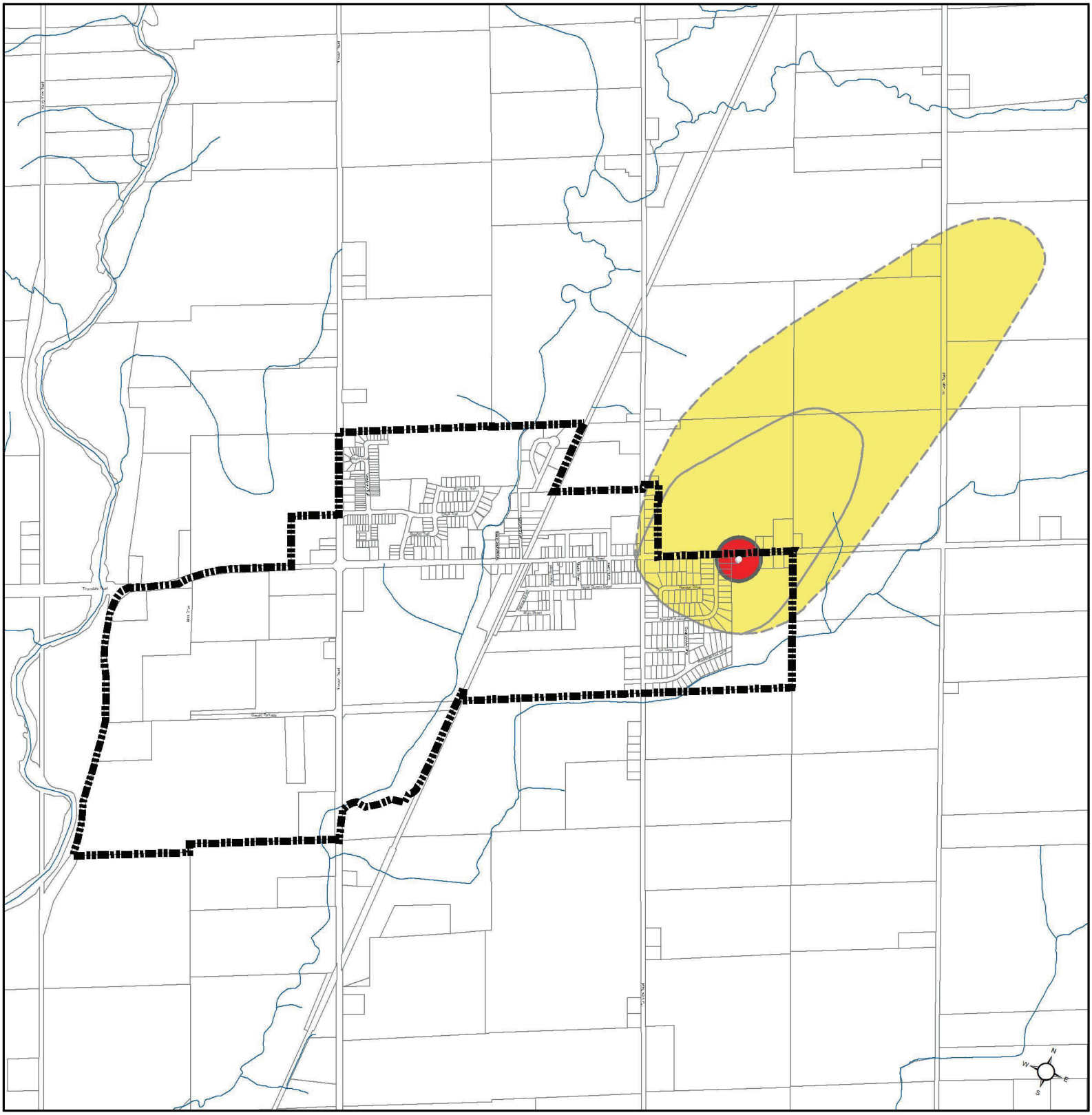
N

SCALE : 1:10,000 metres

0 50 100 200 300 400

Schedule D-2: Thorndale WHPA

MUNICIPALITY OF THAMES CENTRE OFFICIAL PLAN



LEGEND

Settlement Boundary

Municipal Well

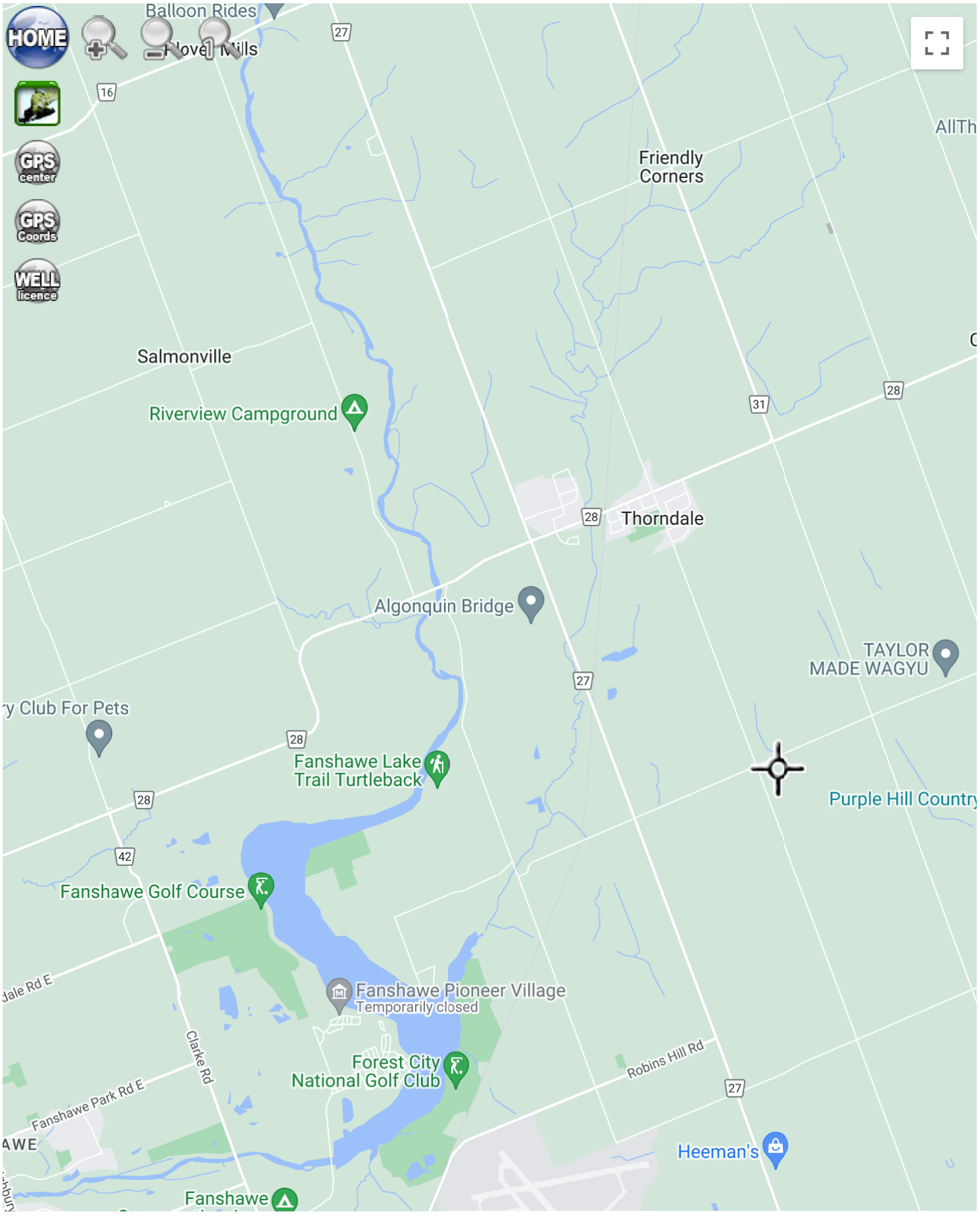
WELLHEAD PROTECTION AREA

WHPA A WHPA B WHPA C

SIGNIFICANT POLICY ZONES VULNERABILITY SCORE

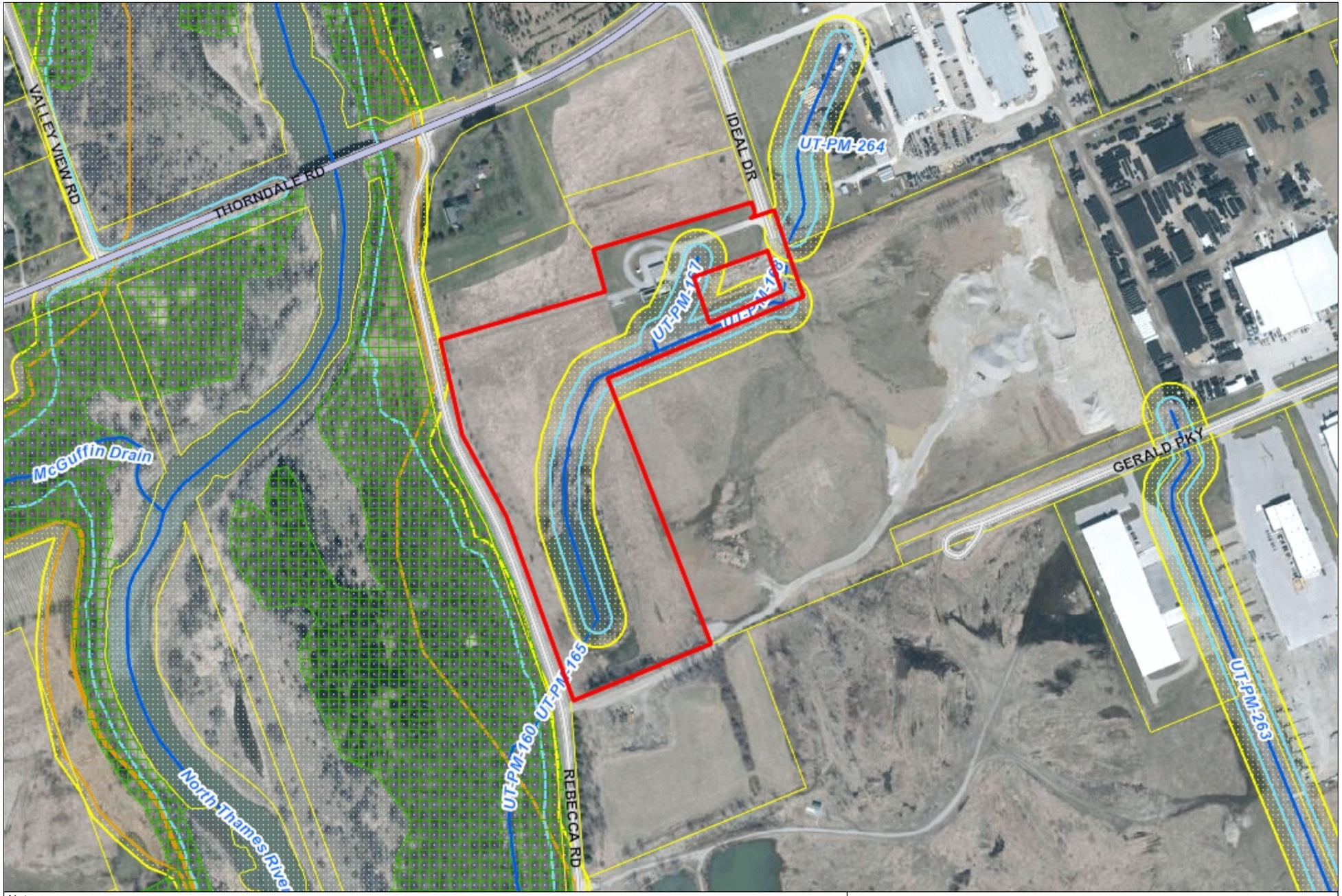
10 8 6 or less

0 250 500 1,000 1,500 2,000 Meters



Google

Map data ©2024 Google Report a map error



Regulated Areas

Regulation under s.28 of the Conservation Authorities Act

Development, interference with wetlands, and alterations to shorelines and watercourses. O.Reg 157/06, 97/04.

Legend

- UTRCA Watershed (2017 LiDAR)
- Assessment Parcel (MPAC)
- Watercourse (UTRCA)
  - Open
  - Tiled
- Middlesex NHSS Woodland (2014)
  - Candidate for Ecologically Important
  - Ecologically Important
  - Significant Ecologically Important
- Regulated Wetland
- Flooding Hazard Limit
- Erosion Hazard Limit
- Regulation Limit 2021

The mapping is for information screening purposes only, and shows the approximate regulation limits. The text of Ontario Regulation 157/06 supersedes the mapping as represented by this data layer. This mapping is subject to change. A site specific determination may be made by the UTRCA.

This layer is the approximate limit for areas regulated under Ontario Regulation 157/06 - Upper Thames River Conservation Authority: Development, Interference with Wetlands and Alterations to Shorelines and Watercourses, which came into effect May 4, 2006.

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This document is not a Plan of Survey.

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UPPER THAMES RIVER CONSERVATION AUTHORITY

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Notes:

Thorndale WWTP, 1135 Ideal Drive, Municipality of Thames Centre (Map 1 of 3 - outlining lands regulated by the UTRCA)

Created By: KMW January 5, 2024

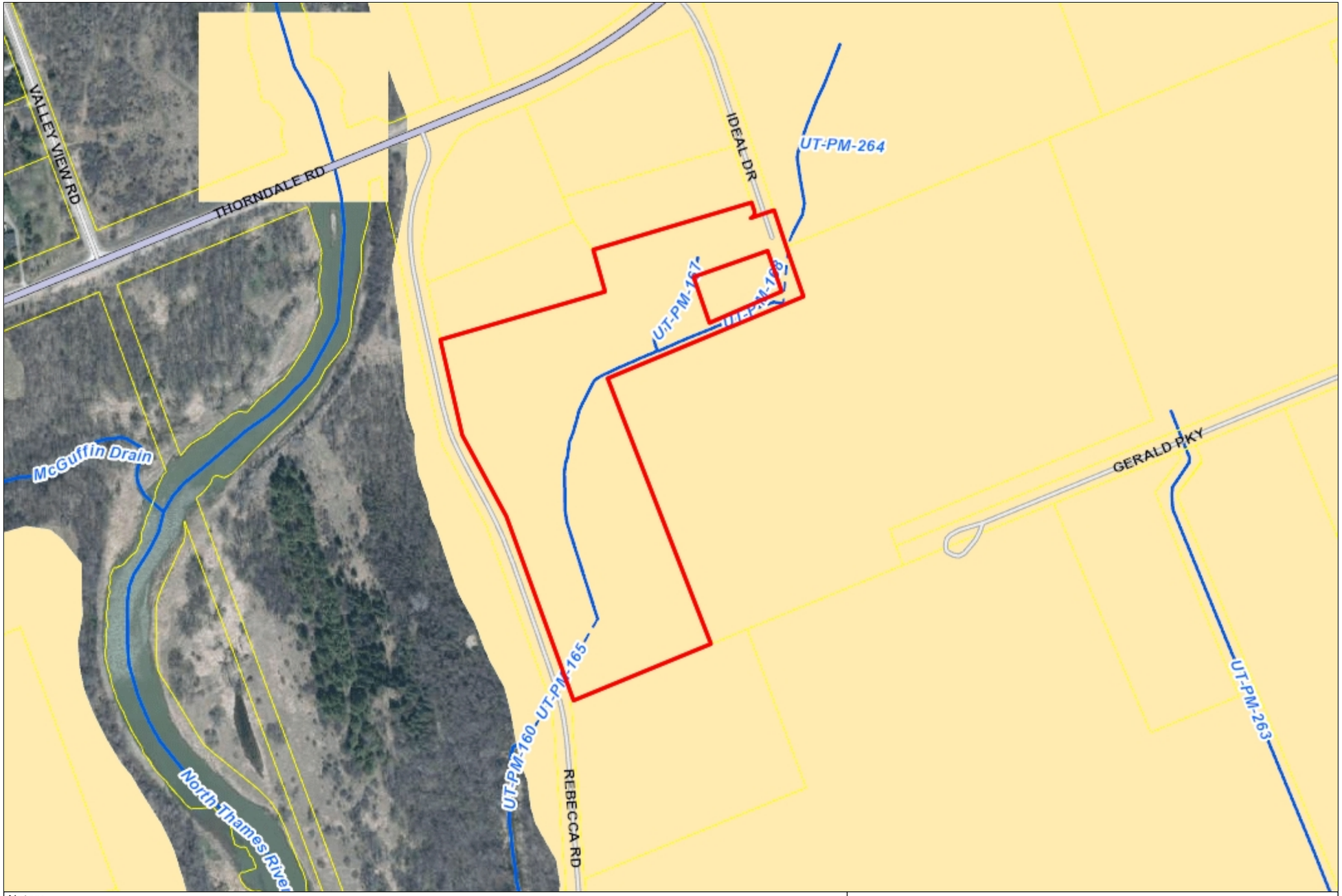
* Please note: Any reference to scale on this map is only appropriate when it is printed landscape on legal-sized (8.5" x 14") paper.

0 100 200 400

metres

1:5,000

N



Regulated Areas

Regulation under s.28 of the Conservation Authorities Act

Development, interference with wetlands, and alterations to shorelines and watercourses. O.Reg 157/06, 97/04.

Legend

- UTRCA Watershed (2017 LiDAR)
- Assessment Parcel (MPAC)
- Watercourse (UTRCA)
  - Open
  - Tiled

Designated Vulnerable Areas

- Activities may be Significant Threats
- Activities may be Moderate and Low Threat
- Other Vulnerable Areas
- See Essex Region SPA for Details

The mapping is for information screening purposes only, and shows the approximate regulation limits. The text of Ontario Regulation 157/06 supersedes the mapping as represented by this data layer. This mapping is subject to change. A site specific determination may be made by the UTRCA.

This layer is the approximate limit for areas regulated under Ontario Regulation 157/06 - Upper Thames River Conservation Authority: Development, Interference with Wetlands and Alterations to Shorelines and Watercourses, which came into effect May 4, 2006.

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This map is not a substitute for professional advice. Please contact UTRCA staff for any changes, updates and amendments to the information provided.

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UPPER THAMES RIVER CONSERVATION AUTHORITY

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Notes:

Thorndale WWTP, 1135 Ideal Drive, Municipality of Thames Centre (Map 2 of 3 - outlining lands identified as Highly Vulnerable Aquifers and/or Significant Groundwater Recharge Areas)

Created By: KMW January 5, 2024

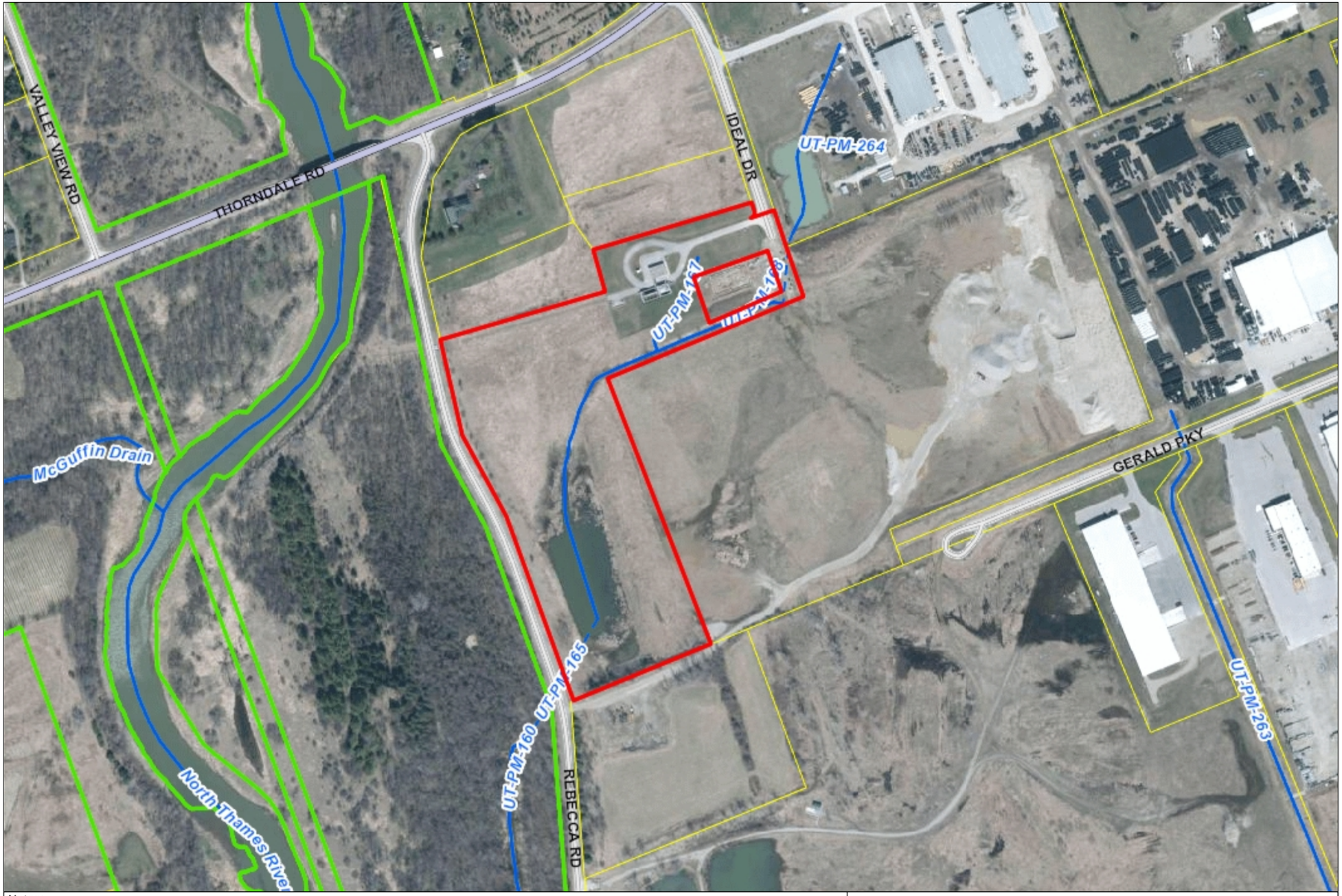
* Please note: Any reference to scale on this map is only appropriate when it is printed landscape on legal-sized (8.5" x 14") paper.

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Regulated Areas

Regulation under s.28 of the Conservation Authorities Act

Development, interference with wetlands, and alterations to shorelines and watercourses. O.Reg 157/06, 97/04.

Legend

- UTRCA Watershed (2017 LiDAR)
- UTRCA Property
- Assessment Parcel (MPAC)
- Watercourse (UTRCA)
  - Open
  - Tiled

The mapping is for information screening purposes only, and shows the approximate regulation limits. The text of Ontario Regulation 157/06 supersedes the mapping as represented by this data layer. This mapping is subject to change. A site specific determination may be made by the UTRCA.

This layer is the approximate limit for areas regulated under Ontario Regulation 157/06 - Upper Thames River Conservation Authority: Development, Interference with Wetlands and Alterations to Shorelines and Watercourses, which came into effect May 4, 2006.

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UPPER THAMES RIVER CONSERVATION AUTHORITY

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Notes:

Thorndale WWTP, 1135 Ideal Drive, Municipality of Thames Centre (Map 3 of 3 - outlining approximate location of lands owned by the UTRCA)

Created By: KMW January 5, 2024

* Please note: Any reference to scale on this map is only appropriate when it is printed landscape on legal-sized (8.5" x 14") paper.

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Appendix E Environmental Technical Reports

E.1 Natural Environment Report

Stantec

Memo

To:	Jeff Paul and David Kielstra Stantec Consulting Ltd.	From:	Erica Padvaiskas Stantec Consulting Ltd. (1609)
Project/File:	165630251	Date:	January 8, 2024

Reference: Village of Thorndale – Thorndale Wastewater Treatment Plant – Existing Conditions Natural Environment Assessment

Introduction

The Municipality of Thames Centre (Municipality) has retained Stantec Consulting Ltd. to complete a Municipal Class Environmental Assessment (EA) to identify options for expansion of the Thorndale Wastewater Treatment Plant (WWTP) (the "Project"), located at 1135 Ideal Drive.

The project is being undertaken as a Schedule 'C' project in accordance with the Municipal Engineers Association (MEA) Municipal Class Environmental Assessment (as amended in 2023).

The proposed Village of Thorndale – Thorndale Wastewater Treatment Plant expansion is located in Thorndale, Ontario (17T 486646E, 4771413N). An existing conditions natural environment assessment is required to support the preliminary design of the Project through the Municipal Class EA process. The existing conditions natural environment assessment will identify potential natural heritage features that may be present in the vicinity of the Project and develop mitigation measures to protect natural heritage features during construction activities. The proposed expansion area of the Thorndale Wastewater Treatment Plant, herein referred to as "the Site", is outlined in **Attachment 1**.

This *Existing Conditions Natural Environment Assessment* presents the results of a desktop review and a reconnaissance field investigation to identify potential environmental constraints and recommendations with respect to species at risk (SAR) and their potential habitat directly within the Site, as well as adjacent lands within 120 meters (m) of the Site; herein referred to as the Study Area.

Background Review

Background Data Collection Sources

A variety of background documents and sources of information were consulted to identify records of designated natural heritage features within the Study Area. Records of terrestrial and aquatic SAR and provincially rare species, occurrences of amphibians, reptiles, birds and mammals, natural heritage features (i.e., Provincially Significant Wetlands (PSW), Areas of Natural and Scientific Interest (ANSI)), and fish habitat data were obtained from the following sources:

- The Natural Heritage Information Centre (NHIC), (MNFR 2023a)
- Land Information Ontario (LIO), (MNRF 2023b)
- County of Middlesex Official Plan (2023), including Schedule C (Natural Heritage System)
- Upper Thames River Conservation Authority Regulated Areas Screening Map (UTRCA 2023)

- Ontario Reptile and Amphibian Atlas (ORAA; Ontario Nature 2022)
- Ontario Mammal Atlas (OMA; Dobbyn 1994)
- Ontario Breeding bird Atlas (OBBA; Cadman et al. 2007)
- Fisheries and Ocean Canada Aquatic SAR Map (DFO 2023)
- Ontario Insect Atlas (OIA; Toronto Entomologists' Association 2021)
- eBird Online Database (eBird 2023)
- iNaturalist Online Observations (iNaturalist 2023)

Agency Consultation

Agency consultation has moved to a proponent driven process for both the federal and provincial agencies responsible for SAR (e.g., DFO, MECP) and proponents are directed to review the background documentation and related information sources outlined above. As such, specific information request packages were not submitted for provincially designated natural heritage features, SOCC, and/or SAR.

Desktop Study Results

Designated Features and Planning Documentation

The Site does not overlap with MNRF (2023b) mapped watercourses or waterbodies. There are two constructed waterbodies within the Study Area (**Attachment 1**), and the southwest waterbody has a connected unmapped ditch parallel to the Site.

The Study Area does not contain any Natural Heritage Systems, according to Schedule C of the County of Middlesex Official Plan (2023).

No other designated features (e.g., ANSIs, wetlands or wooded areas) occur within the Study Area.

The Study Area is within the jurisdiction of the Upper Thames River Conservation Authority (UTRCA) and is subject to the provisions under Ontario Regulation (O. Reg.) 157/06 of the *Conservation Authorities Act*. Two areas within the Site and Study Area were identified as UTRCA Regulated Lands (UTRCA 2023):

1. Southwest of Ideal Drive
2. East of Ideal Drive

The constructed waterbodies and ditch are associated with the UTRCA Regulated Areas (**Attachment 1**).

Species of Special Concern

Species of Conservation Concern (SOCC) are those which are provincially rare (S1-S3 ranked species) or provincially designated special concern species. This category excludes species with a provincial status of threatened or endangered. Status rankings (S-ranks) for wildlife are based on the number of occurrences in Ontario and have the following rankings:

- S1: Critically imperiled; usually fewer than 5 occurrences

- S2: Imperiled; usually fewer than 20 occurrences
- S3: Vulnerable; usually fewer than 100 occurrences
- S4: Apparently secure; uncommon but not rare, usually more than 100 occurrences
- S5: Secure, common, widespread, and abundant

An S-rank followed by a "?" indicates the rank is still uncertain.

Based on a review of the background information, 25 SOCC have been identified as occurring in the vicinity of the Study Area and are provided in **Table 1**. NHIC (2023a) records are from within 2 kilometers (km) of the Study Area and atlas records are from a 10 x 10 km square overlapping the Study Area. Records do not provide the exact locations of SAR and are used as an indicator of potential occurrences in the Study Area.

Table 1: Species of Conservation Concern

Species	S – rank	SARO	Source
REPTILES			
Snapping Turtle (*Chelydra serpentina*)	S4	SC	NHIC, ORRA
Midland Painted Turtle (*Chrysemys picta marginata*)	S4	-	NHIC, ORRA
Northern Map Turtle (*Graptemys geographica*)	S3	SC	NHIC, ORRA
Eastern Milksnake (*Lampropeltis triangulum*)	S4	NAR	NHIC, ORRA
BIRDS			
Eastern Wood-Pewee (*Contopus virens*)	S4B	SC	OBBA, eBird
Bald Eagle (*Haliaeetus leucocephalus*)	S4	SC	NHIC
Barn Swallow *(Hirundo rustica)*	S4B	SC	OBBA, eBird
Wood Thrush (*Hylocichla mustelina*)	S4B	SC	OBBA
Purple Martin (*Progne subis*)	S3B	-	OBBA
Blue-winged Teal (*Spatula discors*)	S3B, S3N	-	OBBA
INSECTS			
Spotted Apatelodes Moth (*Apatelodes torrefacta*)	S3	-	OIA
Hackberry Emperor (*Asterocampa celtis*)	S3	-	NHIC
Monarch (*Danaus plexippus*)	S4B, S2N	SC	OIA
Phyllira Tiger Moth (*Grammia phyllira*)	S3	-	OIA
MAMMALS			
Woodland Vole (*Microtus pinetorum*)	S3?	SC	OMA
VASCULAR PLANTS			
Narrow-leaved Mild Leek (*Allium tricoccum var. burdickii*)	S1?	-	NHIC
Hairy-fruited Sedge (*Carex trichocarpal*)	S3	-	NHIC
Large Toothwort (*Cardamine maxima*)	S3	-	HNIC
Slim-flowered Muhly (*Muhlenbergia tenuiflora*)	S2	-	NHIC
Lizard's-tail (*Saururus cernuus*)	S3	-	NHIC
Striped Cream Violet (*Viola striata*)	S3	-	NHIC

Species	S – rank	SARO	Source
FISH			
Greater Redhorse (*Moxostoma valenciennesi*)	S3	-	NHIC
MOLLUSCS			
Elktoe (*Alasmidonta marginata*)	S3	-	NHIC
Pimpleback (*Cyclonaias pustulosa*)	S2	-	NHIC
Purple Wartyback (*Cyclonaias tuberculate*)	S2	-	NHIC

Species at Risk

For the purpose of this report, SAR are those species identified as endangered or threatened under the provincial *Endangered Species Act, 2007* (ESA). The ESA was created to protect SAR and their habitats in Ontario. Endangered, threatened, and extirpated species listed on the Species at Risk in Ontario (SARO) list (O. Reg. 230/08 under the ESA) automatically receive legal protection from harm or harassment under the ESA. In addition to species protection, the ESA prohibits damage or destruction of habitat for endangered or threatened species. Work on public or private land (excluding federal lands) that may harm or harass protected species (e.g., threatened, or endangered) or impact their habitat requires approval from the Ministry of Environment, Conservation, and Parks' (MECP) Species at Risk Branch.

Based on a review of background information, 19 SAR have been identified as occurring in the vicinity of the Study Area, as shown in **Table 2**. NHIC (2023a) records are from within 2 kilometers (km) of the Study Area and atlas records are from a 10 x 10 km square overlapping the Study Area. Records do not provide the exact locations of SAR and are used as an indicator of potential occurrences in the Study Area.

Table 2 Species at Risk

Species	SARO	COSEWIC	Source	Habitat Description
REPTILES				
Spiny Softshell (*Apalone spinifera*)	END	END	NHIC	Spiny Softshell require sandy beaches and riverbanks for nesting, shallow soft-bottomed water bodies to function as nurseries and refugia, basking areas, deep pools for thermoregulation, and riffle areas for foraging. Habitat features may occur over a large area, as long as the intervening habitat doesn't prevent the turtles from travelling between them (COSEWIC 2002). Two constructed waterbodies are present within the Study Area, however they are not connected and isolated by a terrestrial environment, inhibiting Spiny Softshell from accessing them. Therefore, Spiny Softshell is considered absent from the Study Area.

Species	SARO	COSEWIC	Source	Habitat Description
Blanding's Turtle (*Emydoidea blandingii)*	THR	END	ORRA	Blanding's Turtle inhabits shallow waterbodies with soft organic substrates and abundant submergent vegetation. Blanding's Turtles will nest in in loose soil (i.e., gravel or sand) above the waterline (Ontario Nature 2022). They can migrate several kilometers (km) between summer habitat, nesting sites, and overwintering habitat (MECP 2022). Two storm water waterbodies are present within the project site. Although unlikely, these waterbodies may provide habitat (e.g., summer) for the Blanding's Turtle. A gravel pile is located northeast of the Site, adjacent to Ideal Drive. This gravel pile may serve as potential nesting habitat for this species. Therefore, there is a low potential that the Blanding's Turtle could be observed within the Study Area.
Queensnake (*Regina septemvittata*)	END	END	ORRA	The Queensnake is an aquatic snake found in rocky, gravelly, or slate stream-bed substrates, with a swift to moderate current and woodland surroundings (COSEWIC 2010b). The habitat of this species is highly specialized and it is rarely found more than 3 metres from water. No suitable habitat for Queen Snake exists within the Study Area. Therefore, this species is not expected to occur in the Study Area.
BIRDS				
Chimney Swift *(Chaetura pelagica)*	THR	THR	OBBA	Chimney Swift use chimneys for roosting and breeding, as well as walls, rafters, or gables of buildings and, less frequently, natural structures such as hollow trees, tree cavities and cracks in cliffs (Cadman et al. 2007). Based on air photo interpretation and Google Streetview, no suitable nesting habitat for Chimney Swift is observed within the Study area. Therefore, this species is not expected to occur in the Study Area.
Bobolink (*Dolichonyx oryzivorus*)	THR	THR	OBBA, eBird	The Bobolink is generally referred to as a "grassland species". It nests primarily in forage crops with a mixture of grasses and broad-leaved forbs, predominantly hayfields and pastures. Preferred ground cover species include grasses such as Timothy and Kentucky bluegrass and forbs such as clover and dandelion (COSEWIC 2010a). Based on air photo interpretation and Google Streetview, the Study Area appears to be largely comprised of meadow communities of varying ages, which have the potential to provide nesting habitat for Bobolink.
Red-headed Woodpecker *(Melanerpes erythrocephalus)*	END	END	OBBA	The Red-headed Woodpecker occupies a variety of habitats including open areas for feeding, snags for roosting, and a secure food supply. This species requires multiple snags for nesting, roosting, and foraging. (N.A.S. 2012; Smith et al. 2000). No wooded communities are present within the Study Area; and therefore Red-headed Woodpecker is not expected to occur in the Study Area.
Bank Swallow (*Riparia riparia)*	THR	THR	OBBA, eBird	The Bank Swallow excavate nests in exposed earth banks along watercourses and lakeshores, roadsides, stockpiles of soil, and the sides of sand and gravel pits. Adjacent grasslands and watercourses are used for foraging habitat (Cadman et al., 2007). Based on air photo interpretation and Google Streetview no suitable habitat for Bank Swallow is observed in the Study Area. Therefore, this species is not expected to occur in the Study Area.

Species	SARO	COSEWIC	Source	Habitat Description
Eastern Meadowlark (*Sturnella magna*)	THR	THR	NHIC, OBBA, eBird	As a grassland species the Eastern Meadowlark typically occurs in meadows, hayfields and pastures. However, it will utilize a wider range of habitat than most grassland species, including mown lawn (e.g. golf course, parks), wooded city ravines, young conifer plantations and orchards (Peck and James 1983). Based on air photo interpretations and Google Streetview the Study Area is largely comprised of meadow communities of varying ages, which have the potential to provide nesting habitat for Eastern Meadowlark.
MAMMALS				
Eastern Small-footed Myotis (*Myotis leibii*)	END	-	OMA	These bat species share similar habitat preferences during their active season and are described together. These species will use trees as small as 10 cm diameter at breast height (DBH) with cavities, loose bark, and leaves to nest and day roost as well as for maternity roosting purposes, usually >10 m high on trees exhibiting early stages of decay (COSEWIC 2013, ECCC 2018). While the majority of the Study Area is open, there are a few mature deciduous trees that could potentially provide suitable maternity roost habitat for SAR bats. Therefore, there is a low potential for SAR bats to occur within the Study Area. There are no overwintering features (e.g., caves, abandoned mines) for SAR bats observed within the Study Area.
Little Brown Bat (*Myotis lucifugus*)	END	END	OMA	
Northern Myotis *(Myotis septentrionalis*)	END	END	OMA	
Tricolored Bat (*Perimyotis subflavus*)	END	END	OMA	
American Badger [Southwestern Ontario population] (*Taxidea taxus jacksoni*)	END	END	OMA	American Badger is found in open grasslands, agricultural areas and open parklands (Eder 2002). While meadows communities are present in the Study Area, they are likely too small to support this species; therefore, American Badger is not anticipated to occur in the Study Area.
VASCULAR PLANTS				
Blue Ash (*Fraxinus quadrangulate*)	THR	THR	NHIC	Occurs as a scattered tree, mixed with white ash, black ash, chinquapin oak, black walnut and other southern broadleaf trees; found on floodplains, well-drained sand and on limestone outcrops (Farrar 1995). No suitable habitat is present within Study Area; therefore, Blue Ash is not anticipated to occur in the Study Area.
Wood-poppy (*Stylophorum diphyllum*)	END	END	NHIC	Wood-poppy is found in rich mixed deciduous woodlands, forested ravines and slopes, and along wooded streams (COSEWIC 2007). No wooded communities are present within Study Area; therefore, Wood-poppy is not anticipated to occur in the Study Area.
FISH				
Silver Shiner (*Notropis photogenis*)	THR	THR	NHIC	Preferred habitat for the Silver Shiner is moderately fast-flowing sections of larger streams. This species is restricted to the tributaries of Lakes St. Clair (Thames River), Erie (Grand River) and Ontario (Bronte Creek) in Southwestern Ontario (COSSARO 2011). No watercourses were identified within the Study Area (MNRF 2023b); therefore, this species is not expected to occur in the Study Area.

Species	SARO	COSEWIC	Source	Habitat Description
Black Redhorse (*Moxostoma duquesnei*)	THR	THR	NHIC	Black Redhorse generally inhabits moderately sized, cool, clear streams, preferring pool areas in the summer and overwintering in deep pools (COSEWIC 2005). No watercourses were identified within the Study Area (MNRF 2023b); therefore, this species is not expected to occur in the Study Area.
MOLLUSCS				
Wavy-rayed Lampmussel (*Lampsilis fasciola*)	THR	SC	NHIC	The Wavy-rayed Lampmussel is most abundant in small to medium-sized streams and rivers with steady flows in gravel or sand substrates (COSEWIC 2010d). No watercourses were identified within the Study Area (MNRF 2023b). Therefore, this species is not expected to occur in the Study Area.
Rayed Bean (*Villosa fabalis*)	END	END	NHIC	The Rayed Bean is usually found deeply buried in the gravel and sand substrates in rivers that are fast flowing (COSEWIC 2010c). No watercourses were identified within the Study Area (MNRF 2023b) and therefore, this species is not expected to occur in the Study Area.

Natural Heritage Policy Context

Conservation Authorities Act

Ontario Regulation 157/06 (Development, Interference with Wetlands and Alterations to Shorelines and Watercourses) under the *Conservation Authorities Act* requires prior permission from UTRCA for any development or alteration within a floodplain, valleyland, wetland, or other hazardous land. As noted above, there are two UTRCA Regulated Areas within the Site and Study Area which overlap with the constructed waterbodies. As such, any development within these areas are anticipated to require approval from the UTRCA under Ontario Regulation 157/06.

Results

Field Investigation

A site investigation will be conducted in spring of 2024. Field investigations will be conducted to identify any SAR and/or SAR habitat, including Bat maternity roosting trees, SAR vegetation, and turtle nesting habitat.

General Site Constraints and Recommendations

General Wildlife Protection

The following environmental mitigation and protective measures for wildlife and wildlife habitat are recommended:

- Vegetation removal should avoid sensitive timing windows when possible (e.g., migratory breeding bird period (**March 31 – August 27**)).
- If vegetation removal cannot avoid sensitive timing windows, they must follow appropriate mitigation measures to protect wildlife in the area (e.g., bird nest search).
- Site clearing (i.e., vegetation removal) should proceed in phases with the most disturbed part of the site being cleared first and the least disturbed last.
- Construction equipment and vehicles are to yield to wildlife.
- Inform construction personnel to not threaten, harass or injure wildlife.
- If wildlife species are encountered during construction, personnel are required to move away from the animal and wait for the animal to move off the construction site.

Tree And Vegetation Protection

Where adjacent trees and naturalized areas are to be retained, the following best management practices should be followed when construction activities occur near retained trees:

- Erect a fence 1.2 m high around the critical root zone (CRZ) of trees
- Do not attach any signs, notices, or posters to any tree
- Do not damage the root system, trunk, or branches of any tree
- Do not place any material or equipment within the CRZ of the tree
- Do not raise or lower the existing grade within the CRZ
- Do not direct exhaust fumes from equipment towards any tree's canopy
- Tunnel or bore when digging within the CRZ of any tree

Protection Of Migratory Birds

There is proposed vegetation removal and/or impacts at the Site (e.g., temporary workspaces), and therefore there is a potential to negatively impact birds which are protected under the *Migratory Birds Convention Act, 1994* (MBCA). The MBCA provides legal protection of migratory birds and their active nests in Canada. The loss of migratory bird nests, eggs and or nesting due to tree cutting or other vegetation impacts can be avoided by limiting impacts to vegetation to occur outside of the general nesting period nesting migratory birds in the region (C2) as identified by Environment and Climate Change Canada (ECCC) (i.e., between March 31 – August 27) (ECCC, 2021). If work must be performed within this window, a pre-clearing survey for active nests or breeding activity must be conducted by a qualified biologist before work commences and additional mitigation measure (e.g., implementation of avoidance distance during construction) implemented, as required. Stantec considers a nest search to expire after five (5) days due to

the potential for birds to establish a nest after the survey. It is further recommended that a nest search occur within 48 hours of the start of planned construction activities within the migratory bird nesting period.

Protection Of Species at Risk

The Study Area has potential habitat for SAR herptiles (i.e., Blanding's Turtle), SAR bats (i.e., Small-Footed Myotis, Little Brown Myotis, Northern Myotis, and Tri colored Bat) and SAR birds (i.e., Bobolink and Eastern Meadowlark). Prior to any construction the following general mitigation measures are recommended to protect SAR:

- Implement a worker awareness program for construction staff that includes SAR identification and habitat characteristics.
- Conduct a daily pre-construction search of the work area to identify presence of SAR.
- If threatened or endangered species are seen in or near the work area, stop work immediately.
- Take photographs is possible, but do not interact with the animal.

Species at Risk Permitting Considerations

Endangered Species Act, 2007

SAR Bats

There is potential for SAR Bats to be encountered within the Study Area (i.e., mature trees). As specific habitat features (e.g., maternity roosts, hibernacula) supporting these species are not anticipated to be impacted, as such, further consultation with the MECP, through an Information Gathering Form submission, is not recommended to solicit formal review and comment on ESA requirements associated with the Project.

SAR Birds

There is potential for SAR Birds (Eastern Meadowlark and Bobolink) to be encountered within the Study Area (i.e., meadow communities). However, interactions with these species are not anticipated during project implementation, by avoiding vegetation removal during the migratory bird timing window. As such further review by the responsible agency under the ESA is not recommended, and subsequent permitting is not anticipated.

SAR Turtles

There is potential for Blanding's Turtle to be encountered within the Study Area (i.e., constructed waterbodies or/and the gravel pile). However, interactions with this species are not anticipated during project implementation. As such further review by the responsible agency under the ESA is not recommended, and subsequent permitting is not anticipated.

Reference: Village of Thorndale – Thorndale Wastewater Treatment Plant – Existing Conditions Natural Environment Assessment

Closure

This report documents work that was performed in accordance with generally accepted professional standards at the time and location in which the services were provided. No other representations, warranties or guarantees are made concerning the accuracy or completeness of the data or conclusions contained within this report, including no assurance that this work has uncovered all potential liabilities associated with the identified property. Conclusions made within this report consist of Stantec's professional opinion as of the time of the writing of this report and are based solely on the scope of work described in the report, the limited data available and the results of the work.

Regards,

STANTEC CONSULTING LTD.

Digitally signed by Erica Padvaiskas
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Attachments: Attachment 1 – Study Area Overview, Natural Heritage Features and Natural Heritage Screening Results

cc. David Kielstra, Jeff Paul (Stantec)

References

Broders H.G. Forbes G.J. Woodley S. Thompson I.D. 2006. Range extent and stand selection for forest-dwelling northern long-eared and little brown bats in New Brunswick. Journal of Wildlife Management 70:1174–1184.

Cadman, M.D., D.A. Sutherland, G.G. Beck, D. Lepage, and A.R. Couturier (eds.). 2007. Atlas of the

Cagle, F.R. and L. Cockrum. 1943. Notes on a summer colony of Myotis lucifugus lucifugus. Journal of Mammalogy, 24-4: 474-492.

COSEWIC 2002. COSEWIC assessment and update status report on the spiny softshell turtle Apalone spinifera in Canada. Committee on the Status of Endangered Wildlife in Canada. Vii + 17 pp.

COSEWIC 2005. COSEWIC assessment and update status report on the black redhorse Moxostoma duquesnei in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. vi + 21 pp. (www.sararegistry.gc.ca/status/status_e.cfm).

COSEWIC. 2007. COSEWIC assessment and update status report on thewood-poppy Stylophorum diphyllum in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. vi + 23 pp.

COSEWIC. 2010a. COSEWIC assessment and status report on the Bobolink Dolichonyx oryzivorus in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. Vi + 42pp.

COSEWIC. 2010b. COSEWIC assessment and status report on the Queensnake Regina septemvittata in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. vii + 34 pp.

COSEWIC. 2010c. COSEWIC assessment and status report on the Rayed Bean Villosa fabalis in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. xi + 40 pp.

COSEWIC. 2010d. COSEWIC assessment and status report on the Wavy-rayed Lampmussel *Lampsilis fasciola* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. xi + 60 pp.

COSEWIC. 2013. COSEWIC assessment and status report on the Little Brown Myotis Myotis lucifugus, Northern Myotis Myotis septentrionalis and Tri-colored Bat Perimyotis subflavus in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. xxiv + 93 pp.

COSSARO 2011. COSSARO Candidate Species at Risk Evaluation for Silver Shiner (Notropis photogenis) in Canada. Accessed Online (http://www.mnr.gov.on.ca)

County of Middlesex. 2023. Middlesex County Official Plan (2013). Available online: https://www.middlesex.ca/departments/planning-and-development/county-official-plan

Gerson, H. 1984. Habitat management guidelines for bats of Ontario. Ontario Ministry of Natural Resources.

Dobbyn, J. 1994. Atlas of the Mammals of Ontario. Federation of Ontario Naturalists. Accessed November 2023. https://view.publitas.com/on-nature/mammal_atlas-38jjdao7azjw/page/1.

Fisheries and Oceans Canada (DFO). 2022. Aquatic Species at Risk Map. Accessed November 2023. https://www.dfo-mpo.gc.ca/species-especes/sara-lep/map-carte/index-eng.html.

eBird. 2023. "Hotspots". Accessed November 2023. https://ebird.org/home.

Environment and Climate Change Canada (ECCC). 2018. Recovery Strategy for Little Brown Myotis (Myotis lucifugus), Northern Myotis (Myotis septentrionalis), and Tri-colored Bat (Perimyotis subflavus) in Canada. Species at Risk Act Recovery Strategy Series. Environment and Climate Change Canada, Ottawa. ix + 172 pp.

ECCC. 2021. General Nesting Periods of Migratory Birds in Canada. Accessed November 2023. https://www.canada.ca/en/environment-climate-change/services/avoiding-harm-migratory-birds/general-nesting-periods/nesting-periods.html

Eder, D. 2002. Mammals of Ontario. Lone Pine Publishing, Edmonton, Alberta. 215 p.

Farrar, J.L. 1995. Trees in Canada. Fitzhenry & Whiteside Limited and the Canadian Forest Service. Canada. 168 pp.

Google Earth Pro. 2022. Google Earth Version 7.3.4.8642. Accessed November 2023. https://earth.google.com/.

iNaturalist. 2023. Online natural heritage observation database. Available Online: https://www.inaturalist.org.

MECP. 2021. Reptile and Amphibian Exclusion Fencing. Assessed November 2023. https://www.ontario.ca/page/reptile-and-amphibian-exclusion-fencing.

MECP. 2022. Status of the Blanding's Turtle (Emydoidea blandingii). Species at Risk in Ontario. Assessed November 2023. https://www.ontario.ca/page/blandings-turtle.

MNRF [Ministry of Natural Resources and Forestry]. 2014. Use of Buildings and Isolated Trees by Species at Risk Bats Survey Methodology. Guelph District.

MNRF [Ministry of Natural Resources and Forestry]. 2023a. Natural Heritage Information Centre (NHIC). Natural Areas and Species records search. Biodiversity explorer, http:/nhic.MNRF.gov.on.ca. MNRF, Peterborough. Accessed November 2023.

MNRF [Ministry of Natural Resources and Forestry]. 2023b. Land Information Ontario (LIO). Digital mapping of natural heritage features. Available online: http://www.MNRF.gov.on.ca/en/business/lio/index.html.

National Audubon Society (N.A.S), 2012. Red-headed Woodpecker *Melanerpes erythrosephalus.* Available Online at: https://www.audubon.org/field-guide/bird/red-headed-woodpecker

Ontario Nature. 2018. Ontario Reptile and Amphibian Atlas [web application]. Toronto, Ontario. Available online at www.ontarionature.org/atlas<http://www.ontarionature.org/atlas> Accessed November 2023.

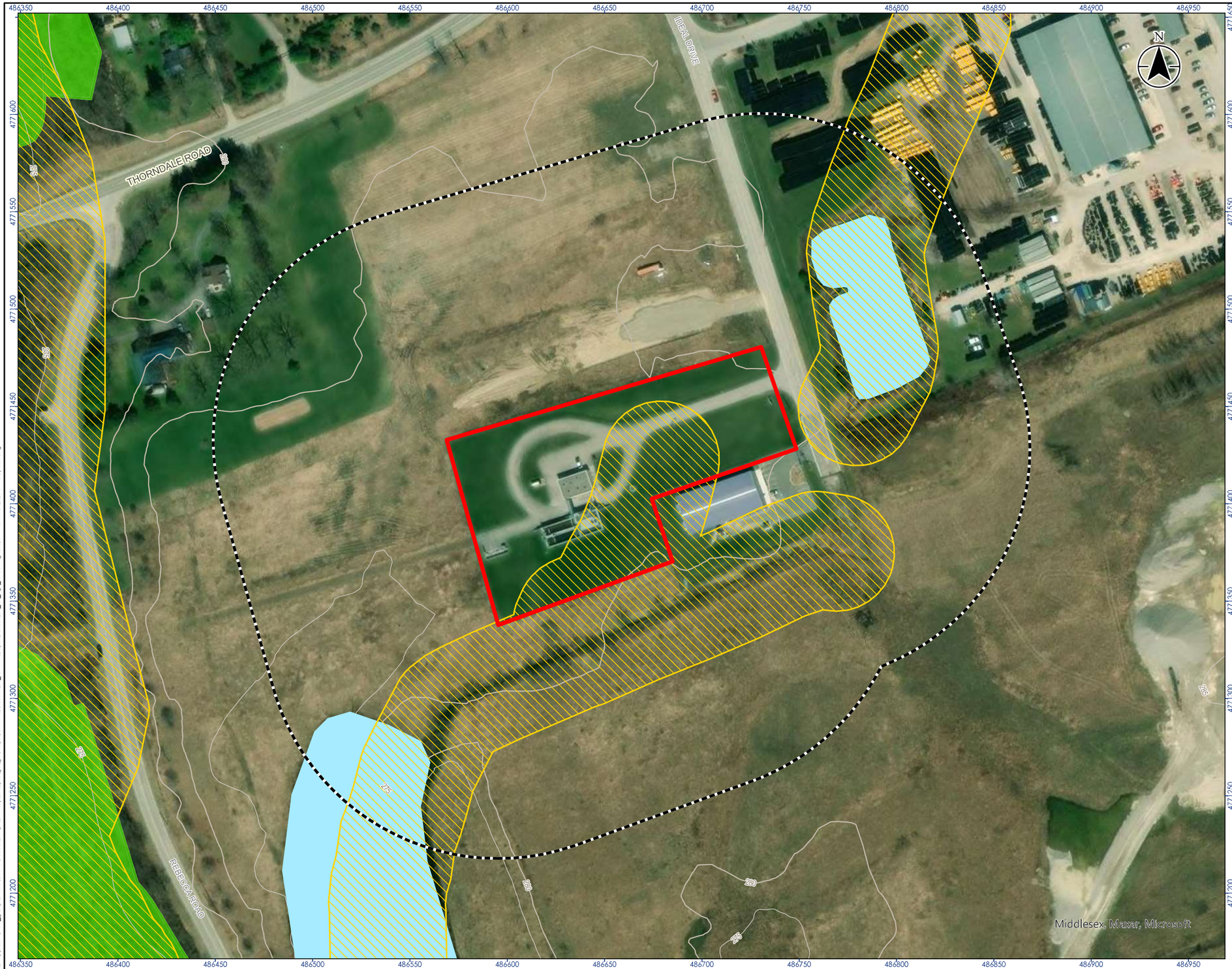
Peck, G. K. and R. D. James. 1983. Breeding Birds of Ontario: Nidiology and Distribution. Volume 1: Nonpasserines. Royal Ontario Museum, Toronto, Ontario.

Smith, K. G., J. H. Withgott, and P. G. Rodewald. 2000. Red-headed Woodpecker (*Melanerpes erythrocephalus*). *In* The Birds of North America, No. 518 (A. Poole and F. Gill, eds.). The Birds of North America, Inc., Philadelphia, PA.

Toronto Entomologists' Association. 2022. Ontario Butterfly Atlas. Accessed November 2023. https://www.ontarioinsects.org/atlas/.

Upper Thames River Conservation Authority. 2023. Regulated Areas Screening Map. Accessed November 2023. Available Online: https://maps.thamesriver.on.ca/gvh/?viewer=regulations

Attachment 1 Study Area Overview, Natural Heritage Features and Natural Heritage Screening Results



Stantec

Legend
- Site Boundary
- Study Area (120 m)
- Contour (5 m Interval)
- Wooded Area
- Waterbody
- UTRCA Regulated Area

0 50 100 m

1:2,000 (At original document size of 11x17)

Notes
1. Coordinate System: NAD 1983 UTM Zone 17N
2. Base features produced under license with the Ontario Ministry of Natural Resources and Forestry © King's Printer for Ontario, 2023. Contains information copyright © UTRCA.



Project Location
Thorndale, Ontario

REV6
Prepared by kaitang on 2025-01-16
Technical Review by JM on 2023-11-20

Client/Project
MUNICIPALITY OF THAMES CENTRE
THORNDALE WWTF
MUNICIPAL CLASS ENVIRONMENTAL ASSESSMENT

Figure No.
1

Title
Mapped Natural Heritage Features and Natural Heritage Screening Results

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E.2 Built Heritage and Cultural Heritage Landscapes Screening Memorandum

Stantec

Memo

To:	Municipality of Thames Centre	From:	Jenn Como, BA (Hons) Meaghan Rivard, MA, CAHP Stantec Consulting Ltd.
Project/File:	165630251	Date:	January 28, 2025

Reference: Thorndale Wastewater Treatment Plant Expansion Environmental Study Report: Cultural Heritage Screening

1 Introduction

Stantec Consulting Ltd. has been retained by the Municipality of Thames Centre to prepare a Cultural Heritage Screening as part of a Schedule C Municipal Class Environmental Assessment (EA) for the Thorndale Wastewater Treatment Plant (WWTP) (the Project). The Project will include expansion of the existing WWTP which was constructed *circa* 2010. This expansion will involve treatment process upgrades only and two alternatives are being considered. For both alternatives, any work areas will be contained within the existing fenced site boundary of the WWTP.

The requirement to consider known and potential built heritage resources and cultural heritage landscapes is discussed in the *Municipal Class Environmental Assessment Manual* (MCEA Manual) (Municipal Engineers Association 2023). The MCEA Manual considers cultural heritage, including built heritage resources and cultural heritage landscapes as well as archaeological resources, as one in a series of environmental factors to be considered when undertaking an MCEA, particularly when describing existing and future conditions, development alternatives, and determination of the preferred alternative. The MCEA Manual further suggests that cultural heritage resources that retain heritage attributes should be identified early in the EA process and avoided where possible. Where avoidance is not possible, potential effects should be identified and minimized. Adverse impacts should be mitigated according to provincial and municipal guidelines.

The Ministry of Citizenship and Multiculturalism (MCM) *Criteria for Evaluating Potential for Built Heritage Resources and Cultural Heritage Landscapes: A Checklist for the Non-Specialist* (2022; the MCM Checklist) provides a tool to identify known (previously recognized) or potential built heritage resources and cultural heritage landscapes in the project area from desktop sources, as well as commemorative plaques, cemeteries, Canadian Heritage River watersheds, properties with buildings 40 or more years old, or potential cultural heritage landscapes. Under the *Ontario Heritage Act*, built heritage resources and cultural heritage landscapes are linked to real property.

In order to assess the potential for the seven types of direct and indirect impacts outlined in InfoSheet #5: Heritage Impact Assessments and Conservation Plans" in *Heritage Resources in the Land Use Planning Process, Cultural Heritage and Archaeology Policies of the Ontario Provincial Policy Statement, 2005* the Study Area for the Cultural Heritage Screening included the Site Boundary plus a 50m buffer (Government of Ontario 2006) (Figure 1). In addition to consideration of potential direct effects, the potential for indirect effects resulting from vibration due to construction and operation activities and the transportation of Project components and personnel were also evaluated. Although the existing effect of traffic and construction vibrations on historic period structures is not fully known, negative effects have been demonstrated on buildings with a setback of less than 40 metres from the curbside (Crispino and D'Apuzzo 2001; Ellis 1987; National Park Service 2001, Rainer 1982; Wiss 1981). The proximity of Project components to BHRs and CHLs was considered in this assessment, particularly those within 50 metres, to encompass a wide enough buffer zone to account for built resources less than 40 metres from curbside or potential Project activities. The 50-metre buffer represents a conservative approach to effects identification.

The Study Area is located in part of Lot 15, Concession 2 in the former Township of Nissouri, now the Municipality of Thames Centre in the County of Middlesex.



Stantec

Legend

- Study Area
- Site Boundary
- Potential Built Heritage Resource
- Canadian Heritage Rivers System

0 50 100 Meters

1:2,000 (At original document size of 11x17)

Notes

1. Coordinate System:NAD 1983 UTM Zone 17N
2. Base features produced under license with the Ontario Ministry of Natural Resources and Forestry © Queen's Printer for Ontario, 2023.
3. Imagery: Maxar, Microsoft



Project Location
Thorndale, ON

165630251
Prepared by kaitang on 2025-01-10

Client/Project
MUNICIPALITY OF THAMES CENTRE
THORNDALE WWTF
CULTURAL HERITAGE ASSESSMENT

Figure No.
1

Title
Study Area

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2 Methodology

A Cultural Heritage Screening includes a community input program and a desktop review of available mapping, digital databases, and aerial photography. The results of the desktop survey were used to complete the MCM Checklist (MCM 2022) for Alternatives 1 and 2.

Community information requests were conducted to determine the presence of previously identified built heritage resources and cultural heritage landscapes. Community input (summarized in Section 4) included correspondence with the following agencies and groups:

- MCM
- Ontario Heritage Trust (OHT)
- County of Middlesex

Digitized historical mapping and topographic mapping were reviewed to identify areas where potential built heritage resources and cultural heritage landscapes may be located (summarized in Sections 3.2.1 and 3.3.1). Mapping reviewed included:

- 1878 Map of the Township of West Nissouri (H.R. Page & Co. 1878)
- 1936 Topographic Map, Lucan Sheet (Department of National Defence 1936)
- 1973 Topographic Map, Crumlin Sheet (Department of Energy, Mines and Resources 1973)

Present-day mapping and available online aerial photography were also reviewed to identify potential built heritage resources and cultural heritage landscapes and confirm the location of known built heritage resources and cultural heritage landscapes.

Alongside community input and a review of historical mapping, a desktop review of databases was completed (summarized in Sections 3.2.2 and 3.3.2), including:

- Parks Canada Directory of Federal Heritage Designations (Parks Canada 2023a)
- Parks Canada Canada's Historic Places (Parks Canada 2023b)
- Ontario Heritage Trust Plaque Database (Ontario Heritage Trust 2023)
- Ontario Trails Council Find a Trail (Ontario Trails Council 2023)
- The Municipality of Thames Centre's list of Designated Properties and Priority List (Municipality of Thames Centre 2024)
- Canada GenWeb Cemetery Find a Cemetery (Can GenWeb 2023)
- Canadian Heritage Rivers Systems (CHRS) (CHRS 2023)
- United Nations Educational, Scientific and Cultural Organization (UNESCO) World Heritage List (UNESCO 2023)

3 Desktop Review

3.1 Introduction

The Project's Study Area includes the existing fenced site boundary at 1135 Ideal Drive in the Municipality of Thames Centre. Project activities for both Alternatives 1 and 2 will be contained within the existing Site Boundary illustrated on Figure 1. The Study Area is in part of Lot 15, Concession 2 in the former Township of Nissouri, now the Municipality of Thames Centre in the County of Middlesex.

Historical, topographic, and present-day mapping and photography were review for each property within and adjacent to the Study Area to screen for potential built heritage resources and cultural heritage landscapes. While historical mapping from 1878 was reviewed, it is important to note that it was part of the *Illustrated Historical Atlas of the County of Middlesex, Ontario*. Mapping included in the Illustrated Atlases from this period only included structures and landowners who subscribed to the Dominion Atlas, in which these illustrated historical township maps were added as a supplement (Caston 1997; Gentilcore 1984). Therefore, the lack of a structure on a lot does not necessarily indicate the absence of a built heritage resource.

3.2 Alternative 1

Alternative 1 includes the construction of a flow equalization tank as well as sequencing batch receptors (SBR) and sludge holding tanks within the existing Site Boundary at 1135 Ideal Drive.

3.2.1 Mapping Review

Historical mapping from 1878 depicts a structure and two orchards on the north half of Lot 15, Concession 2 and an orchard on the southern portion of the lot (**Error! Reference source not found.**). Based on p resent-day mapping and aerial imagery, this structure likely remains extant at the present-day address of 16615 Thorndale Road, but it is located more than 50 metres from the Study Area. Topographic mapping from 1936 and 1973 indicate that no structures were located within the Study Area during this time period (**Error! Reference source not found.** and **Error! Reference source not found.**). The 1973 topographic ma p also depicts a former gravel pit which was located to the south of the Study Area.

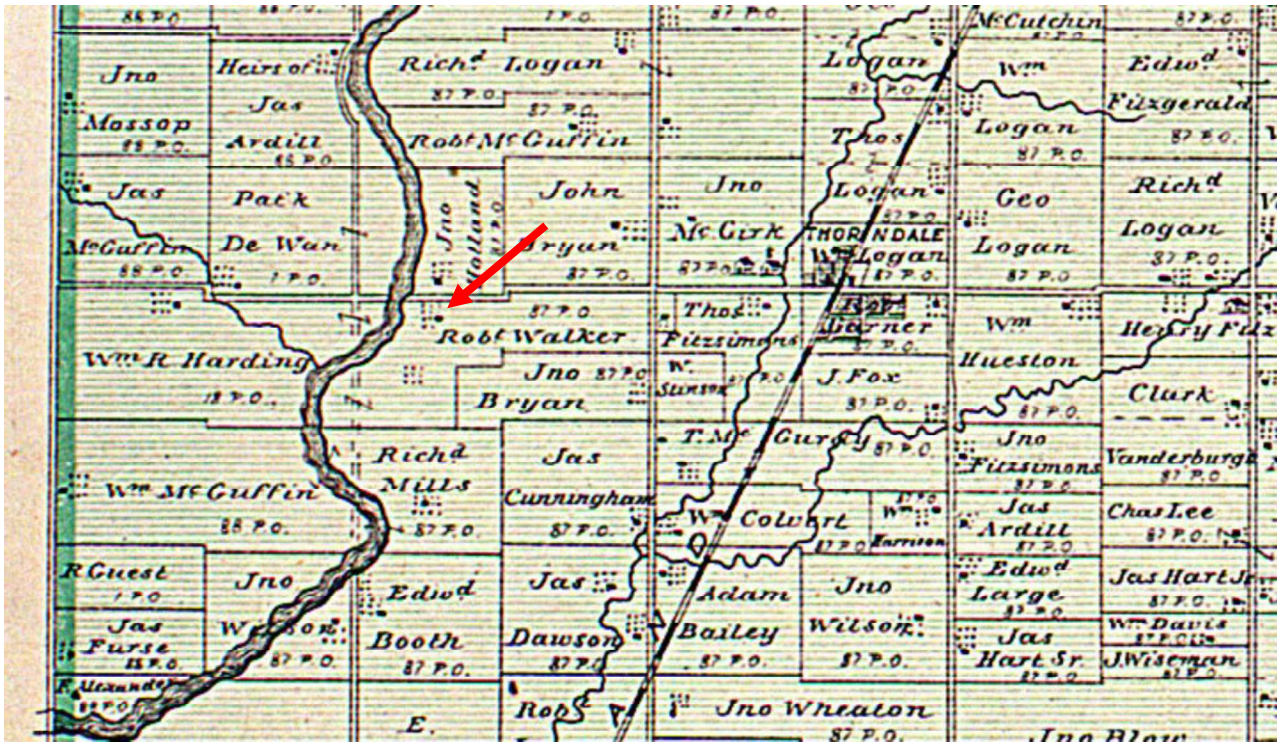


Figure 2 **Excerpt from 1878 map of West Nissouri with the Location of 16615 Thorndale Road Indicated by an Orange Arrow (H.R. Page & Co)**



Figure 3 **Excerpt from 1936 Topographic Map with the Approximate Location of the Study Area Indicated by an Orange Circle (Department of National Defence 1936)**

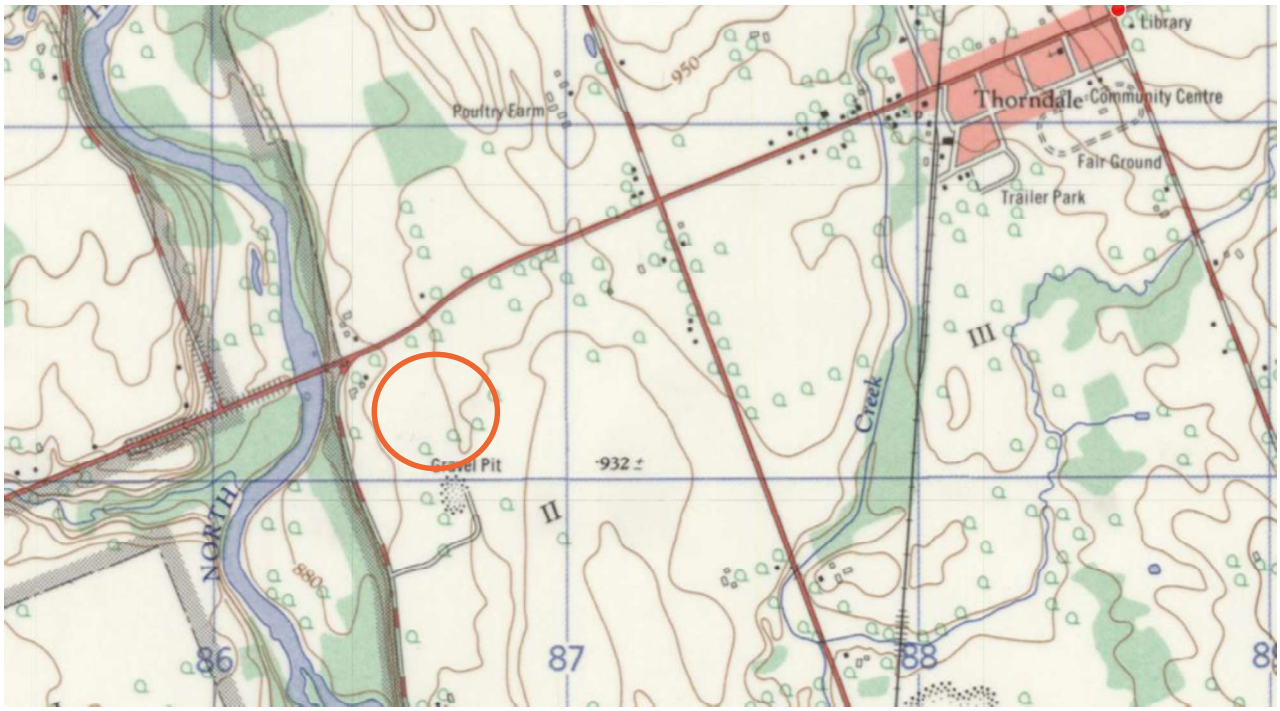


Figure 4 **Excerpt from 1973 Topographic Map with the Approximate Location of the Study Area Indicated by an Orange Circle (Department of Energy, Mines and Resources 1973)**

3.2.2 Database Review

Table 1 summarizes the database review for the Study Area.

Table 1 **Database Review Results**

Database	Results
Parks Canada Directory of Federal Heritage Designations	None identified within or adjacent to the Study Area.
Canada's Historic Places	None identified within or adjacent to the Study Area.
Ontario Heritage Trust Plaque Database	None identified within or adjacent to the Study Area.
Ontario Trail Council	None identified within or adjacent to the Study Area.
Canada GenWeb Cemetery Project	None identified within or adjacent to the Study Area.
CHRS	The Study Area is located within the Thames River Watershed.
UNESCO	None identified within or adjacent to the Study Area.

3.2.3 Discussion

Based on an understanding of the historical development of the area, a review of mapping, and a review of Google Street View photography, one 19th century residence and associated barn were identified adjacent

to the Study Area. It was also determined that the Thames River is located west of the Study Area. These previously identified and potential heritage resources are summarized in Table 2.

Table 2 Previously Identified and Potential Heritage Resources

Location of Previously Identified or Potential Resource	Heritage Status	Description
16615 Thorndale Road	Identified as part of Desktop Review	Property containing a 19th century residence and associated barn. Based on available digital imagery, the residence appears to be a one and one half storey structure with a front facing gable roof. It is clad in siding and has a projecting, three bay window on the front (north) façade. There is a transom window above the door. The windows and door have decorative wooden surrounds. The residence has a one storey addition with a side gable roof and picture windows on its west side. The barn is a timber clad structure. The barn's roof type and the foundation materials for the residence and barn could not be confirmed from available imagery. The property also contains a windbreak of large coniferous and deciduous trees.
Thames River	CHRS	The Study Area is located within the watershed of the Thames River. The Thames River is a 273 kilometre River that was designated as a Canadian Heritage River in 2000 (CHRS 2025). The river has cultural heritage value for its association with Canada's Aboriginal Peoples and connections to Euro-Canadian exploration, settlement, and history.

The structures located at 16615 Thorndale Road are more than 50 metres from the Study Area and no direct or indirect impacts are anticipated due to Alternative 1. The Study Area is also located within the Thames River Watershed, which has been identified as a CHRS. No upgrades to the existing outfall to the Thames River are required as part of the Project and construction will be limited to within the existing Site Boundary. Therefore, no direct or indirect impacts to the Thames River are anticipated due to Alternative 1.

3.3 Alternative 2

Alternative 2 includes the construction of a flow equalization tank as well as SBR and sludge holding tanks and a temporary filter building within the existing Site Boundary at 1135 Ideal Drive. Although it contains a different configuration of Project Components, Alternative 2 has the same Site Boundary as Alternative 1.

3.3.1 Mapping Review

See Section 3.2.1 for mapping review findings.

3.3.2 Database Review

See Section 3.2.2 for database review findings.

3.3.3 Discussion

Based on an understanding of the historical development of the area, a review of mapping, and a review of Google Street View photography, there is one 19th century residence and associated barn adjacent to the Study Area as outlined in Section 3.2.1, 3.2.2, and Table 2. However, these structures, located at present-day 16615 Thorndale Road, are more than 50 metres from the Study Area and no direct or indirect impacts are anticipated due to Alternative 2. As discussed in Section 3.2.3, the Study Area is also located within the Thames River Watershed, which has been identified as a CHRS. No upgrades to the existing outfall to the Thames River are required as part of the Project and construction will be limited to within the existing site boundary. Therefore, no direct or indirect impacts to the Thames River are anticipated due to Alternative 2.

4 Community Input

Community input was conducted to determine the presence of previously identified built heritage resources and cultural heritage landscapes. Table 3 summarizes the results.

Table 3 Summary of Community Input

Organization	Contact	Results
MCM	Karla Barboza, Team Lead, Heritage	The MCM is not aware of any provincial heritage properties or properties designated by the Minister within or adjacent to the Study Area.
OHT	Samuel Bayefsky, Real Property Coordinator	No OHT owned properties or conservation easements within or adjacent to the Study Area.
County of Middlesex	Alana Kertesz, Planner	No response had been received at the time this memo was prepared. No designated or priority properties were identified within or adjacent to the Study Area based on the lists available on the municipal website (Municipality of Thames Centre 2024).

5 Engagement

Engagement with local communities and Indigenous communities will be undertaken as part of the Schedule C Municipal Class EA being undertaken for the Project. No further consideration of engagement will be provided in this Cultural Heritage Screening.

6 Results

6.1 Alternative 1

Table 4 MCM Checklist Results for Alternative 1

Indicators of Cultural Heritage Value or Interest (CHVI)	Identified within the Study Area
Property identified, designated or otherwise protected under the OHA as being of cultural heritage value.	Not Identified
A National Historic Site (or part of)	Not Identified
Designated under the *Heritage Railway Stations Protections Act*	Not Identified
Designated under the Heritage *Lighthouse Protection Act*	Not Identified
Identified as a Federal Heritage Building by the Federal Heritage Buildings Review Office	Not Identified
Located within a UNESCO World Heritage Site	Not Identified
Is the subject of a municipal, provincial or federal commemorative or interpretative plaque	Not Identified
Has or is adjacent to a known burial site and/or cemetery	Not Identified
Is in a Canadian Heritage River watershed	Identified
Contains buildings or structures that are 40 or more years old	Identified
Local or Aboriginal knowledge that the property is considered a landmark in the local community or contains structures or sites that are important in defining the character of the area	Not Identified
Local or Aboriginal knowledge that the property has a special association with a community, person, or historical event	Not Identified
Local or Aboriginal knowledge that the property contains or is part of a cultural heritage landscape	Not Identified

6.2 Alternative 2

Table 5 MCM Checklist Results for Alternative 2

Indicators of Cultural Heritage Value or Interest (CHVI)	Identified within the Study Area
Property identified, designated or otherwise protected under the OHA as being of cultural heritage value.	Not Identified
A National Historic Site (or part of)	Not Identified
Designated under the *Heritage Railway Stations Protections Act*	Not Identified
Designated under the Heritage *Lighthouse Protection Act*	Not Identified
Identified as a Federal Heritage Building by the Federal Heritage Buildings Review Office	Not Identified

Reference: Thorndale Wastewater Treatment Plant Expansion Environmental Study Report: Cultural Heritage Screening

Indicators of Cultural Heritage Value or Interest (CHVI)	Identified within the Study Area
Located within a UNESCO World Heritage Site	Not Identified
Is the subject of a municipal, provincial or federal commemorative or interpretative plaque	Not Identified
Has or is adjacent to a known burial site and/or cemetery	Not Identified
Is in a Canadian Heritage River watershed	Identified
Contains buildings or structures that are 40 or more years old	Identified
Local or Aboriginal knowledge that the property is considered a landmark in the local community or contains structures or sites that are important in defining the character of the area	Not Identified
Local or Aboriginal knowledge that the property has a special association with a community, person, or historical event	Not Identified
Local or Aboriginal knowledge that the property contains or is part of a cultural heritage landscape	Not Identified

7 Recommendations

7.1 Alternative 1

The Study Area meets two indicators of CHVI: it contains one potential built heritage resource over 40 years of age (16615 Thorndale Road) and is located next to a CHRS (the Thames River). However, the construction activities associated with Alternative 1 will be limited to the existing Site Boundary and are located more than 50 metres from the potential built heritage resource. No upgrades to the existing outfall to the Thames River are required as part of the Project. Therefore, no direct or indirect impacts are anticipated due to Alternative 1 and no further cultural heritage studies are recommended.

7.2 Alternative 2

The Study Area meets two indicators of CHVI: it contains one potential built heritage resource over 40 years of age (16615 Thorndale Road) and is located next to a CHRS (the Thames River). However, the construction activities associated with Alternative 2 will be limited to the existing Site Boundary are located more than 50 metres from the potential built heritage resource. No upgrades to the existing outfall to the Thames River are required as part of the Project. Therefore, no direct or indirect impacts are anticipated due to Alternative 2 and no further cultural heritage studies are recommended.

8 Closure

This memorandum has been prepared for the sole benefit of the Municipality of Thames Centre and may not be used by any third party without the express written consent of Stantec Consulting Ltd. and the Municipality of Thames Centre.

We trust this memo meets your current requirements. Please do not hesitate to contact us should you require further information or have additional questions about any facet of this report.

Sincerely,

STANTEC CONSULTING LTD.

Digitally signed by Como, Jenn
Date: 2025.01.28 13:00:31 -05'00'

Jenn Como
Cultural Heritage Specialist
Phone: (226) 927-5319
jenn.como@stantec.com

Digitally signed by Rivard, Meaghan
Date: 2025.01.28 13:10:13 -05'00'

Meaghan Rivard
Associate, Senior Cultural Heritage Specialist
Phone: (226) 268-9025
meaghan.rivard@stantec.com

Attachments:
Attachment A MCM Checklist

8 References

CanadaGenWeb. 2023. Cemetery Project. Electronic Document: https://cemetery.canadagenweb.org/. Last accessed November 30, 2023.

Caston, Wayne. 1997. Evolution in the Mapping of Southern Ontario and Wellington County. In Wellington County History, 10, 91-106.

CHRS [Canadian Heritage Rivers Systems]. 2025. The Rivers. Electronic Document: https://chrs.ca/en. Last accessed January 2, 2025.

Crispino, M. and M. D'Apuzzo. 2001. Measurement and Prediction of Traffic-induced Vibrations in a Heritage Building. Journal of Sound and Vibration 246(2): 319-335.

Department of National Defence. 1936. *Topographic Map, Ontario, Lucan Sheet*.

Department of Energy, Mines and Resources. 1973. *Topographic Map, Ontario, Crumlin Sheet.*

Ellis, P. 1987. Effects of Traffic Vibration on Historic Buildings. The Science of the Total Environment. 59: 37-45.

Gentilcore, R. Louis and C. Grant Head. 1984. Ontario's History in Maps. Toronto: University of Toronto Press.

Government of Ontario. 2006. "InfoSheet #5: Heritage Impact Assessments and Conservation Plans" in *Heritage Resources in the Land Use Planning Process, Cultural Heritage and Archaeology Policies of the Ontario Provincial Policy Statement, 2005*. Toronto: Ministry of Tourism, Culture and Sport

H.R. Page & Co. 1878. "Map of the Township of Nissouri West" in *Illustrated Historical Atlas of the County of Middlesex, Ontario.* Toronto: H.R. Page & Co.

MCM. 2016. Criteria for Evaluation Potential for Built Heritage Resources and Cultural Heritage Landscapes. Electronic Document: https://forms.mgcs.gov.on.ca/en/dataset/021-0500. Last Accessed: September 5, 2024.

Municipality of Thames Centre. 2024. *Heritage.* Electronic Document: https://www.thamescentre.on.ca/services/residents/heritage. Last Accessed: September 5, 2024.

National Park Service. 2001. *Identifying and Avoiding Risks from Adjacent Construction.* Electronic Document: https://www.nps.gov/orgs/1739/upload/tech-note-temporary-protection-03-during-construction.pdf. Last Accessed: January 2, 2025.

Ontario Heritage Act, R.S.O. 1990, c. O.18.

Ontario Heritage Trust. 2023. Plaque Database. Electronic Document: Last accessed November 30, 2023. https://www.heritagetrust.on.ca/zzztemp-disabled_online-plaque-guide.

Ontario Trails Council. 2023. Find a Trail. Electronic Document: Last Accessed November 30, 2023. https://www.ontariotrails.on.ca/trails.

Parks Canada. 2023a. Directory of Federal Heritage Designations. Electronic Document: https://www.pc.gc.ca/apps/dfhd/search-recherche_eng.aspx. Last accessed November 30, 2023.

Parks Canada. 2023b. Canada's Historic Places, Canadian Register. Electronic Document: https://www.historicplaces.ca/en/pages/about-apropos.aspx. Last accessed November 30, 2023.

Rainer, J.H. 1982. Effect of Vibrations on Historic Buildings. The Association for Preservation Technology Bulletin. 14 (1): 2-10.

UNESCO. 2023. World Heritage List. Electronic Document: https://whc.unesco.org/en/list/. Last accessed November 30, 2023.

Wiss, J.F. 1981. Construction Vibrations; State-of-the-Art. Journal of Geotechnical Engineering Division. 107: 167-181.

Attachment A MCM Checklist

Project or Property Name

Thorndale WWTP Expansion Environmental Study Report: Cultural Heritage Screening - Alternative 1

Project or Property Location (upper and lower or single tier municipality)

Municipality of Thames Centre, County of Middlesex

Proponent Name

Municipality of Thames Centre

Proponent Contact Information

Screening Questions

	Yes	No
1. Is there a pre-approved screening checklist, methodology or process in place?	☐	☑

If Yes, please follow the pre-approved screening checklist, methodology or process.

If No, continue to Question 2.

Part A: Screening for known (or recognized) Cultural Heritage Value

	Yes	No
2. Has the property (or project area) been evaluated before and found **not** to be of cultural heritage value?	☐	☑

If Yes, do **not** complete the rest of the checklist.

The proponent, property owner and/or approval authority will:

- summarize the previous evaluation and
- add this checklist to the project file, with the appropriate documents that demonstrate a cultural heritage evaluation was undertaken

The summary and appropriate documentation may be:

- submitted as part of a report requirement
- maintained by the property owner, proponent or approval authority

If No, continue to Question 3.

	Yes	No
3. Is the property (or project area):		
a. identified, designated or otherwise protected under the *Ontario Heritage Act* as being of cultural heritage value?	☐	☑
b. a National Historic Site (or part of)?	☐	☑
c. designated under the *Heritage Railway Stations Protection Act*?	☐	☑
d. designated under the *Heritage Lighthouse Protection Act*?	☐	☑
e. identified as a Federal Heritage Building by the Federal Heritage Buildings Review Office (FHBRO)?	☐	☑
f. located within a United Nations Educational, Scientific and Cultural Organization (UNESCO) World Heritage Site?	☐	☑

If Yes to any of the above questions, you need to hire a qualified person(s) to undertake:

- a Cultural Heritage Evaluation Report, if a Statement of Cultural Heritage Value has not previously been prepared or the statement needs to be updated

If a Statement of Cultural Heritage Value has been prepared previously and if alterations or development are proposed, you need to hire a qualified person(s) to undertake:

- a Heritage Impact Assessment (HIA) – the report will assess and avoid, eliminate or mitigate impacts

If No, continue to Question 4.

Part B: Screening for Potential Cultural Heritage Value

	Yes	No
4. Does the property (or project area) contain a parcel of land that:		
a. is the subject of a municipal, provincial or federal commemorative or interpretive plaque?	☐	☑
b. has or is adjacent to a known burial site and/or cemetery?	☐	☑
c. is in a Canadian Heritage River watershed?	☑	☐
d. contains buildings or structures that are 40 or more years old?	☑	☐

Part C: Other Considerations

	Yes	No
5. Is there local or Aboriginal knowledge or accessible documentation suggesting that the property (or project area):		
a. is considered a landmark in the local community or contains any structures or sites that are important in defining the character of the area?	☐	☑
b. has a special association with a community, person or historical event?	☐	☑
c. contains or is part of a cultural heritage landscape?	☐	☑

If Yes to one or more of the above questions (Part B and C), there is potential for cultural heritage resources on the property or within the project area.

You need to hire a qualified person(s) to undertake:

- a Cultural Heritage Evaluation Report (CHER)

If the property is determined to be of cultural heritage value and alterations or development is proposed, you need to hire a qualified person(s) to undertake:

- a Heritage Impact Assessment (HIA) – the report will assess and avoid, eliminate or mitigate impacts

If No to all of the above questions, there is low potential for built heritage or cultural heritage landscape on the property.

The proponent, property owner and/or approval authority will:

- summarize the conclusion
- add this checklist with the appropriate documentation to the project file

The summary and appropriate documentation may be:

- submitted as part of a report requirement e.g. under the *Environmental Assessment Act, Planning Act* processes
- maintained by the property owner, proponent or approval authority

Project or Property Name

Thorndale WWTP Expansion Environmental Study Report: Cultural Heritage Screening - Alternative 2

Project or Property Location (upper and lower or single tier municipality)

Municipality of Thames Centre, County of Middlesex

Proponent Name

Municipality of Thames Centre

Proponent Contact Information

Screening Questions

	Yes	No
1. Is there a pre-approved screening checklist, methodology or process in place?	☐	☑

If Yes, please follow the pre-approved screening checklist, methodology or process.

If No, continue to Question 2.

Part A: Screening for known (or recognized) Cultural Heritage Value

	Yes	No
2. Has the property (or project area) been evaluated before and found **not** to be of cultural heritage value?	☐	☑

If Yes, do **not** complete the rest of the checklist.

The proponent, property owner and/or approval authority will:

- summarize the previous evaluation and
- add this checklist to the project file, with the appropriate documents that demonstrate a cultural heritage evaluation was undertaken

The summary and appropriate documentation may be:

- submitted as part of a report requirement
- maintained by the property owner, proponent or approval authority

If No, continue to Question 3.

	Yes	No
3. Is the property (or project area):		
a. identified, designated or otherwise protected under the *Ontario Heritage Act* as being of cultural heritage value?	☐	☑
b. a National Historic Site (or part of)?	☐	☑
c. designated under the *Heritage Railway Stations Protection Act*?	☐	☑
d. designated under the *Heritage Lighthouse Protection Act*?	☐	☑
e. identified as a Federal Heritage Building by the Federal Heritage Buildings Review Office (FHBRO)?	☐	☑
f. located within a United Nations Educational, Scientific and Cultural Organization (UNESCO) World Heritage Site?	☐	☑

If Yes to any of the above questions, you need to hire a qualified person(s) to undertake:

- a Cultural Heritage Evaluation Report, if a Statement of Cultural Heritage Value has not previously been prepared or the statement needs to be updated

If a Statement of Cultural Heritage Value has been prepared previously and if alterations or development are proposed, you need to hire a qualified person(s) to undertake:

- a Heritage Impact Assessment (HIA) – the report will assess and avoid, eliminate or mitigate impacts

If No, continue to Question 4.

Part B: Screening for Potential Cultural Heritage Value

	Yes	No
4. Does the property (or project area) contain a parcel of land that:		
a. is the subject of a municipal, provincial or federal commemorative or interpretive plaque?	☐	☑
b. has or is adjacent to a known burial site and/or cemetery?	☐	☑
c. is in a Canadian Heritage River watershed?	☑	☐
d. contains buildings or structures that are 40 or more years old?	☑	☐

Part C: Other Considerations

	Yes	No
5. Is there local or Aboriginal knowledge or accessible documentation suggesting that the property (or project area):		
a. is considered a landmark in the local community or contains any structures or sites that are important in defining the character of the area?	☐	☑
b. has a special association with a community, person or historical event?	☐	☑
c. contains or is part of a cultural heritage landscape?	☐	☑

If Yes to one or more of the above questions (Part B and C), there is potential for cultural heritage resources on the property or within the project area.

You need to hire a qualified person(s) to undertake:

- a Cultural Heritage Evaluation Report (CHER)

If the property is determined to be of cultural heritage value and alterations or development is proposed, you need to hire a qualified person(s) to undertake:

- a Heritage Impact Assessment (HIA) – the report will assess and avoid, eliminate or mitigate impacts

If No to all of the above questions, there is low potential for built heritage or cultural heritage landscape on the property.

The proponent, property owner and/or approval authority will:

- summarize the conclusion
- add this checklist with the appropriate documentation to the project file

The summary and appropriate documentation may be:

- submitted as part of a report requirement e.g. under the *Environmental Assessment Act, Planning Act* processes
- maintained by the property owner, proponent or approval authority

Appendix F Technical Memos

F.1 Technical Memorandum 1

Stantec Consulting Ltd.
200-835 Paramount Drive
Stoney Creek ON L8J 0B4

February 23, 2024

Project/File: 165630251

London MECP District
733 Exeter Road
London ON
N6E 1L3

Dear Director,

Reference: ECA # 0955-8MKJNP Thorndale WWTP Performance Review

PURPOSE

The purpose of this letter is to address clause 6.(4) of the Terms and Conditions set out in the ECA for the Thorndale WWTP which states

“Within 180 days after the Average Daily Flow of the Works reaches 50% of its Rated Capacity of 674 m3/day, the Owner shall complete a detailed performance assessment of the Works to determine whether the Works will have to be upgraded, through the installation of a tertiary filtration system or otherwise, in order to be able to meet the effluent objectives and effluent limits once the Works begins to receive Average Daily Flow exceeding 50% of its Rated Capacity of 674 m3/day, and the Owner shall submit to the Director for approval a " Contingency Plan" which outlines the outcome of the performance assessment, detailed contingency plans, and any need for an upgrade of the Works

DESCRIPTION OF EXISTING WASTEWATER TREATMENT PLANT

The Thorndale WWTP has a design capacity of 674 m^3/day. Wastewater flow entering the plant via the low-lift pumping station is screened through a mechanically cleaned bar screen, discharged to grit channels, then enters the pre-react zone prior to entering the Sequencing Batch Reactors (SBRs). Alum is used for phosphorus removal. Decanted effluent from the SBR is directed to an ultraviolet disinfection system, then enters an effluent chamber prior to discharge to the Thames River.

TREATMENT AND COMPLIANCE REQUIREMENTS

The treatment plant operates under an Amended Environmental Compliance Approval (ECA) No. 0955-8MKJNP issued on October 12, 2011. The current ECA outlines the effluent compliance limits and objectives for the facility, which are summarized in Table 1.

Reference: **Thorndale WWTP Performance Review**

Table 1 - Effluent Objectives and Non-compliance Limits

	Effluent Objectives		Effluent Limits	
Effluent Parameter	**Average Concentration (milligrams per litre unless otherwise indicated)**	**Average Waste Loading (kilograms per day unless otherwise indicated)**	**Average Concentration (milligrams per litre unless otherwise indicated)**	**Average Waste Loading (kilograms per day unless otherwise indicated)**
$cBOD_5$	5.0	3.37	10	6.37
Total suspended solids	5.0	3.37	10	6.37
Total Phosphorus	0.5	0.34	0.65	0.44
Total Ammonia Nitrogen Non-freezing season (May 1 to Oct 31)	3.2	2.16	4.1	2.76
Total Ammonia Nitrogen Freezing season (Nov 1 to April 30)	7.0	4.72	8.6	5.8
E. coli	100 E. Coli/100 mL (monthly Geometric Mean Density)		100 E. Coli/100 mL (monthly Geometric Mean Density)	-
pH of the effluent maintained between 6.0 to 9.5, inclusive, at all times				
Notes: The ECA also indicates the best effort to: (1) operate at the Rated Capacity. (2) ensure that the effluent is essentially free of floating and settleable solids and does not contain oil or any other substance in amounts sufficient to create a visible film or sheen or foam or discoloration on the receiving waters.				

Plant Effluent Characteristics

Table 2 - Thorndale WWTP Annual Average Effluent Parameters 2018 - 2023

Effluent Parameter	2018	2019	2020	2021	2022	2023
$cBOD_5$ (mg/L)	3	3	2.9	2.393	2.46	2.75
Total suspended solids (mg/L)	2.3	3.2	3.4	4.4	2.6	8.9
Total Phosphorus (mg/L)	0.15	0.13	0.23	0.29	0.16	0.16
Total Ammonia Nitrogen (mg/L) Non-freezing season (May 1 to Oct 31)	2.41	1.22	1.14	0.28	0.71	0.9
Total Ammonia Nitrogen (mg/L) Freezing season (Nov 1 to April 30)	0.61	0.99	1.85	2.18	0.32	0.92
E. coli	12.59	7.51	8.36	11.49	14.68	29.27
Monthly Exceedances: $cBOD_5$ – none TSS – September 2021: 20.5 mg/L; April 2023: 60 mg/L TP – December 2020: 0.84 mg/L; January 2021: 0.77 mg/L						

Reference: Thorndale WWTP Performance Review

E. Coli – March 2023: 102.3 CFU/100mL; April 2023: 260.1 mg/L
pH & Temperature: none

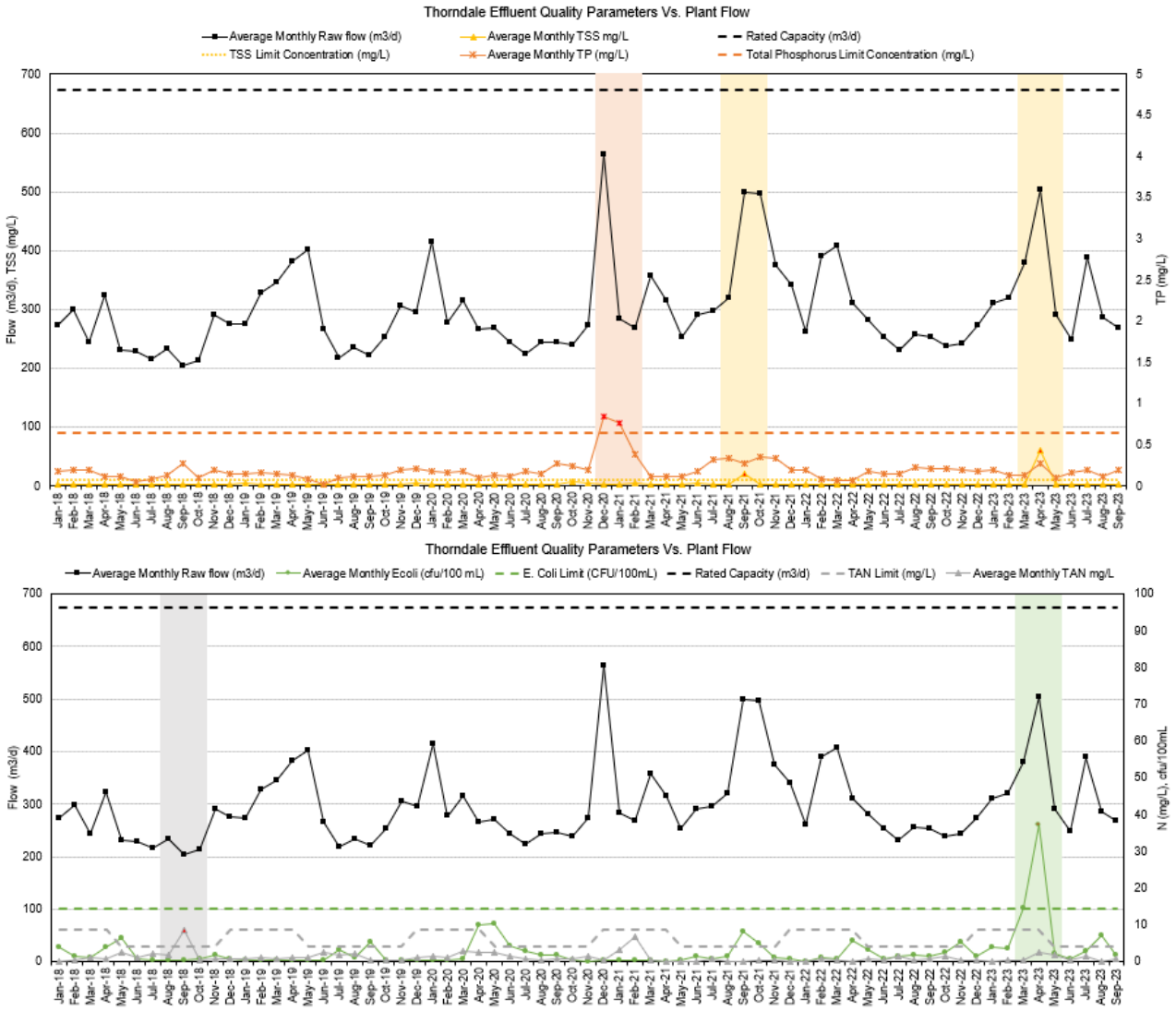


Figure 1 - Thorndale WWTP Effluent Parameters vs. Flow

Policy 2 Receiver – Assimilative Capacity Study Review

The Assimilative Capacity Study (ACS) Completed by AECOM (Nov. 2009) proposed effluent criteria for the then future Thorndale WWTP which was used to create the ECA effluent limits provided above in Table 1.

Reference: Thorndale WWTP Performance Review

The Thames River is the effluent receiver for the Thorndale WWTP and was deemed a Policy 2 receiver with respect to phosphorus as the river 75th percentile phosphorus levels were above the Provincial Water Quality Objective (PWQO) of 0.03 mg/L at 0.09 mg/L. Policy 2 states that the "water quality which presently does not meet the PWQO shall not be degraded further and all practical measures shall be taken to upgrade the water quality to the objectives". The TP effluent objective in the first stage of the WWTP with rated capacity of 674 m^3/d was not projected to affect the Thames River TP concentration of 0.09 mg/L. The WWTP effluent limits were based on the receiver maximum compliance criterion of 0.84 kg/d which was used to outline a maximum future rated capacity of 1,294 m^3/d at the effluent limit of 0.65 mg/L of TP. The current effluent limit of 0.44kg/d is based on the same effluent limit for the rated capacity of 0.65 mg/L.

Findings

This review of historical operating and performance data (2018 to September 2023) has been used to define the status of the overall plant and the individual unit processes. Overall, the plant is operating at an average daily raw flow of 300 m^3/d, representing approximately 45 percent of the annual average rated plant capacity.

As Thorndale WWTP approached the end of 2023 it reached 50.6% of it's rated capacity, and the plant appears to be operating very well. The loading and operating parameters for each unit process are adequate in comparison to the MECP Design Guideline values. Thorndale WWTP has consistently produced a high-quality effluent with average concentrations of 2.75 mg/L $cBOD_5$, 3.92 mg/L TSS, 0.18 mg/L TP, and 1.12 mg/L TAN, respectively, over the 2018-2023 period reviewed.

Contingency Plan

The contingency plan for the expansion of the Thorndale WWTP is to continue monitoring the effluent data and respond with tertiary treatment should a trend develop towards exceeding effluent limits.

Regards,

STANTEC CONSULTING LTD.

LICENSED PROFESSIONAL ENGINEER
Kevin Vitone
K. V. VITONE
100503002
Feb. 23. 2024
PROVINCE OF ONTARIO

Parnian Izadi

Kevin Vitone P. Eng.
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Parnian Izadi PhD.
Process EIT
Phone: 416-598-6692
Parnian.izadi@stantec.com

Attachment: Thorndale WWTP ECA

Reference: Thorndale WWTP Performance Review

Ontario

Ministry of the Environment
Ministère de l'Environnement

AMENDED CERTIFICATE OF APPROVAL
MUNICIPAL AND PRIVATE SEWAGE WORKS
NUMBER 0955-8MKJNP
Issue Date: October 12, 2011

The Corporation of the Municipality of Thames Centre
4305 Hamilton Rd
Dorchester, Ontario
N0L 1G3

Site Location: Thorndale Wastewater Treatment Plant
16651 Thorndale Road, Thorndale, Ontario
Municipality of Thames Centre, County of Middlesex

You have applied in accordance with Section 53 of the Ontario Water Resources Act for approval of:

the establishment of a wastewater treatment plant with a Phase I *Rated Capacity* of 674 m^3/day and an *Peak Flow Rate* of 2,436 m^3/day, located in the Municipality of Thames Centre, County of Middlesex, consisting of the following:

PROPOSED SEWAGE WORKS:

Main Pumping Station and Forcemain

- three (3) submersible sewage pumps (two duty, one standby), both duty pumps providing a firm pump station capacity of 28.2 L/sec, conveying raw sewage via 150 mm and 200 mm diameter forcemains to the inlet works of the Thorndale Wastewater Treatment Plant described below;
- including all associated controls and appurtenances.

Sewage Treatment Plant

Screen and Grit Channels

- two (2) inlet screen channels (one duty, one standby) equipped with float switches for high level alarm, one (1) perforated plate auger screen installed in the duty channel discharging to a screenings

collection bin, and a weir to allow bypass of excess flow to the standby channel;

- two (2) 450 mm wide x 6.4 m long concrete grit channels (one duty, one standby) each equipped with proportional weir designed to maintain flow velocity in the channel at approximately 0.3 m/sec and designed to handle Phase 2 peak flow of 3,600 m^3/day; and

- five (5) flow split box/weir arrangements directing sewage flows to the Sequencing Batch Reactor (SBR) described below;

Sequencing Batch Reactors (SBR)

- two (2) parallel Sequencing Batch Reactors (SBR) - Intermittent Cycle Extended Aeration System (ICEAS) basins with a combined *Rated Capacity* of 674 m^3/day and *Peak Flow Rate* of 2,436 m^3/day, each basin consisting of one (1) pre-react zone with approximate dimensions of 2.5 m long x 4.7 m wide x 5.5 m SWD and one (1) SBR basin with approximate dimensions of 4.7 m wide x 17.3 m long x 5.5 m SWD equipped with one hundred and twenty eight (128) fine bubble aeration diffusers, one (1) 6.8 L/sec at 4.1 m TDH capacity submersible WAS pump, one (1) motorized decanter with a rated capacity of 44.2 L/sec and a peak capacity of 68.3 L/sec, and one (1) decant chamber, discharging to an effluent UV disinfection system described below;

Air Blowers

- one (1) air blower with a capacity of 7.6 m^3/min of standard air at 56.5 kPa on duty to supply air to the SBR basin;

- one (1) air blower with a capacity of 11.6 m^3/min of standard air at 60.7 kPa on duty to supply air to the Aerated Sludge Holding Tank (ASHT);

- one (1) air blower with a capacity of 11.6 m^3/min of standard air at 60.7 kPa on standby to supply air to the Aerated Sludge Holding Tank (ASHT) and SBR;

Phosphorus Removal System

- one (1) 15,000 L capacity chemical storage tank equipped with two (2) positive displacement chemical feed pumps (one duty, one standby), each pump with a rated capacity of 12.0 L/hr dosing alum to each of the SBR basins;

UV Disinfection System

- one (1) UV disinfection system designed to handle a peak flow of 2,436 m^3/day, consisting of one (1) 305 mm wide x 7.66 m long UV channel containing two (2) banks in series (one duty, one standby), each bank containing eighteen (18) low pressure medium intensity UV lamps, designed to achieve a UV dose of 24 mJ/cm^2 at a minimum of 65% UV transmittance @ 253.7 nm, equipped with a weir to ensure that the lamps are always submerged and a 450 mm diameter bypass pipe for operational

maintenance purposes;

Aerated Sludge Holding Tank (ASHT)

- one (1) 480 m^3 storage capacity Aerated Sludge Holding Tank (ASHT) with approximate dimension of 9.9 m wide x 10.5 m long x 5.5 m SWD equipped with three hundred (300) fine bubble aeration diffusers, one (1) 26.5 L/sec at 8.0 m TDH capacity submersible sludge transfer pump to load biosolids into haul trucks for off-site disposal, one (1) 37.7 L/sec mechanical decanter, and one (1) 6.1 L/sec capacity submersible supernatant pump discharging to the inlet works;

- use of a 145 m^3 portion of the 480 m^3 ASHT as a SBR during the initial period of the sewage treatment plant when plant flows are less than 110 m^3/day fitted with a separate decanter, waste activated sludge (WAS) transfer pump and forty six (46) fine bubble aeration diffusers;

Effluent Outfall

- one (1) approximately 162.6 m long 450 mm diameter effluent outfall sewer line from the UV Disinfection System discharging through one (1) approximately 125.8 m long 900 mm diameter sewer to Thames River complete with manholes;

Standby Power

- one (1) 200 kW capacity diesel standby power generator installed in a sound attenuated outdoor enclosure;

Control Building

- a control (administrative) building housing blower room, chemical storage room, electrical room, utility room, control room (SCADA), and wash room;

- including all associated controls and appurtenances.

all in accordance with the Application for Approval of Municipal and Private Sewage Works submitted by the Municipality of Thames Centre dated December 17, 2010 and design specifications and drawings prepared by Stantec Consulting Ltd., London, Ontario and the following documents:

1. "Thorndale WWTP Class EA - Technical Memorandum - Assimilative Capacity Study" dated November 13, 2009, prepared by AECOM Canada Ltd., Brampton, Ontario.

2. " Municipality of Thames Centre - Environmental Study Report for Wastewater Servicing the Community of Thorndale" dated November 13, 2009, prepared by AECOM Canada Ltd., Brampton, Ontario.

3. "Notice of Study Completion Schedule C Class Environmental Assessment for Thorndale Wastewater Treatment Plant in the Municipality of Thames Centre" November 12, 2009.

4. "Thorndale WWTP Design Brief"dated December 2010 prepared by Stantec Consulting Ltd., London, Ontario.

5. Revised "Table QF-1 Technical Data Form Sequencing Batch Reactor Treatment Process Equipment" dated April 2010 prepared by Stantec Consulting Ltd. submitted on April 19, 2011.

6. Decision dated September 21, 2011 by the Environmental Review Tribunal on the appeal filed by the Corporation of the Municipality of Thames Centre under Case No. 11-028 with respect to Conditions 6(4) and 6(5) of Certificate of Approval No. 0074-8EET4C issued on April 29, 2011.

For the purpose of this Certificate of Approval and the terms and conditions specified below, the following definitions apply:

"*Act* " means the Ontario Water Resources Act, R.S.O. 1990, Chapter 0.40, as amended;

"*Average Daily Flow* " means the cumulative total sewage flow to the sewage works during a calendar year divided by the number of days during which sewage was flowing to the sewage works that year;

"*BOD5* " (also known as $TBOD_5$) means five day biochemical oxygen demand measured in an unfiltered sample and includes carbonaceous and nitrogenous oxygen demand;

"*By-pass"* means any discharge from the *Works* that does not undergo any treatment before it is discharged to the environment;

"*CBOD5* " means five day carbonaceous (nitrification inhibited) biochemical oxygen demand measured in an unfiltered sample;

"*Certificate* " means this entire certificate of approval document, issued in accordance with Section 53 of the *Act* , and includes any schedules;

"*Daily Concentration* " means the concentration of a contaminant in the effluent discharged over any single day, as measured by a composite or grab sample, whichever is required;

"*Director* " means any *Ministry* employee appointed by the Minister pursuant to section 5 of the *Act* ;

"*District Manager* " means the District Manager of the London District Office of the Ministry;

"*E. Coli* " refers to the thermally tolerant forms of Escherichia that can survive at 44.5 degrees Celsius;

"*Geometric Mean Density* " is the nth root of the product of multiplication of the results of n number of samples over the period specified;

"*Individual Waste Loading"* means the loading expressed in kilograms per day and calculated by multiplying the concentration of a parameter in a sample by the total volume of effluent discharged from the works during the day in which the sample is taken;

"*Ministry* " means the Ontario Ministry of the Environment;

"*Monthly Average Concentration* " means the arithmetic mean of all *Daily Concentrations* of a contaminant in the effluent sampled or measured, or both, during a calendar month;

"*Monthly Average Daily Flow"* means the cumulative total sewage flow to the sewage works during a calendar month divided by the number of days during which sewage was flowing to the sewage works that month;

"*Monthly Average Loading* " means the value obtained by multiplying the *Monthly Average Concentration* of a contaminant by the *Monthly Average Daily Flow* over the same calendar month;

"*Owner* " means The Municipality of Thames Centre and includes its successors and assignees;

"*Peak Flow Rate* " means the maximum rate of sewage flow for which the plant or process unit was designed;

"Previous Works " means those portions of the sewage works previously constructed and approved under a certificate of approval;

"Proposed Works " means the sewage works described in the *Owner* 's application, this *Certificate* and in the supporting documentation referred to herein, to the extent approved by this *Certificate* ;

"*Rated Capacity* " means the *Average Daily Flow* for which the *Works* are approved to handle;

"*Regional Director* " means the Regional Director of the Southwestern Region of the Ministry;

"Substantial Completion" has the same meaning as *"substantial performance* " in the Construction Lien Act; and

"*Works* " means the sewage works described in the *Owner* 's application, this *Certificate* and in the supporting documentation referred to herein, to the extent approved by this *Certificate* and includes both *Previous Works* and *Proposed Works* .

You are hereby notified that this approval is issued to you subject to the terms and conditions outlined below:

TERMS AND CONDITIONS

1. GENERAL PROVISIONS

(1) The *Owner* shall ensure that any person authorized to carry out work on or operate any aspect of the *Works* is notified of this *Certificate* and the conditions herein and shall take all reasonable measures to ensure any such person complies with the same.

(2) Except as otherwise provided by these Conditions, the *Owner* shall design, build, install, operate and maintain the *Works* in accordance with the description given in this *Certificate*, the application for approval of the works and the submitted supporting documents and plans and specifications as listed in this *Certificate*.

(3) Where there is a conflict between a provision of any submitted document referred to in this *Certificate* and the Conditions of this *Certificate*, the Conditions in this *Certificate* shall take precedence, and where there is a conflict between the listed submitted documents, the document bearing the most recent date shall prevail.

(4) Where there is a conflict between the listed submitted documents, and the application, the application shall take precedence unless it is clear that the purpose of the document was to amend the application.

(5) The requirements of this *Certificate* are severable. If any requirement of this *Certificate*, or the application of any requirement of this *Certificate* to any circumstance, is held invalid or unenforceable, the application of such requirement to other circumstances and the remainder of this certificate shall not be affected thereby.

2. EXPIRY OF APPROVAL

The approval issued by this *Certificate* will cease to apply to those parts of the *Proposed Works* which have not been constructed within five (5) years of the date of this *Certificate*.

3. CHANGE OF OWNER

(1) The *Owner* shall notify the *District Manager* and the *Director*, in writing, of any of the following changes within 30 days of the change occurring:

(a) change of *Owner*;

(b) change of address of the *Owner*;

(c) change of partners where the *Owner* is or at any time becomes a partnership, and a copy of the most recent declaration filed under the Business Names Act, R.S.O. 1990, c.B17 shall be included in the notification to the *District Manager*;

(d) change of name of the corporation where the *Owner* is or at any time becomes a corporation, and a copy of the most current information filed under the Corporations

Information Act, R.S.O. 1990, c. C39 shall be included in the notification to the *District Manager* ;

(2) In the event of any change in ownership of the *Works* , other than a change to a successor municipality, the *Owner* shall notify in writing the succeeding owner of the existence of this *Certificate* , and a copy of such notice shall be forwarded to the *District Manager* and the *Director* .

4. UPON THE SUBSTANTIAL COMPLETION OF THE WORKS

(1) Within one (1) year of the *Substantial Completion* of the *Proposed Works* , a set of as-built drawings showing the works "as constructed" shall be prepared. These drawings shall be kept up to date through revisions undertaken from time to time and a copy shall be retained at the *Works* for the operational life of the *Works* .

5. BY-PASSES

(1) Any *By-pass* of sewage from any portion of the *Works* is prohibited, except where:

(a) it is necessary to avoid loss of life, personal injury, danger to public health or severe property damage; or

(b) the *District Manager* agrees that it is necessary for the purpose of carrying out essential maintenance and the *District Manager* has given prior written acknowledgment of the *by-pass* ;

(2) The *Owner* shall collect at least one (1) grab sample of the *By-pass* and have it analyzed for the parameters outlined in Condition 7 using the protocols in Condition 9 (4).

(3) The *Owner* shall maintain a logbook of all *By-pass* events which shall include, at a minimum, the time, location, duration, quantity of *By-pass* , the authority for *By-pass* pursuant to subsection (1), and the reasons for the occurrence.

(4) The *Owner* shall, in the event of a *By-pass* event pursuant to subsection (1), disinfect the by-passed effluent prior to it reaching the receiver such that the receiver is not negatively impacted.

6. EFFLUENT OBJECTIVES

(1) The *Owner* shall use best efforts to design, construct and operate the *Works* with the objective that the concentrations of the materials named below as effluent parameters are not exceeded in the effluent from the *Works* .

Table 1 - Effluent Objectives		
Effluent Parameter	**Concentration Objective** (milligrams per litre unless otherwise indicated)	**Waste Loading** (kilograms per day unless otherwise indicated)
CBOD5	5.0	3.37
Total Suspended Solids	5.0	3.37
Total Phosphorus	0.5	0.34
Total Ammonia Nitrogen Non-freezing season (May 1 - Oct 31)	3.2	2.16
Total Ammonia Nitrogen Freezing season (Nov 1 - Apr 30)	7.0	4.72
E. *Coli*	100 E. Coli/100 mL (Monthly *Geometric Mean Density)*	-

(2) The *Owner* shall use best efforts to:

(a) maintain the pH of the effluent from the *Works* within the range of 6.5 to 8.5, inclusive, at all times;

(b) operate the works within the *Rated Capacity* of the *Works* ;

(c) ensure that the effluent from the *Works* is essentially free of floating and settleable solids and does not contain oil or any other substance in amounts sufficient to create a visible film or sheen or foam or discolouration on the receiving waters.

(3) The *Owner* shall include in all reports submitted in accordance with Condition 10 a summary of the efforts made and results achieved under this Condition.

(4) Within 180 days after the *Average Daily Flow* of the *Works* reaches 50% of its *Rated Capacity* of 674 m^3/day, the *Owner* shall complete a detailed performance assessment of the *Works* to determine whether the *Works* will have to be upgraded, through the installation of a tertiary filtration system or otherwise, in order to be able to meet the effluent objectives and effluent limits once the *Works* begins to receive *Average Daily Flow* exceeding 50% of its *Rated Capacity* of 674 m^3/day, and the *Owner* shall submit to the *Director* for approval a " **Contingency Plan"** which outlines the outcome of the performance assessment, detailed contingency plans, and any need for an upgrade of the *Works* .

(5) If an upgrade of the *Works* is required based on the assessment completed under Condition 6(4), within 120 days of completion of the assessment, the *Owner* shall submit to the *Director* an application for an amendment of the *Certificate* and a design brief for the proposed sewage works upgrade, including technical descriptions, design specifications, and design performance

of the proposed upgrade.

7. EFFLUENT LIMITS

(1) The *Owner* shall construct the *Proposed Works* and operate and maintain the *Works* such that the concentrations and waste loadings of the materials named below as effluent parameters are not exceeded in the effluent from the *Work* s.

Table 2 - Effluent Limits		
Effluent Parameter	**Average Concentration** (milligrams per litre unless otherwise indicated)	**Average Waste Loading** (kilograms per day unless otherwise indicated)
Column 1	Column 2	Column 3
CBOD5	10.0	6.74
Total Suspended Solids	10.0	6.74
Total Phosphorus	0.65	0.44
Total Ammonia Nitrogen Non-freezing season (May 1 - Nov 30)	4.1	2.76
Total Ammonia Nitrogen Freezing season (Dec 1 - Apr 30)	8.6	5.80
E. *Coli*	100 E. Coli/100 mL (Monthly *Geometric Mean Density)*	-
pH of the effluent maintained between 6.0 to 9.5, inclusive, at all times		

(2) For the purposes of determining compliance with and enforcing subsection (1):

(a) The *Monthly Average Concentration* of ***CBOD5*** and **Total Suspended Solids**, **Total Ammonia Nitrogen** and **Total Phosphorus** named in Column 1 of subsection (1) shall not exceed the corresponding maximum concentration set out in Column 2 of subsection (1).

(b) The *Monthly Geometric Mean Density* of ***E.* Coli** named in Column 1 of subsection (1) shall not exceed the corresponding maximum density set out in Column 2 of subsection (1).

(c) The *Monthly Average Loading* of a parameter named in Column 1 of subsection (1) shall not exceed the corresponding maximum waste loading set out in Column 3 of subsection (1).

(e) The pH of the effluent shall be maintained within the limits outlined in subsection (1), at all times.

(3) The effluent limits set out in subsection (1) shall come into effect three (3) months after the commencement of operation of the *Proposed Works* .

(4) Only those monitoring results collected during the corresponding time period shall be used in calculating the *Monthly Average Concentration* and *Monthly Average Loading* for this *Certificate.*

8. OPERATION AND MAINTENANCE

(1) The *Owner* shall exercise due diligence in ensuring that, at all times, the *Works* and the related equipment and appurtenances used to achieve compliance with this *Certificate* are properly operated and maintained. Proper operation and maintenance shall include effective performance, adequate funding, adequate operator staffing and training, including training in all procedures and other requirements of this *Certificate* and the *Act* and regulations, adequate laboratory facilities, process controls and alarms and the use of process chemicals and other substances used in the *Works* .

(2) The *Owner* shall prepare a revised operations manual within six (6) months of the commencement of operation of the *Proposed Works* , that includes, but not necessarily limited to, the following information:

(a) operating procedures for routine operation of the *Works* ;

(b) inspection programs, including frequency of inspection, for the *Works* and the methods or tests employed to detect when maintenance is necessary;

(c) repair and maintenance programs, including the frequency of repair and maintenance for the *Works* ;

(d) procedures for the inspection and calibration of monitoring equipment;

(e) a spill prevention control and countermeasures plan, consisting of contingency plans and procedures for dealing with equipment breakdowns, potential spills and any other abnormal situations, including notification of the *District Manager* ; and

(f) procedures for receiving, responding and recording public complaints, including recording any follow up actions taken.

(3) The *Owner* shall maintain the operations manual current and retain a copy at the location of the *Works* for the operational life of the *Works* . Upon request, the *Owner* shall make the manual available to *Ministry* staff.

(4) The *Owner* shall provide for the overall operation of the *Works* with an operator who holds a licence that is applicable to that type of facility and that is of the same class as or

higher than the class of the facility in accordance with Ontario Regulation 129/04.

9. MONITORING AND RECORDING

The *Owner* shall, upon commencement of operation of the *Works* , carry out the following monitoring program:

(1) All samples and measurements taken for the purposes of this *Certificate* are to be taken at a time and in a location characteristic of the quality and quantity of the effluent stream over the time period being monitored.

(2) For the purposes of this condition, the following definitions apply:

(a) Daily means once each day;

(b) Weekly means once each week;

(c) Monthly means once every month;

(d) Quarterly means once every three months;

(3) Samples shall be collected at the following sampling points, at the frequency specified, by means of the specified sample type and analyzed for each parameter listed and all results recorded:

Table 3 - Influent Monitoring
Sampling Location: Inlet Works

Parameters	Sample Type	Frequency
BOD5	Composite	Monthly
Total Suspended Solids	Composite	Monthly
Total Phosphorus	Composite	Monthly
Total Kjeldahl Nitrogen	Composite	Monthly

Table 4 - Effluent Monitoring
Sampling Location: Effluent Outfall

Parameters	Sample Type	Frequency
CBOD5	Composite	Weekly
Total Suspended Solids	Composite	Weekly
Total Phosphorus	Composite	Weekly
Total Ammonia Nitrogen	Composite	Weekly
E. Coli	Grab	Weekly
pH	On-line	Weekly

Temperature	On-line	Weekly

(4) The methods and protocols for sampling, analysis and recording shall conform, in order of precedence, to the methods and protocols specified in the following:

(a) the Ministry's Procedure F-10-1, “Procedures for Sampling and Analysis Requirements for Municipal and Private Sewage Treatment Works (Liquid Waste Streams Only), as amended from time to time by more recently published editions;

(b) the Ministry's publication "Protocol for the Sampling and Analysis of Industrial/Municipal Wastewater" (January 1999), ISBN 0-7778-1880-9, as amended from time to time by more recently published editions;

(c) the publication "Standard Methods for the Examination of Water and Wastewater" (21st edition), as amended from time to time by more recently published editions; and

(5) The temperature and pH of the effluent from the *Works* shall be determined in the field at the time of sampling for Total Ammonia Nitrogen. The concentration of un-ionized ammonia shall be calculated using the total ammonia concentration, pH and temperature using the methodology stipulated in "Ontario's Provincial Water Quality Objectives" dated July 1994, as amended, for ammonia (un-ionized).

(6) The measurement frequencies specified in subsection (2) in respect to any parameter are minimum requirements which may, after 24 months of monitoring in accordance with this Condition, be modified by the *District Manager* in writing from time to time.

(7) The *Owner* shall install and maintain (a) continuous flow measuring device(s), to measure the flow rate of the effluent from the *Works* with an accuracy to within plus or minus 15 per cent (+/- 15%) of the actual flow rate for the entire design range of the flow measuring device, and record the flow rate at a daily frequency.

(8) The *Owner* shall retain for a minimum of three (3) years from the date of their creation, all records and information related to or resulting from the monitoring activities required by this *Certificate* .

10. REPORTING

(1) One week prior to the start up of the operation of the *Proposed Works* , the *Owner* shall notify the *District Manager* (in writing) of the pending start up date.

(2) Ten (10) days prior to the date of a planned *By-pass* being conducted pursuant to Condition 5 and as soon as possible for an unplanned *By-pass* , the *Owner* shall notify the *District Manager* (in writing) of the pending start date, in addition to an assessment of

the potential adverse effects on the environment and the duration of the *By-pass* .

(3) The *Owner* shall report to the *District Manager* or designate, any exceedence of any parameter specified in Condition 7 orally, as soon as reasonably possible, and in writing within seven (7) days of the exceedence.

(4) In addition to the obligations under Part X of the Environmental Protection Act, the *Owner* shall, within 10 working days of the occurrence of any reportable spill as defined in Ontario Regulation 675/98, bypass or loss of any product, by-product, intermediate product, oil, solvent, waste material or any other polluting substance into the environment, submit a full written report of the occurrence to the *District Manager* describing the cause and discovery of the spill or loss, clean-up and recovery measures taken, preventative measures to be taken and schedule of implementation.

(5) The *Owner* shall, upon request, make all manuals, plans, records, data, procedures and supporting documentation available to *Ministry* staff.

(6) The *Owner* shall prepare, and submit to the *Director* and the *District* Manager upon request, a performance report, on an annual basis, within ninety (90) days following the end of the period being reported upon. The first such report shall cover the first annual period following the commencement of operation of the *Works* and subsequent reports shall be submitted to cover successive annual periods following thereafter. The reports shall contain, but shall not be limited to, the following information:

(a) a summary and interpretation of all monitoring data and a comparison to the effluent limits outlined in Condition 7, including an overview of the success and adequacy of the *Works* ;

(b) a description of any operating problems encountered and corrective actions taken;

(c) a summary of all maintenance carried out on any major structure, equipment, apparatus, mechanism or thing forming part of the *Works* ;

(d) a summary of any effluent quality assurance or control measures undertaken in the reporting period;

(e) a summary of the calibration and maintenance carried out on all effluent monitoring equipment; and

(f) a description of efforts made and results achieved in meeting the Effluent Objectives of Condition 6.

(g) a tabulation of the volume of sludge generated in the reporting period, an outline of anticipated volumes to be generated in the next reporting period and a summary of the locations to where the sludge was disposed;

(h) a summary of any complaints received during the reporting period and any steps taken to address the complaints;

(i) a summary of all *By-pass* , spill or abnormal discharge events; and

(j) any other information the *District Manager* requires from time to time.

The reasons for the imposition of these terms and conditions are as follows:

1. Condition 1 is imposed to ensure that the *Works* are built and operated in the manner in which they were described for review and upon which approval was granted. This condition is also included to emphasize the precedence of Conditions in the *Certificate* and the practice that the Approval is based on the most current document, if several conflicting documents are submitted for review. The condition also advises the Owners their responsibility to notify any person they authorized to carry out work pursuant to this *Certificate* the existence of this *Certificate* .

2. Condition 2 is included to ensure that the *Works* are constructed in a timely manner so that standards applicable at the time of Approval of the *Works* are still applicable at the time of construction, to ensure the ongoing protection of the environment.

3. Condition 3 is included to ensure that the *Ministry* records are kept accurate and current with respect to the approved works and to ensure that subsequent owners of the *Works* are made aware of the *Certificate* and continue to operate the *Works* in compliance with it.

4. Condition 4 is included to ensure that the *Works* are constructed in accordance with the approval and that record drawings of the *Works* "as constructed" are maintained for future references.

5. Condition 5 is included to indicate that by-passes of untreated sewage to the receiving watercourse is prohibited, save in certain limited circumstances where the failure to *By-pass* could result in greater injury to the public interest than the *By-pass* itself where a *By-pass* will not violate the approved effluent requirements, or where the *By-pass* can be limited or otherwise mitigated by handling it in accordance with an approved contingency plan. The notification and documentation requirements allow the *Ministry* to take action in an informed manner and will ensure the *Owner* is aware of the extent and frequency of *By-pass* events.

6. Condition 6 is imposed to establish non-enforceable effluent quality objectives which the *Owner* is obligated to use best efforts to strive towards on an ongoing basis. These objectives are to be used as a mechanism to trigger corrective action proactively and voluntarily before environmental impairment occurs and before the compliance limits of Condition 6 are exceeded..

7. Condition 7 is imposed to ensure that the effluent discharged from the *Works* to the Thames River meets the *Ministry* 's effluent quality requirements thus minimizing environmental impact

on the receiver and to protect water quality, fish and other aquatic life in the receiving water body.

8. Condition 8 is included to require that the *Works* be properly operated, maintained, funded, staffed and equipped such that the environment is protected and deterioration, loss, injury or damage to any person or property is prevented. As well, the inclusion of a comprehensive operations manual governing all significant areas of operation, maintenance and repair is prepared, implemented and kept up-to-date by the owner and made available to the *Ministry* . Such a manual is an integral part of the operation of the *Works* . Its compilation and use should assist the *Owner* in staff training, in proper plant operation and in identifying and planning for contingencies during possible abnormal conditions. The manual will also act as a benchmark for *Ministry* staff when reviewing the *Owner'* s operation of the work.

9. Condition 9 is included to enable the *Owner* to evaluate and demonstrate the performance of the *Works* , on a continual basis, so that the *Works* are properly operated and maintained at a level which is consistent with the design objectives and effluent limits specified in the *Certificate* and that the *Works* does not cause any impairment to the receiving watercourse.

10. Condition 10 is included to provide a performance record for future references, to ensure that the *Ministry* is made aware of problems as they arise, and to provide a compliance record for all the terms and conditions outlined in this *Certificate,* so that the *Ministry* can work with the *Owner* in resolving any problems in a timely manner.

This Certificate of Approval revokes and replaces Certificate(s) of Approval No. 0074-8EET4C issued on April 29, 2011.

In accordance with Section 100 of the Ontario Water Resources Act, R.S.O. 1990, Chapter 0.40, as amended, you may by written notice served upon me and the Environmental Review Tribunal within 15 days after receipt of this Notice, require a hearing by the Tribunal. Section 101 of the Ontario Water Resources Act, R.S.O. 1990, Chapter 0.40, provides that the Notice requiring the hearing shall state:

1. The portions of the approval or each term or condition in the approval in respect of which the hearing is required, and;
2. The grounds on which you intend to rely at the hearing in relation to each portion appealed.

The Notice should also include:

3. The name of the appellant;
4. The address of the appellant;
5. The Certificate of Approval number;
6. The date of the Certificate of Approval;
7. The name of the Director;
8. The municipality within which the works are located;

And the Notice should be signed and dated by the appellant.

This Notice must be served upon:

The Secretary*
Environmental Review Tribunal
655 Bay Street, 15th Floor
Toronto, Ontario
M5G 1E5

AND

The Director
Section 53, *Ontario Water Resources Act*
Ministry of the Environment
2 St. Clair Avenue West, Floor 12A
Toronto, Ontario
M4V 1L5

*** Further information on the Environmental Review Tribunal's requirements for an appeal can be obtained directly from the Tribunal at: Tel: (416) 314-4600, Fax: (416) 314-4506 or www.ert.gov.on.ca**

The above noted sewage works are approved under Section 53 of the Ontario Water Resources Act.

DATED AT TORONTO this 12th day of October, 2011



Ian Parrott, P.Eng.
Director
Section 53, *Ontario Water Resources Act*

SH/
c: District Manager, MOE London - District
Kirby Oudekerk, P.Eng., Stantec Consulting Ltd.

Alternative 1 Cost Estimate: Additional SBR Train + Sludge Holding Tank, Storage Equalization Tank

ITEM #1 - DIVISION 1

	Item	Description	Total	
DIVISION 1		**GENERAL (ALL LOCATIONS):**		
1	1.1	MOBILIZATION & DEMOBILIZATION		
1	1.2	PERFORMANCE BONDS		
1	1.3	SCHEDULE		
1	1.4	LABOUR & MATERIAL BONDS		
1	1.5	INSURANCE		
1	1.6	BUILDING PERMITS		
1	1.7	PROJECT SIGNAGE		
1	1.8	SHOP DRAWINGS		
1	1.9	START-UP & COMMISSIONING		
1	1.10	RECORD DRAWINGS		
1	1.11	OPERATION & MAINTENANCE MANUALS		
1	1.12	PRE-START HEALTH AND SAFETY REVIEWS		
1	1.13	OTHER ITEMS REQ'D TO COMPLETE DIV 1		
		DIVISION 1 TOTAL:		**$ 190,000.00**
ITEM #2 - NEW THORNDALE WWTP				
DIVISION 2		**SITE CONSTRUCTION:**		
2	2.1	GENERAL SITE ITEMS	$ 22,803.65	
2	2.2	DEWATERING	$ 9,120.00	
2	2.3	EXCAVATION	$ 53,579.09	
2	2.4A	BACKFILL - SELECT NATIVE	$ 15,499.44	
2	2.4B	BACKFILL - GRANULAR 'A'	$ 45,840.77	
2	2.4C	BACKFILL - ENGINEERED FILL	$ -	
2	2.4D	BACKFILL - GRANULAR 'B'	$ 12,217.15	
2	2.5	YARD PIPING	$ 66,742.90	
2	2.6.1	OUTFALL PIPE (EXCL. DIR. DRILL)	$ -	
2	2.6.2	DIRECTIONAL DRILLING	$ -	
2	2.7	SANITARY & STORM SEWERS IN STREETS 'A' & 'B'	$ -	
2	2.8	SITE GRADING	$ 33,369.17	
2	2.9	LANDSCAPING	$ -	
2	2.10	ROADWORKS/SIDEWALKS	$ 63,303.29	
2	2.11	FENCING & GATES	$ -	
2	2.12	SURFACE RESTORATION (TOPSOIL, SEED & MULCH)	$ 18,681.41	
2	2.13	OTHER ITEMS REQ'D TO COMPLETE DIV 2	$ 15,048.00	
		TOTAL THIS SECTION:	$ 356,204.86	**$ 360,000.00**
DIVISION 3		**CONCRETE:**		
2	3.1	CAST-IN-PLACE - ADMIN BUILDING	$ -	
2	3.2	PRE-CAST - ADMIN BUILDING	$ -	
2	3.3	CAST-IN-PLACE - HEADWORKS, SBR & SLUDGE TANKS	$ 725,688.48	
2	3.4	CAST-IN-PLACE - UV CHANNEL	$ -	
2	3.5	CAST-IN-PLACE - EQUIPMENT AND PIPE SUPPORT PADS	$ -	
2	3.6	PRE-CAST - CHAMBERS, MHs, HEADWALLS ETC…	$ -	
2	3.7	INLET PS WETWELL & DROP STRUCTURE	$ -	

2 3.8	OTHER ITEMS REQ'D TO COMPLETE DIV 3	$	13,680.00	
	TOTAL THIS SECTION:	$	739,368.48	**$ 740,000.00**
DIVISION 4	**MASONRY:**			
2 4.1	MASONRY (FACE BLOCK)	$	-	
2 4.2	MASONRY (RE-INF. CONCRETE BLOCK)	$	-	
2 4.3	MASONRY (INTERIOR CONCRETE BLOCK)	$	-	
2 4.4	OTHER ITEMS REQ'D TO COMPLETE DIV 4	$	-	
	TOTAL THIS SECTION:	$	-	**$**
DIVISION 5	**METALS:**			
2 5.1	STRUCTURAL STEEL, LINTELS AND ACCESSORIES	$	-	
2 5.2	PUMPING STATION (PLATFORM, RAILING, HATCHES, ETC…)	$	-	
2 5.3	ADMIN BLDG (RAILING, GRATING, ETC…)	$	-	
2 5.4	PROCESS TANKS (RAILINGS, STAIRS, GRATINGS, ETC…)	$	50,679.38	
2 5.5	UV CHANNEL (RAILINGS, GRATINGS, ETC…)	$	-	
2 5.6	OTHER ITEMS REQ'D TO COMPLETE DIV 5	$	8,208.00	
	TOTAL THIS SECTION:	$	58,887.38	**$ 60,000.00**
DIVISION 6	**WOOD AND PLASTER:**			
2 6.1	ROUGH CARPENTRY	$	-	
2 6.2	FINISH CARPENTRY	$	-	
2 6.3	ARCHITECTURAL WOODWORK	$	-	
2 6.4	OTHER ITEMS REQ'D TO COMPLETE DIV 6	$	-	
	TOTAL THIS SECTION:	$	-	**$**
DIVISION 7	**THERMAL AND MOISTURE PROTECTION:**			
2 7.1	FOUNDATION INSULATION	$	6,718.70	
2 7.2	ROOF MEMBRANE	$	-	
2 7.3	CAVITY WALL INSULATION AND BARRIER	$	-	
2 7.4	METAL FLASHING AND TRIM	$	-	
2 7.5	SEALANTS	$	5,409.53	
2 7.6	MEMBRANE WATERPROOFING	$	3,829.49	
2 7.7	OTHER ITEMS REQ'D TO COMPLETE DIV 7	$	-	
	TOTAL THIS SECTION:	$	15,957.72	**$ 20,000.00**
DIVISION 8	**WINDOWS AND DOORS:**			
2 8.1	DOORS, FRAMES & HARDWARE	$	-	
2 8.2	ALUMINUM WINDOWS	$	-	
2 8.3	OTHER ITEMS REQ'D TO COMPLETE DIV 8	$	-	
	TOTAL THIS SECTION:	$	-	**$**
DIVISION 9	**FINISHES:**			
2 9.1	QUARRY & CERAMIC TILE	$	-	
2 9.2	EPOXY COATING (FLOOR)	$	-	
2 9.3	CHEMICAL RESISTANT COATING	$	4,620.19	
2 9.4	PAINTING (WALLS)	$	-	
2 9.5	PAINTING EPOXY (STEEL)	$	-	
2 9.6	PAINTING (PIPING)	$	1,944.38	
2 9.7	CONCRETE TANK LINING	$	28,321.70	
2 9.8	OTHER ITEMS REQ'D TO COMPLETE DIV 9	$	-	
	TOTAL THIS SECTION:	$	34,886.28	**$ 30,000.00**

DIVISION 10	**SPECIALTIES:**				
2	10.1	GRIT DISPOSAL BIN	$	-	
2	10.2	METAL LOCKERS	$	-	
2	10.3	WASHROOM ACCESSORIES	$	-	
2	10.4	IDENTIFYING DEVICES	$	-	
2	10.5	FIRE EXTINGUISHERS	$	-	
2	10.6	OTHER ITEMS REQ'D TO COMPLETE DIV 10	$	-	
		TOTAL THIS SECTION:	$	-	**$**
DIVISION 11	**EQUIPMENT:**				
2	11.1	SLUDGE LOADING PLATFORM	$	-	
2	11.2.1	SUBMERSIBLE PUMPS (INLET PS)	$	-	
2	11.2.2	SUBMERSIBLE PUMPS (SLUDGE TANKS)	$	29,836.99	
2	11.3	CHEMICAL FEED SYSTEM (INCL. TANK)	$	-	
2	11.4	SLIDE GATES	$	73,150.61	
2	11.5	AUTO-SAMPLERS	$	-	
2	11.6	AUGER SCREEN	$	-	
2	11.7	UV DISINFECTION EQUIPMENT	$	-	
2	11.8	ICEAS SBR PACKAGE SYSTEM (PRE-SELECTED)			
2	11.8.1	PRE-SELECTED EQUIPMENT PRICE	$	819,850.00	
2	11.8.2	SBR AERATION SYSTEM INSTALLATION	$	-	
2	11.8.3	SBR VALVES INSTALLATION	$	-	
2	11.8.4	SBR ELECTRICAL/INSTRUMENTATION INSTALLATION	$	-	
2	11.8.5	OTHER ITEMS REQ'D TO INSTALL SBR	$	-	
2	11.9	SLUDGE TANK COVER (PROVISIONAL)	$	167,732.33	
2	11.10	EQ TANK-DESIGN	$	857,280.00	
2	11.11	OTHER ITEMS REQ'D TO COMPLETE DIV 11	$	2,701.71	
		TOTAL THIS SECTION:	**$**	**1,950,551.64**	**$ 1,950,000.00**
DIVISION 12	**FURNISHINGS :**				
2	12.1	LAB FURNISHINGS	$	-	
2	12.2	OTHER ITEMS REQ'D TO COMPLETE DIV 12	$	-	
		TOTAL THIS SECTION:	$	-	**$**
DIVISION 13	**SPECIAL CONSTRUCTION:**				
2	13.1	COMMISSIONING AND START-UP	$	35,472.24	
2	13.2	OTHER ITEMS REQ'D TO COMPLETE DIV 13	$	-	
		TOTAL THIS SECTION:	$	35,472.24	**$ 40,000.00**
DIVISION 14	**HOISTING DEVICES:**				
2	14.1	LIFTING DAVITS	$	11,517.88	
2	14.2	OTHER ITEMS REQ'D TO COMPLETE DIV 14	$	-	
		TOTAL THIS SECTION:	$	11,517.88	**$ 10,000.00**
DIVISION 15	**MECHANICAL:**				
2	15.1	PROCESS PIPING	$	142,656.41	
2	15.2	PROCESS VALVES	$	31,055.42	
2	15.3	PROCESS AND MECHANICAL IDENTIFICATION	$	7,432.80	
2	15.4	PIPE INSULATION	$	8,934.86	

2	15.5	HVAC SYSTEM - ADMIN BUILDING	$	-	
2	15.6	HVAC SYSTEM - PLANT	$	-	
2	15.7	HVAC BALANCING REPORTS	$	-	
2	15.8	PLUMBING AND DRAINAGE	$	-	
2	15.9	PROCESS PIPING TESTING	$	6,840.00	
2	15.10	OTHER ITEMS REQ'D TO COMPLETE DIV 15	$	17,328.00	
		TOTAL THIS SECTION:	$	214,247.50	**$ 210,000.00**
DIVISION 16		**ELECTRICAL:**			
2	16.1	PRIMARY POWER SUPPLY	$	22,744.78	
2	16.2	SECONDARY POWER SUPPLY	$	9,321.10	
2	16.3	GENERATORS	$	-	
2	16.4	MCC,VFD,AHF & LP/TX	$	46,354.68	
2	16.5	WIRING	$	79,541.90	
2	16.6	HEAT TRACING (PIPES)	$	8,429.16	
2	16.7	CONDUITS	$	39,726.72	
2	16.8	CABLE TRAY	$	15,704.64	
2	16.9	FIELD DS & CPLS	$	-	
2	16.10	INSTRUMENTATION AND CONTROLS	$	31,114.02	
2	16.11	PLC & SCADA (EQUIPMENT AND INSTALL)	$	75,367.68	
2	16.12	BUILDING SERVICES (LIGHTS, POWER, SECURITY)	$	-	
2	16.13	OTHER ITEMS REQ'D TO COMPLETE DIV 16	$	20,352.65	
		TOTAL THIS SECTION:	$	348,657.33	**$ 350,000.00**
		THORNDALE WWTP TOTAL	**No Div 1**		**$ 3,770,000.00**
			All Divs		**$ 3,960,000.00**
			Engineering (+10%)		$ 400,000.00
			Contingency (+20%)		$ 790,000.00
					$ -
					$ 5,150,000.00

Alternative 2 Cost Estimate: Additional SBR Train + Sludge Holding Tank, Storage Equalization Tank, New Tertiary Filter Building

ITEM #1 - DIVISION 1

Item	Description	Total	Total
DIVISION 1	**GENERAL (ALL LOCATIONS):**		
1 1.1	MOBILIZATION & DEMOBILIZATION		
1 1.2	PERFORMANCE BONDS		
1 1.3	SCHEDULE		
1 1.4	LABOUR & MATERIAL BONDS		
1 1.5	INSURANCE		
1 1.6	BUILDING PERMITS		
1 1.7	PROJECT SIGNAGE		
1 1.8	SHOP DRAWINGS		
1 1.9	START-UP & COMMISSIONING		
1 1.10	RECORD DRAWINGS		
1 1.11	OPERATION & MAINTENANCE MANUALS		
1 1.12	PRE-START HEALTH AND SAFETY REVIEWS		
1 1.13	OTHER ITEMS REQ'D TO COMPLETE DIV 1		
	DIVISION 1 TOTAL:		**$ 340,000.00**
ITEM #2 - NEW THORNDALE WWTP			
DIVISION 2	**SITE CONSTRUCTION:**		
2 2.1	GENERAL SITE ITEMS	$ 34,205.47	
2 2.2	DEWATERING	$ 9,120.00	
2 2.3	EXCAVATION	$ 80,368.63	
2 2.4A	BACKFILL - SELECT NATIVE	$ 23,249.16	
2 2.4B	BACKFILL - GRANULAR 'A'	$ 68,761.15	
2 2.4C	BACKFILL - ENGINEERED FILL	$ -	
2 2.4D	BACKFILL - GRANULAR 'B'	$ 18,325.73	
2 2.5	YARD PIPING	$ 66,742.90	
2 2.6.1	OUTFALL PIPE (EXCL. DIR. DRILL)	$ -	
2 2.6.2	DIRECTIONAL DRILLING	$ -	
2 2.7	SANITARY & STORM SEWERS IN STREETS 'A' & 'B'	$ 87,551.32	
2 2.8	SITE GRADING	$ 50,053.75	
2 2.9	LANDSCAPING	$ 37,266.37	
2 2.10	ROADWORKS/SIDEWALKS	$ 126,606.58	
2 2.11	FENCING & GATES	$ -	
2 2.12	SURFACE RESTORATION (TOPSOIL, SEED & MULCH)	$ 28,022.11	
2 2.13	OTHER ITEMS REQ'D TO COMPLETE DIV 2	$ 22,572.00	
	TOTAL THIS SECTION:	$ 652,845.17	**$ 650,000.00**
DIVISION 3	**CONCRETE:**		
2 3.1	CAST-IN-PLACE - ADMIN BUILDING	$ -	
2 3.2	PRE-CAST - ADMIN BUILDING	$ -	
2 3.3	CAST-IN-PLACE - HEADWORKS, SBR & SLUDGE TANKS	$ 725,688.48	
2 3.4	CAST-IN-PLACE - UV CHANNEL	$ -	
2 3.5	CAST-IN-PLACE - EQUIPMENT AND PIPE SUPPORT PADS	$ -	
2 3.6	PRE-CAST - CHAMBERS, MHs, HEADWALLS ETC…	$ -	
2 3.7	INLET PS WETWELL & DROP STRUCTURE	$ -	
2 3.8	CAST-IN-PLACE - FILTER BUILDING	$ 243,000.00	
2 3.9	PRE-CAST - FILTER BUILDING	$ 585,000.00	
2 3.10	CAST-IN-PLACE - EQUIPMENT AND PIPE SUPPORT PADS	$ 19,447.49	
2 3.11	PRE-CAST - CHAMBERS, MHs, HEADWALLS ETC…	$ -	
2 3.12	INLET PS WETWELL & DROP STRUCTURE	$ -	
2 3.13	OTHER ITEMS REQ'D TO COMPLETE DIV 3	$ 13,680.00	
	TOTAL THIS SECTION:	$ 1,586,815.97	**$ 1,590,000.00**

DIVISION 4	**MASONRY:**			
2 4.1	MASONRY (FACE BLOCK)	$	-	
2 4.2	MASONRY (RE-INF. CONCRETE BLOCK)	$	-	
2 4.3	MASONRY (INTERIOR CONCRETE BLOCK)	$	-	
2 4.4	OTHER ITEMS REQ'D TO COMPLETE DIV 4	$	-	
	TOTAL THIS SECTION:	$	-	**$**
DIVISION 5	**METALS:**			
2 5.1	STRUCTURAL STEEL, LINTELS AND ACCESSORIES	$	-	
2 5.2	PUMPING STATION (PLATFORM, RAILING, HATCHES, ETC…)	$	-	
2 5.3	ADMIN BLDG (RAILING, GRATING, ETC…)	$	-	
2 5.4	FILTER BUILDING (RAILING, GRATING, ETC…)	$	33,227.81	
2 5.5	PROCESS TANKS (RAILINGS, STAIRS, GRATINGS, ETC…)	$	50,679.38	
2 5.6	UV CHANNEL (RAILINGS, GRATINGS, ETC…)	$	-	
2 5.7	OTHER ITEMS REQ'D TO COMPLETE DIV 5	$	8,208.00	
	TOTAL THIS SECTION:	$	92,115.19	**$ 90,000.00**
DIVISION 6	**WOOD AND PLASTER:**			
2 6.1	ROUGH CARPENTRY	$	3,936.19	
2 6.2	FINISH CARPENTRY	$	456.00	
2 6.3	ARCHITECTURAL WOODWORK	$	-	
2 6.4	OTHER ITEMS REQ'D TO COMPLETE DIV 6	$	-	
	TOTAL THIS SECTION:	$	4,392.19	**$**
DIVISION 7	**THERMAL AND MOISTURE PROTECTION:**			
2 7.1	FOUNDATION INSULATION	$	6,718.70	
2 7.2	ROOF MEMBRANE	$	41,697.55	
2 7.3	CAVITY WALL INSULATION AND BARRIER	$	-	
2 7.4	METAL FLASHING AND TRIM	$	-	
2 7.5	SEALANTS	$	10,819.06	
2 7.6	MEMBRANE WATERPROOFING	$	7,658.98	
2 7.7	OTHER ITEMS REQ'D TO COMPLETE DIV 7	$	-	
	TOTAL THIS SECTION:	$	66,894.29	**$ 70,000.00**
DIVISION 8	**WINDOWS AND DOORS:**			
2 8.1	DOORS, FRAMES & HARDWARE	$	23,595.26	
2 8.2	ALUMINUM WINDOWS	$	7,646.21	
2 8.3	OTHER ITEMS REQ'D TO COMPLETE DIV 8	$	-	
	TOTAL THIS SECTION:	$	31,241.47	**$ 30,000.00**
DIVISION 9	**FINISHES:**			
2 9.1	QUARRY & CERAMIC TILE	$	-	
2 9.2	EPOXY COATING (FLOOR)	$	13,434.67	
2 9.3	CHEMICAL RESISTANT COATING	$	6,930.29	
2 9.4	PAINTING (WALLS)	$	16,512.67	
2 9.5	PAINTING EPOXY (STEEL)	$	-	
2 9.6	PAINTING (PIPING)	$	1,944.38	
2 9.7	CONCRETE TANK LINING	$	28,321.70	
2 9.8	OTHER ITEMS REQ'D TO COMPLETE DIV 9	$	-	
	TOTAL THIS SECTION:	$	67,143.72	**$ 70,000.00**

DIVISION 10	**SPECIALTIES:**			
2 10.1	GRIT DISPOSAL BIN	$	2,552.69	
2 10.2	METAL LOCKERS	$	-	
2 10.3	WASHROOM ACCESSORIES	$	2,365.73	
2 10.4	IDENTIFYING DEVICES	$	5,281.39	
2 10.5	FIRE EXTINGUISHERS	$	693.12	
2 10.6	OTHER ITEMS REQ'D TO COMPLETE DIV 10	$	-	
	TOTAL THIS SECTION:	$	10,892.93	**$ 10,000.00**
DIVISION 11	**EQUIPMENT:**			
2 11.1	SLUDGE LOADING PLATFORM	$	-	
2 11.2.1	SUBMERSIBLE PUMPS (INLET PS)	$	-	
2 11.2.2	SUBMERSIBLE PUMPS (SLUDGE TANKS)	$	29,463.09	
2 11.3	CHEMICAL FEED SYSTEM (INCL. TANK)	$	-	
2 11.4	SLIDE GATES	$	72,233.93	
2 11.5	AUTO-SAMPLERS	$	-	
2 11.6	AUGER SCREEN	$	-	
2 11.7	UV DISINFECTION EQUIPMENT	$	-	
2 11.8	ICEAS SBR PACKAGE SYSTEM (PRE-SELECTED)			
2 11.8.1	PRE-SELECTED EQUIPMENT PRICE	$	819,850.00	
2 11.8.2	SBR AERATION SYSTEM INSTALLATION	$	-	
2 11.8.3	SBR VALVES INSTALLATION	$	-	
2 11.8.4	SBR ELECTRICAL/INSTRUMENTATION INSTALLATION	$	-	
2 11.8.5	OTHER ITEMS REQ'D TO INSTALL SBR	$	-	
2 11.9	SLUDGE TANK COVER (PROVISIONAL)	$	167,732.33	
2 11.10	GFS EQ TANK-DESIGN	$	857,280.00	
2 11.11	DISK FILTRATION	$	1,093,032.00	
2 11.12	OTHER ITEMS REQ'D TO COMPLETE DIV 11	$	2,701.71	
	TOTAL THIS SECTION:	**$**	**3,042,293.07**	**$ 3,040,000.00**
DIVISION 12	**FURNISHINGS :**			
2 12.1	LAB FURNISHINGS	$	-	
2 12.2	OTHER ITEMS REQ'D TO COMPLETE DIV 12	$	-	
	TOTAL THIS SECTION:	$	-	**$**
DIVISION 13	**SPECIAL CONSTRUCTION:**			
2 13.1	COMMISSIONING AND START-UP	$	63,850.03	
2 13.2	OTHER ITEMS REQ'D TO COMPLETE DIV 13	$	-	
	TOTAL THIS SECTION:	$	63,850.03	**$ 60,000.00**
DIVISION 14	**HOISTING DEVICES:**			
2 14.1	LIFTING DAVITS	$	11,517.88	
2 14.2	OTHER ITEMS REQ'D TO COMPLETE DIV 14	$	-	
	TOTAL THIS SECTION:	$	11,517.88	**$ 10,000.00**
DIVISION 15	**MECHANICAL:**			
2 15.1	PROCESS PIPING	$	285,312.82	
2 15.2	PROCESS VALVES	$	62,110.85	
2 15.3	PROCESS AND MECHANICAL IDENTIFICATION	$	14,865.60	
2 15.4	PIPE INSULATION	$	17,869.73	
15.5	HVAC SYSTEM - FILTER BUILDING	$	57,609.22	
2 15.6	HVAC SYSTEM - PLANT	$	1,824.00	
2 15.7	HVAC BALANCING REPORTS	$	2,330.16	
2 15.8	PLUMBING AND DRAINAGE	$	64,130.47	
2 15.9	PROCESS PIPING TESTING	$	6,840.00	
2 15.10	OTHER ITEMS REQ'D TO COMPLETE DIV 15	$	34,656.00	
	TOTAL THIS SECTION:	$	547,548.84	**$ 550,000.00**

DIVISION 16		**ELECTRICAL:**		
2	16.1	PRIMARY POWER SUPPLY	$ 45,489.56	
2	16.2	SECONDARY POWER SUPPLY	$ 18,642.19	
2	16.3	GENERATORS	$ -	
2	16.4	MCC,VFD,AHF & LP/TX	$ 92,709.36	
2	16.5	WIRING	$ 159,083.81	
2	16.6	HEAT TRACING (PIPES)	$ 16,858.32	
2	16.7	CONDUITS	$ 79,453.44	
2	16.8	CABLE TRAY	$ 31,409.28	
2	16.9	FIELD DS & CPLS	$ -	
2	16.10	INSTRUMENTATION AND CONTROLS	$ 62,228.04	
2	16.11	PLC & SCADA (EQUIPMENT AND INSTALL)	$ 75,367.68	
2	16.12	BUILDING SERVICES (LIGHTS, POWER, SECURITY)	$ 52,364.30	
2	16.13	OTHER ITEMS REQ'D TO COMPLETE DIV 16	$ 40,705.30	
		TOTAL THIS SECTION:	$ 674,311.28	**$ 670,000.00**
		THORNDALE WWTP TOTAL	**No Div 1**	**$ 6,840,000.00**
			All Divs	**$ 7,180,000.00**
			Engineering (10%)	$ 720,000.00
			Contingency (20%)	$ 1,440,000.00
				$ -
				$ 9,340,000.00

Ontario

Ministry of the Environment, Conservation and Parks
Ministère de l'Environnement, de la Protection de la nature et des Parcs

AMENDED ENVIRONMENTAL COMPLIANCE APPROVAL

NUMBER 3804-D6TL9K
Issue Date: September 25, 2024

The Corporation of the Municipality of Thames Centre
4305 Hamilton Road, Dorchester
Thames Centre, Ontario
N0L 1G3

Site Location: Thorndale Wastewater Treatment Plant
1135 Ideal Drive, Thorndale
Municipality of Thames Centre, County of Middlesex
N0M 2P0

You have applied under section 20.2 of Part II.1 of the Environmental Protection Act, R.S.O. 1990, c. E. 19 (Environmental Protection Act) for approval of:

usage and operation of existing municipal sewage works, for the treatment of sanitary sewage and disposal of effluent to Thames River via a Sewage Treatment Plant (Thorndale Wastewater Treatment Plant) and Final Effluent disposal facilities as follows:

Classification of Collection System: Separate Sanitary Sewer System

Classification of Sewage Treatment Plant: Tertiary

Design Capacity of Sewage Treatment Plant

Design Capacity with All Treatment Trains in Operation	Existing Works
Rated Capacity	674 m^3/d

Influent

Receiving Location	Types
In Collection System	Sanitary Sewage

Existing Works:

Thorndale Wastewater Treatment Plant (WWTP)

Influent Sewer

- one (1) 450 mm diameter sewer to wet well of the Sewage Pumping Station;

Sewage Pumping Station

- a wet well equipped with three (3) submersible sewage pumps (two duty, one standby), both duty pumps providing a firm pump station capacity of 28.2 L/s, conveying raw sewage via 150 mm and 200 mm diameter forcemains to the Preliminary Treatment System;

Preliminary Treatment System

- Screening
  - two (2) inlet screen channels (one duty, one standby) equipped with float switches for high level alarm;
  - one (1) perforated plate auger screen installed in the duty channel discharging to a screenings collection bin, and a weir to allow bypass of excess flow to the standby channel;
- Grit Removal
  - two (2) 450 mm wide x 6.4 m long concrete grit channels (one duty, one standby), each equipped with proportional weir designed to maintain flow velocity in the channel at approximately 0.3 m/s and designed to handle Phase 2 peak flow of 3,600 m^3/d;
  - five (5) flow split box/weir arrangements directing sewage flows to the Sequencing Batch Reactor (SBR) described below;

Influent Flow Measurement and Sampling Point

- flow measurement device on discharge forcemain of the Sewage Pumping Station;
- automatic composite sampler on discharge forcemain of the Sewage Pumping Station;

Secondary Treatment Systems

- Biological Treatment
  - two (2) parallel Sequencing Batch Reactors (SBR) - Intermittent Cycle Extended Aeration

System (ICEAS) basins with a combined Rated Capacity of 674 m^3/d and a peak flow rate of 2,436 m^3/d, each basin consisting of:

- one (1) pre-react zone with approximate dimensions of 2.5 m long x 4.7 m wide x 5.5 m side water depth (SWD) and one (1) SBR basin with approximate dimensions of 4.7 m wide x 17.3 m long x 5.5 m SWD equipped with one hundred and twenty eight (128) fine bubble aeration diffusers,

- one (1) submersible waste activated sludge (WAS) pump, with rated capacity of 6.8 L/s at a total dynamic head (TDH) of 4.1 m, one (1) motorized decanter with a rated capacity of 44.2 L/s and a peak capacity of 68.3 L/s, and one (1) decant chamber, discharging to an effluent altraviolet (UV) disinfection system described below;

- one (1) air blower with a capacity of 7.6 m^3/min of standard air at 56.5 kPa on duty to supply air to the SBR basin;

- one (1) air blower with a capacity of 11.6 m^3/min of standard air at 60.7 kPa on duty to supply air to the Aerated Sludge Holding Tank (ASHT);

- one (1) air blower with a capacity of 11.6 m^3/min of standard air at 60.7 kPa on standby to supply air to the Aerated Sludge Holding Tank (ASHT) and SBR;

Supplementary Treatment Systems

- Phosphorus Removal

  - one (1) 15,000 L capacity chemical storage tank equipped with two (2) positive displacement chemical feed pumps (one duty, one standby), each pump with a rated capacity of 12.0 L/h dosing alum to each of the SBR basins;

Disinfection System

- one (1) UV disinfection system designed to handle a peak flow of 2,436 m^3/d, consisting of one (1) 305 mm wide x 7.66 m long UV channel containing two (2) banks in series (one duty, one standby), each bank containing eighteen (18) low pressure medium intensity UV lamps, designed to achieve a UV dose of 24 mJ/cm^2 at a minimum of 65% UV transmittance @ 253.7 nm, equipped with a weir to ensure that the lamps are always submerged and a 450 mm diameter bypass pipe for operational maintenance purposes;

Final Effluent Flow Measurement and Sampling Point

- flow measurement device at effluent channel downstream of the UV disinfection channel;

- automatic composite sampler at effluent channel downstream of the UV disinfection channel;

Sludge Management System

- Aerated Sludge Holding Tank

  - one (1) 480 m^3 storage capacity Aerated Sludge Holding Tank (ASHT) with approximate dimensions of 9.9 m wide x 10.5 m long x 5.5 m SWD equipped with three hundred (300) fine bubble aeration diffusers, one (1) submersible sludge transfer pump with rated capacity of 26.5 L/s at a TDH of 8.0 m to load biosolids into haul trucks for off-site disposal, one (1) 37.7 L/s mechanical decanter, and one (1) submersible supernatant pump with rated capacity of 6.1 L/s discharging to the inlet works;

  - use of a 145 m^3 portion of the 480 m^3 ASHT as a SBR during the initial period of the sewage treatment plant when plant flows are less than 110 m^3/d fitted with a separate decanter, WAS transfer pump and forty six (46) fine bubble aeration diffusers;

Final Effluent Disposal Facilities

- one (1) 450 mm diameter with approximately 162.6 m long effluent outfall sewer, from the UV Disinfection System discharging through one (1) 900 mm diameter with approximately 125.8 m long sewer to Thames River complete with manholes;

including all other mechanical system, electrical system, instrumentation and control system, standby power system, piping, pumps, valves and appurtenances essential for the proper, safe and reliable operation of the Works in accordance with this Approval, in the context of process performance and general principles of wastewater engineering only;

all in accordance with the submitted supporting documents listed in Schedule A.

For the purpose of this environmental compliance approval, the following definitions apply:

1. "Annual Average Daily Influent Flow" means the cumulative total sewage flow of Influent to the Sewage Treatment Plant during a calendar year divided by the number of days during which sewage was flowing to the Sewage Treatment Plant that year;

2. "Approval" means this environmental compliance approval and any schedules attached to it, and the application;

3. "BOD5" (also known as TBOD5) means five day biochemical oxygen demand measured in an unfiltered sample and includes carbonaceous and nitrogenous oxygen demands;

4. "Bypass" means diversion of sewage around one or more treatment processes, excluding Preliminary Treatment System, within the Sewage Treatment Plant with the diverted sewage flows being returned to

the Sewage Treatment Plant treatment train upstream of the Final Effluent sampling point(s) and discharged via the approved effluent disposal facilities;

5. "CBOD5" means five day carbonaceous (nitrification inhibited) biochemical oxygen demand measured in an unfiltered sample;

6. "Director" means a person appointed by the Minister pursuant to section 5 of the EPA for the purposes of Part II.1 of the EPA;

7. "District Manager" means the District Manager of the appropriate local district office of the Ministry where the Works is geographically located;

8. "*E. coli* " refers to coliform bacteria that possess the enzyme beta-glucuronidase and are capable of cleaving a fluorogenic or chromogenic substrate with the corresponding release of a fluorogen or chromogen, that produces fluorescence under long wavelength (366 nm) UV light, or color development, respectively. Enumeration methods include tube, membrane filter, or multi-well procedures. Depending on the method selected, incubation temperatures include 35.5 $\pm$ 0.5 °C or 44.5 $\pm$ 0.2 °C (to enumerate thermotolerant species). Depending on the procedure used, data are reported as either colony forming units (CFU) per 100 mL (for membrane filtration methods) or as most probable number (MPN) per 100 mL (for tube or multi-well methods);

9. "EPA" means the *Environmental Protection Act* , R.S.O. 1990, c.E.19, as amended;

10. "Equivalent Equipment" means alternate piece(s) of equipment that meets the design requirements and performance specifications of the piece(s) of equipment to be substituted;

11. "Event" means an action or occurrence, at a given location within the Works that causes a Bypass or Overflow. An Event ends when there is no recurrence of Bypass or Overflow in the 12-hour period following the last Bypass or Overflow. Overflows and Bypasses are separate Events even when they occur concurrently;

12. "Existing Works" means those portions of the Works included in the Approval that have been constructed previously;

13. "Final Effluent" means effluent that is discharged to the environment through the approved effluent disposal facilities, including all Bypasses, that are required to meet the compliance limits stipulated in the Approval for the Sewage Treatment Plant at the Final Effluent sampling point(s);

14. "Influent" means flows to the Sewage Treatment Plant from the collection system;

15. "Limited Operational Flexibility" (LOF) means the conditions that the Owner shall follow in order to undertake any modification that is pre-authorized as part of this Approval;

16. "Ministry" means the ministry of the government of Ontario responsible for the EPA and OWRA and

includes all officials, employees or other persons acting on its behalf;

17. "Monthly Average Effluent Concentration" is the mean of all Single Sample Results of the concentration of a contaminant in the Final Effluent sampled or measured during a calendar month, calculated and reported as per the methodology specified in Schedule F;

18. "Monthly Average Daily Effluent Flow" means the cumulative total Final Effluent discharged during a calendar month divided by the number of days during which Final Effluent was discharged that month;

19. "Monthly Average Daily Effluent Loading" means the value obtained by multiplying the Monthly Average Effluent Concentration of a contaminant by the Monthly Average Daily Effluent Flow over the same calendar month;

20. "Monthly Geometric Mean Density" is the mean of all Single Sample Results of *E. coli* measurement in the samples taken during a calendar month, calculated and reported as per the methodology specified in Schedule F;

21. "Normal Operating Condition" means the condition when all unit process(es), excluding Preliminary Treatment System, in a treatment train is operating within its design capacity;

22. "Operating Agency" means the Owner or the entity that is authorized by the Owner for the management, operation, maintenance, or alteration of the Works in accordance with this Approval;

23. "Overflow" means a discharge to the environment from the Works at designed location(s) other than the approved effluent disposal facilities or via the effluent disposal facilities downstream of the Final Effluent sampling point;

24. "Owner" means The Corporation of the Municipality of Thames Centre and its successors and assignees;

25. "OWRA" means the *Ontario Water Resources Act* , R.S.O. 1990, c. O.40, as amended;

26. "Preliminary Treatment System" means all facilities in the Sewage Treatment Plant associated with screening and grit removal;

27. "Professional Engineer" means a person entitled to practice as a Professional Engineer in the Province of Ontario under a license issued under the Professional Engineers Act;

28. "Rated Capacity" means the Annual Average Daily Influent Flow for which the Sewage Treatment Plant is designed to handle;

29. "Sanitary Sewers" means pipes that collect and convey wastewater from residential, commercial, institutional and industrial buildings, and some infiltration and inflow from extraneous sources such as groundwater and surface runoff through means other than stormwater catch basins;

30. "Secondary Treatment System" means all facilities in the Sewage Treatment Plant associated with

biological treatment, secondary sedimentation and phosphorus removal unit processes;

31. "Separate Sewer Systems" means wastewater collection systems that comprised of Sanitary Sewers while runoff from precipitation and snowmelt are separately collected in Storm Sewers;

32. "Sewage Treatment Plant" means all the facilities related to sewage treatment within the sewage treatment plant site excluding the Final Effluent disposal facilities;

33. "Single Sample Result" means the test result of a parameter in the effluent discharged on any day, as measured by a probe, analyzer or in a composite or grab sample, as required;

34. "Storm Sewers" means pipes that collect and convey runoff resulting from precipitation and snowmelt (including infiltration and inflow);

35. "Works" means the approved sewage works, and includes Existing Works and modifications made under Limited Operational Flexibility.

You are hereby notified that this environmental compliance approval is issued to you subject to the terms and conditions outlined below:

TERMS AND CONDITIONS

1. GENERAL PROVISIONS

1. The Owner shall ensure that any person authorized to carry out work on or operate any aspect of the Works is notified of this Approval and the terms and conditions herein and shall take all reasonable measures to ensure any such person complies with the same.

2. The Owner shall design, construct, operate and maintain the Works in accordance with the conditions of this Approval.

3. Where there is a conflict between a provision of any document referred to in this Approval and the conditions of this Approval, the conditions in this Approval shall take precedence.

2. CHANGE OF OWNER AND OPERATING AGENCY

1. The Owner shall, within thirty (30) calendar days of issuance of this Approval, prepare/update and submit to the District Manager the Municipal and Local Services Board Wastewater System Profile Information Form, as amended (Schedule G) under any of the following situations:

    a. the form has not been previously submitted for the Works;

    b. this Approval is issued for extension, re-rating or process treatment upgrade of the Works;

c. when a notification is provided to the District Manager in compliance with requirements of change of Owner or Operating Agency under this condition.

2. The Owner shall notify the District Manager and the Director, in writing, of any of the following changes within thirty (30) days of the change occurring:

   a. change of address of Owner;

   b. change of Owner, including address of new owner;

   c. change of partners where the Owner is or at any time becomes a partnership, and a copy of the most recent declaration filed under the *Business Names Act, R.S.O. 1990, c. B.17* , as amended, shall be included in the notification;

   d. change of name of the corporation where the Owner is or at any time becomes a corporation, and a copy of the most current information filed under the *Corporations Information Act, R.S.O. 1990, c. C.39* , as amended, shall be included in the notification.

3. The Owner shall notify the District Manager, in writing, of any of the following changes within thirty (30) days of the change occurring:

   a. change of address of Operating Agency;

   b. change of Operating Agency, including address of new Operating Agency.

4. In the event of any change in ownership of the Works, the Owner shall notify the succeeding owner in writing, of the existence of this Approval, and forward a copy of the notice to the District Manager.

5. The Owner shall ensure that all communications made pursuant to this condition refer to the environmental compliance approval number.

3. RECORD DRAWINGS

1. A set of record drawings of the Works shall be kept up to date through revisions undertaken from time to time and a copy shall be readily accessible for reference at the Works.

4. BYPASSES

1. Any Bypass is prohibited, except:

   a. an emergency Bypass when a structural, mechanical or electrical failure causes a temporary reduction in the capacity of a treatment process or when an unforeseen flow condition exceeds the design capacity of a treatment process that is likely to result in personal injury, loss of life, health hazard, basement flooding, severe property damage, equipment damage or treatment process upset, if a

portion of the flow is not bypassed;

b. a planned Bypass that is a direct and unavoidable result of a planned repair and maintenance procedure or other circumstance(s), the Owner having notified the District Manager in writing at least fifteen (15) days prior to the occurrence of Bypass, including an estimated quantity and duration of the Bypass, an assessment of the impact on the quality of the Final Effluent and the mitigation measures if necessary, and the District Manager has given written consent of the Bypass;

2. Notwithstanding the exceptions given in Paragraph 1, the Operating Agency shall undertake everything practicable to maximize the flow through the downstream treatment process(es) prior to bypassing.

3. At the beginning of a Bypass Event, the Owner shall immediately notify the Spills Action Centre (SAC) and the local Medical Officer of Health. This notice shall include, at a minimum, the following information:

   a. the type of the Bypass as indicated in Paragraph 1 and the reason(s) for the Bypass;

   b. the date and time of the beginning of the Bypass;

   c. the treatment process(es) gone through prior to the Bypass and the treatment process(es) bypassed;

   d. the effort(s) done to maximize the flow through the downstream treatment process(es) and the reason(s) why the Bypass was not avoided.

4. Upon confirmation of the end of a Bypass Event, the Owner shall immediately notify the Spills Action Centre (SAC) and the local Medical Officer of Health. This notice shall include, at a minimum, the following information:

   a. the date and time of the end of the Bypass;

   b. the estimated or measured volume of Bypass.

5. For any Bypass Event, the Owner shall collect daily sample(s) of the Final Effluent, inclusive of the Event and analyze for all effluent parameters outlined in Compliance Limits condition that require composite samples, following the same protocol specified in the Monitoring and Recording condition for the regular samples. The sample(s) shall be in addition to the regular Final Effluent samples required under the monitoring and recording condition. If the Event occurs on a scheduled monitoring day, the regular sampling requirements prevail. If representative sample for the effluent parameter(s) that require grab sample cannot be obtained, they shall be collected after the Event at the earliest time when situation returns to normal.

6. The Owner shall submit a summary report of the Bypass Event(s) to the District Manager on a quarterly basis, no later than each of the following dates for each calendar year: February 15, May 15, August 15, and November 15. The summary reports shall contain, at a minimum, the types of information set out in Paragraphs (3), (4) and (5) and either a statement of compliance or a summary of the non-compliance

notifications submitted as required under Paragraph 1 of Condition 12. If there is no Bypass Event during a quarter, a statement of no occurrence of Bypass is deemed sufficient.

7. The Owner shall develop a notification procedure in consultation with the District Manager and SAC and notify the public and downstream water users that may be adversely impacted by any Bypass Event.

5. OVERFLOWS

1. Any Overflow is prohibited, except:

   a. an emergency Overflow in an emergency situation when a structural, mechanical or electrical failure causes a temporary reduction in the capacity of the Works or when an unforeseen flow condition exceeds the design capacity of the Works that is likely to result in personal injury, loss of life, health hazard, basement flooding, severe property damage, equipment damage or treatment process upset, if a portion of the flow is not overflowed;

   b. a planned Overflow that is a direct and unavoidable result of a planned repair and maintenance procedure or other circumstance(s), the Owner having notified the District Manager in writing at least fifteen (15) days prior to the occurrence of Overflow, including an estimated quantity and duration of the Overflow, an assessment of the impact on the environment and the mitigation measures if necessary, and the District Manager has given written consent of the Overflow;

2. Notwithstanding the exceptions given in Paragraph 1, the Operating Agency shall undertake everything practicable to maximize the flow through the downstream treatment process(es) and Bypass(es) prior to overflowing.

3. At the beginning of an Overflow Event, the Owner shall immediately notify the Spills Action Centre (SAC) and the local Medical Officer of Health. This notice shall include, at a minimum, the following information:

   a. the type of the Overflow as indicated in Paragraph 1 and the reason(s) for the Overflow;

   b. the date and time of the beginning of the Overflow;

   c. the point of the Overflow from the Works, the treatment process(es) gone through prior to the Overflow, the disinfection status of the Overflow and whether the Overflow is discharged through the effluent disposal facilities or an alternate location;

   d. the effort(s) done to maximize the flow through the downstream treatment process(es) and Bypass(es) and the reason(s) why the Overflow was not avoided.

4. Upon confirmation of the end of an Overflow Event, the Owner shall immediately notify the Spills Action Centre (SAC) and the local Medical Officer of Health. This notice shall include, at a minimum, the following information:

a. the date and time of the end of the Overflow;

b. the estimated or measured volume of the Overflow.

5. For any Overflow Event

   a. in the Sewage Treatment Plant, the Owner shall collect grab sample(s) of the Overflow, one near the beginning of the Event and one every eight (8) hours for the duration of the Event, and have them analyzed at least for CBOD5, total suspended solids, total phosphorus, total ammonia nitrogen, *E. coli.* except that raw sewage and primary treated effluent Overflow shall be analyzed for BOD5, total suspended solids, total phosphorus and total Kjeldahl nitrogen only.

6. The Owner shall submit a summary report of the Overflow Event(s) to the District Manager on a quarterly basis, no later than each of the following dates for each calendar year: February 15, May 15, August 15, and November 15. The summary report shall contain, at a minimum, the types of information set out in Paragraphs (3), (4) and (5). If there is no Overflow Event during a quarter, a statement of no occurrence of Overflow is deemed sufficient.

7. The Owner shall develop a notification procedure in consultation with the District Manager and SAC and notify the public and downstream water users that may be adversely impacted by any Overflow Event.

6. DESIGN OBJECTIVES

1. The Owner shall design and undertake everything practicable to operate the Sewage Treatment Plant in accordance with the following objectives:

   a. Final Effluent parameters design objectives listed in the table(s) included in Schedule B.

   b. Final Effluent is essentially free of floating and settleable solids and does not contain oil or any other substance in amounts sufficient to create a visible film or sheen or foam or discolouration on the receiving waters.

   c. Annual Average Daily Influent Flow is within the Rated Capacity of the Sewage Treatment Plant.

7. COMPLIANCE LIMITS

1. The Owner shall operate and maintain the Sewage Treatment Plant such that compliance limits for the Final Effluent parameters listed in the table(s) included in Schedule C are met.

2. The Owner shall operate and maintain the Sewage Treatment Plant such that the Final Effluent is disinfected continuously year-round.

8. OPERATION AND MAINTENANCE

1. The Owner shall ensure that, at all times, the Works and the related equipment and appurtenances used to achieve compliance with this Approval are properly operated and maintained. Proper operation and maintenance shall include effective performance, adequate funding, adequate staffing and training, including training in all procedures and other requirements of this Approval and the OWRA and regulations, adequate laboratory facilities, process controls and alarms and the use of process chemicals and other substances used in the Works.

2. The Owner shall update/maintain the operations manual for the Works that includes, but not necessarily limited to, the following information:

    a. operating procedures for the Works under Normal Operating Conditions;

    b. inspection programs, including frequency of inspection, for the Works and the methods or tests employed to detect when maintenance is necessary;

    c. repair and maintenance programs, including the frequency of repair and maintenance for the Works;

    d. procedures for the inspection and calibration of monitoring equipment;

    e. operating procedures for the Works to handle situations outside Normal Operating Conditions and emergency situations such as a structural, mechanical or electrical failure, or an unforeseen flow condition, including procedures to minimize Bypasses and Overflows;

    f. a spill prevention and contingency plan, consisting of procedures and contingency plans, including notification to the District Manager, to reduce the risk of spills of pollutants and prevent, eliminate or ameliorate any adverse effects that result or may result from spills of pollutants;

    g. procedures for receiving, responding and recording public complaints, including recording any followup actions taken.

3. The Owner shall maintain the operations manual up-to-date and make the manual readily accessible for reference at the Works.

4. The Owner shall ensure that the Operating Agency fulfills the requirements under O. Reg. 129/04, as amended for the Works, including the classification of facilities, licensing of operators and operating standards.

9. MONITORING AND RECORDING

1. The Owner shall, upon commencement of operation of the Works, carry out a scheduled monitoring program of collecting samples at the required sampling points, at the frequency specified or higher, by means of the specified sample type and analyzed for each parameter listed in the tables under the monitoring program included in Schedule D and record all results, as follows:

    a. all samples and measurements are to be taken at a time and in a location characteristic of the quality

and quantity of the sewage stream over the time period being monitored.

b. definitions and preparation requirements for each sample type are included in document referenced in Paragraph 3.b.

c. definitions for frequency:

i. Daily means once every day;

ii. Weekly means once every week;

iii. Monthly means once every month;

iv. Quarterly means once every three months;

d. a schedule of the day of the week/month for the scheduled sampling shall be created. The sampling schedule shall be revised and updated every year through rotation of the day of the week/month for the scheduled sampling program, except when the actual scheduled monitoring frequency is three (3) or more times per week.

2. In addition to the scheduled monitoring program required in Paragraph 1, the Owner shall collect daily sample(s) of the Final Effluent, on any day when there is any situation outside Normal Operating Conditions, and analyze for all effluent parameters outlined in Compliance Limits condition that require composite samples, following the same protocol specified in this condition for the regular samples. If the Event occurs on a scheduled monitoring day, the regular sampling requirements prevail. If representative sample for the effluent parameter(s) that require grab sample cannot be obtained, they shall be collected after the Event at the earliest time when situation returns to normal.

3. The methods and protocols for sampling, analysis and recording shall conform, in order of precedence, to the methods and protocols specified in the following documents and all analysis shall be conducted by a laboratory accredited to the ISO/IEC:17025 standard or as directed by the District Manager:

a. the Ministry's Procedure F-10-1, “Procedures for Sampling and Analysis Requirements for Municipal and Private Sewage Treatment Works (Liquid Waste Streams Only), as amended;

b. the Ministry's publication "Protocol for the Sampling and Analysis of Industrial/Municipal Wastewater Version 2.0" (January 2016), PIBS 2724e02, as amended;

c. the publication "Standard Methods for the Examination of Water and Wastewater", as amended.

4. The Owner shall monitor and record the flow rate and daily quantity using flow measuring devices or other methods of measurement as approved below calibrated to an accuracy within plus or minus 15 per cent (+/- 15%) of the actual flowrate of the following:

a. Influent flow to the Sewage Treatment Plant by continuous flow measuring devices and instrumentations, or in lieu of an actual installation of equipment, adopt the flow measurements of the Final Effluent for the purpose of estimating Influent flows if the Influent and Final Effluent

streams are considered not significantly different in flow rates and quantities;

b. Final Effluent discharged from the Sewage Treatment Plant by continuous flow measuring devices and instrumentations, or in lieu of an actual installation of equipment, adopt the flow measurements of the Influent for the purpose of estimating Final Effluent flows if the Influent and Final Effluent streams are considered not significantly different in flow rates and quantities;

5. The Owner shall retain for a minimum of five (5) years from the date of their creation, all records and information related to or resulting from the monitoring activities required by this Approval.

10. SPECIAL CONDITION

1. Within 180 days after the Annual Average Daily Influent Flow of the Works reaches 75% of its Rated Capacity of 674 m^3/d, the Owner shall complete a detailed performance assessment of the Works to determine whether the Works will have to be upgraded in order to be able to meet the effluent objectives and effluent limits.

2. If any two (2) or more effluent non-compliance situations are encountered during any calendar year for any effluent parameter listed in Schedule C, the Owner shall investigate and implement whatever contingency measures are necessary to ensure consistent compliance by the Works in accordance with the effluent limits listed in Schedule C. The results of the investigation and implementation of contingency measures shall be documented in the performance report under Paragraph 4 of Condition 11.

3. The Owner shall, within 120 days of completion of the investigation or/and assessment, submit to the Director an application for an amendment of the Approval and a design brief for the proposed sewage works upgrade, including technical descriptions, design specifications, and design performance of the proposed upgrade, if an upgrade of the Works is required based on the investigation or/and assessment.

11. LIMITED OPERATIONAL FLEXIBILITY

1. The Owner may make pre-authorized modifications to the sewage pumping stations and Sewage Treatment Plant in Works in accordance with the document "Limited Operational Flexibility - Protocol for Pre-Authorized Modifications to Municipal Sewage Works" (Schedule E), as amended, subject to the following:

   a. the modifications will not involve the addition of any new treatment process or the removal of an existing treatment process, including chemical systems, from the liquid or solids treatment trains as originally designed and approved.

   b. the scope and technical aspects of the modifications are in line with those delineated in Schedule E and conform with the Ministry's publication "Design Guidelines for Sewage Works 2008", as amended, Ministry's regulations, policies, guidelines, and industry engineering standards;

   c. the modifications shall not negatively impact on the performance of any process or equipment in the

Works or result in deterioration in the Final Effluent quality;

d. where the pre-authorized modification requires notification, a "Notice of Modifications to Sewage Works" (Schedule E), as amended shall be completed with declarations from a Professional Engineer and the Owner and retained on-site prior to the scheduled implementation date. All supporting information including technical memorandum, engineering plans and specifications, as applicable and appropriate to support the declarations that the modifications conform with LOF shall remain on-site for future inspection.

2. The following modifications are not pre-authorized under Limited Operational Flexibility:

   a. Modifications that involve addition or extension of process structures, tankages or channels;

   b. Modifications that involve relocation of the Final Effluent outfall or any other discharge location or that may require reassessment of the impact to the receiver or environment;

   c. Modifications that involve addition of or change in technology of a treatment process or that may involve reassessment of the treatment train process design;

   d. Modifications that require changes to be made to the emergency response, spill prevention and contingency plan; or

   e. Modifications that are required pursuant to an order issued by the Ministry.

12. REPORTING

1. The Owner shall report to the District Manager orally as soon as possible any non-compliance with the compliance limits, and in writing within seven (7) days of non-compliance.

2. The Owner shall, within fifteen (15) days of occurrence of a spill within the meaning of Part X of the EPA, submit a full written report of the occurrence to the District Manager describing the cause and discovery of the spill, clean-up and recovery measures taken, preventative measures to be taken and schedule of implementation, in addition to fulfilling the requirements under the EPA and O. Reg. 675/98 "Classification and Exemption of Spills and Reporting of Discharges".

3. The Owner shall, upon request, make all manuals, plans, records, data, procedures and supporting documentation available to Ministry staff.

4. The Owner shall prepare performance reports on a calendar year basis and submit to the District Manager by March 31 of the calendar year following the period being reported upon. The reports shall contain, but shall not be limited to, the following information pertaining to the reporting period:

   a. a summary and interpretation of all Influent monitoring data, and a review of the historical trend of the sewage characteristics and flow rates;

b. a summary and interpretation of all Final Effluent monitoring data, including concentration, flow rates, loading and a comparison to the design objectives and compliance limits in this Approval, including an overview of the success and adequacy of the Works;

c. a summary of all operating issues encountered and corrective actions taken;

d. a summary of all normal and emergency repairs and maintenance activities carried out on any major structure, equipment, apparatus or mechanism forming part of the Works;

e. a summary of any effluent quality assurance or control measures undertaken;

f. a summary of the calibration and maintenance carried out on all Influent and Final Effluent monitoring equipment to ensure that the accuracy is within the tolerance of that equipment as required in this Approval or recommended by the manufacturer;

g. a summary of efforts made to achieve the design objectives in this Approval, including an assessment of the issues and recommendations for pro-active actions if any are required under the following situations:

    i. when any of the design objectives is not achieved more than 50% of the time in a year, or there is an increasing trend in deterioration of Final Effluent quality;

    ii. when the Annual Average Daily Influent Flow reaches 80% of the Rated Capacity;

h. a tabulation of the volume of sludge generated, an outline of anticipated volumes to be generated in the next reporting period and a summary of the locations to where the sludge was disposed;

i. a summary of any complaints received and any steps taken to address the complaints;

j. a summary of all Bypasses, Overflows, other situations outside Normal Operating Conditions and spills within the meaning of Part X of EPA and abnormal discharge events;

k. a summary of all Notice of Modifications to Sewage Works completed under Paragraph 1.d. of Condition 11, including a report on status of implementation of all modification;

l. a summary of efforts made to achieve conformance with Procedure F-5-1 including but not limited to projects undertaken and completed in the sanitary sewer system that result in overall Bypass/Overflow elimination including expenditures and proposed projects to eliminate Bypass/Overflows with estimated budget forecast for the year following that for which the report is submitted;

m. a summary of any deviation from the monitoring schedule and reasons for the current reporting year and a schedule for the next reporting year.

The reasons for the imposition of these terms and conditions are as follows:

1. Condition 1 regarding general provisions is imposed to ensure that the Works are constructed and operated in the manner in which they were described and upon which approval was granted.

2. Condition 2 regarding change of Owner and Operating Agency is included to ensure that the Ministry records are kept accurate and current with respect to ownership and Operating Agency of the Works and to ensure that subsequent owners of the Works are made aware of the Approval and continue to operate the Works in compliance with it.

3. Condition 3 regarding record drawings is included to ensure that the Works are constructed in accordance with the Approval and that record drawings of the Works "as constructed" are updated and maintained for future references.

4. Condition 4 regarding Bypasses is included to indicate that Bypass is prohibited, except in circumstances where the failure to Bypass could result in greater damage to the environment than the Bypass itself. The notification and documentation requirements allow the Ministry to take action in an informed manner and will ensure the Owner is aware of the extent and frequency of Bypass Events.

5. Condition 5 regarding Overflows is included to indicate that Overflow of untreated or partially treated sewage to the receiver is prohibited, except in circumstances where the failure to Overflow could result in greater damage to the environment than the Overflow itself. The notification and documentation requirements allow the Ministry to take action in an informed manner and will ensure the Owner is aware of the extent and frequency of Overflow Events.

6. Condition 6 regarding design objectives is imposed to establish non-enforceable design objectives to be used as a mechanism to trigger corrective action proactively and voluntarily before environmental impairment occurs.

7. Condition 7 regarding compliance limits is imposed to ensure that the Final Effluent discharged from the Works to the environment meets the Ministry's effluent quality requirements.

8. Condition 8 regarding operation and maintenance is included to require that the Works be properly operated, maintained, funded, staffed and equipped such that the environment is protected and deterioration, loss, injury or damage to any person or property is prevented. As well, the inclusion of a comprehensive operations manual governing all significant areas of operation, maintenance and repair is prepared, implemented and kept up-to-date by the Owner. Such a manual is an integral part of the operation of the Works. Its compilation and use should assist the Owner in staff training, in proper plant operation and in identifying and planning for contingencies during possible abnormal conditions. The manual will also act as a benchmark for Ministry staff when reviewing the Owner's operation of the Works.

9. Condition 9 regarding monitoring and recording is included to enable the Owner to evaluate and demonstrate the performance of the Works, on a continual basis, so that the Works are properly operated and

maintained at a level which is consistent with the design objectives and compliance limits.

10. Condition 10 regarding special condition is included to enable the Owner to evaluate and demonstrate the performance of the Works, and to ensure no adverse impact to the nature environment.

11. Condition 11 regarding Limited Operational Flexibility is included to ensure that the Works are constructed, maintained and operated in accordance with the Approval, and that any pre-approved modification will not negatively impact on the performance of the Works.

12. Condition 12 regarding reporting is included to provide a performance record for future references, to ensure that the Ministry is made aware of problems as they arise, and to provide a compliance record for this Approval.

Schedule A

1. Application for Environmental Compliance Approval submitted by Stantec Consulting Ltd. on behalf of The Corporation of the Municipality of Thames Centre received on February 29, 2024 for compliance with conditions, including performance review dated February 23, 2024, prepared by Stantec Consulting Ltd.

Schedule B

Final Effluent Design Objectives

Concentration Objectives

Final Effluent Parameter	**Averaging Calculator**	**Objective** (milligrams per litre unless otherwise indicated)
CBOD5	Monthly Average Effluent Concentration	5.0 mg/L
Total Suspended Solids	Monthly Average Effluent Concentration	5.0 mg/L
Total Phosphorus	Monthly Average Effluent Concentration	0.65 mg/L
Total Ammonia Nitrogen	Monthly Average Effluent Concentration	3.2 mg/L (May 1 - November 30) 7.0 mg/L (December 1 - April 30)
E. coli	Monthly Geometric Mean Density	*100 CFU/100 mL
pH	Single Sample Result	6.5 - 8.5 inclusive

*If the MPN method is utilized for *E. coli* analysis the objective shall be 100 MPN/100 mL

Schedule C

Final Effluent Compliance Limits

Concentration Limits

Final Effluent Parameter	Averaging Calculator	Limit (maximum unless otherwise indicated)
CBOD5	Monthly Average Effluent Concentration	10.0 mg/L
Total Suspended Solids	Monthly Average Effluent Concentration	10.0 mg/L
Total Phosphorus	Monthly Average Effluent Concentration	0.65 mg/L
Total Ammonia Nitrogen	Monthly Average Effluent Concentration	4.1 mg/L (May 1 - November 30) 8.6 mg/L (December 1 - April 30)
E. coli	Monthly Geometric Mean Density	*100 CFU/100 mL
pH	Single Sample Result	between 6.0 - 9.5 inclusive

*If the MPN method is utilized for *E. coli* analysis the limit shall be 100 MPN/100 mL

Loading Limits

Final Effluent Parameter	Averaging Calculator	Limit (maximum unless otherwise indicated)
CBOD5	Monthly Average Daily Effluent Loading	6.74 kg/d
Total Suspended Solids	Monthly Average Daily Effluent Loading	6.74 kg/d
Total Phosphorus	Monthly Average Daily Effluent Loading	0.44 kg/d
Total Ammonia Nitrogen	Monthly Average Daily Effluent Loading	2.76 kg/d (May 1 - November 30) 5.80 kg/d (December 1 - April 30)

Schedule D

Monitoring Program

Influent - Influent sampling point

Parameters	Sample Type	Minimum Frequency
BOD5	8 hour composite	Monthly
Total Suspended Solids	8 hour composite	Monthly
Total Phosphorus	8 hour composite	Monthly
Total Kjeldahl Nitrogen	8 hour composite	Monthly

Final Effluent - Final Effluent sampling point

Parameters	Sample Type	Minimum Frequency
CBOD5	8 hour composite	Weekly
Total Suspended Solids	8 hour composite	Weekly
Total Phosphorus	8 hour composite	Weekly
Total Ammonia Nitrogen	8 hour composite	Weekly
Total Kjeldahl Nitrogen	8 hour composite	Weekly
Nitrate as Nitrogen	8 hour composite	Weekly
Nitrite as Nitrogen	8 hour composite	Weekly
E. coli	Grab	Weekly
pH*	Grab/Probe/Analyzer	Weekly
Temperature*	Grab/Probe/Analyzer	Weekly
Un-ionized Ammonia**	As Calculated	Weekly

*pH and temperature of the Final Effluent shall be determined in the field at the time of sampling for Total Ammonia Nitrogen.

**The concentration of un-ionized ammonia shall be calculated using the total ammonia concentration, pH and temperature using the methodology stipulated in "Ontario's Provincial Water Quality Objectives" dated July 1994, as amended.

Sludge/Biosolids – holding tank/truck loading bay

Parameters	Sample Type	Minimum Frequency
Total Solids	Grab	Quarterly
Total Phosphorus	Grab	Quarterly
Total Ammonia Nitrogen	Grab	Quarterly
Nitrate as Nitrogen	Grab	Quarterly
Metal Scan - Arsenic - Cadmium - Cobalt - Chromium - Copper - Lead - Mercury - Molybdenum - Nickel - Potassium - Selenium - Zinc	Grab	Quarterly

Schedule E

Limited Operational Flexibility

Protocol for Pre-Authorized Modifications to Municipal Sewage Works

1. General

1. Pre-authorized modifications are permitted only where Limited Operational Flexibility has already been granted in the Approval and only permitted to be made at the pumping stations and sewage treatment plant in the Works, subject to the conditions of the Approval.

2. Where there is a conflict between the types and scope of pre-authorized modifications listed in this document, and the Approval where Limited Operational Flexibility has been granted, the Approval shall take precedence.

3. The Owner shall consult the District Manager on any proposed modifications that may fall within the scope and intention of the Limited Operational Flexibility but is not listed explicitly or included as an example in this document.

4. The Owner shall ensure that any pre-authorized modifications will not:

    a. adversely affect the hydraulic profile of the Sewage Treatment Plant or the performance of any upstream or downstream processes, both in terms of hydraulics and treatment performance;

    b. result in new Overflow or Bypass locations, or any potential increase in frequency or quantity of Overflow(s) or Bypass(es).

    c. result in a reduction in the required Peak Flow Rate of the treatment process or equipment as originally designed.

2. Modifications that do not require pre-authorization:

1. Sewage works that are exempt from Ministry approval requirements;

2. Modifications to the electrical system, instrumentation and control system.

3. Pre-authorized modifications that do not require preparation of "Notice of Modification to Sewage Works"

1. Normal or emergency maintenance activities, such as repairs, renovations, refurbishments and replacements with Equivalent Equipment, or other improvements to an existing approved piece of equipment of a treatment process do not require pre-authorization. Examples of these activities are:

a. Repairing a piece of equipment and putting it back into operation, including replacement of minor components such as belts, gear boxes, seals, bearings;

b. Repairing a piece of equipment by replacing a major component of the equipment such as motor, with the same make and model or another with the same or very close power rating but the capacity of the pump or blower will still be essentially the same as originally designed and approved;

c. Replacing the entire piece of equipment with Equivalent Equipment.

2. Improvements to equipment efficiency or treatment process control do not require pre-authorization. Examples of these activities are:

a. Adding variable frequency drive to pumps;

b. Adding on-line analyzer, dissolved oxygen probe, ORP probe, flow measurement or other process control device.

4. Pre-Authorized Modifications that require preparation of "Notice of Modification to Sewage Works"

1. Pumping Stations

a. Replacement, realignment of existing sewers including manholes, valves, gates, weirs and associated appurtenances provided that the modifications will not add new influent source(s) or result in an increase in flow from existing sources as originally approved.

b. Extension or partition of wetwell to increase retention time for emergency response and improve station maintenance and pump operation;

c. Replacement or installation of inlet screens to the wetwell;

d. Replacement or installation of flowmeters, construction of station bypass;

e. Replacement, reconfiguration or addition of pumps and modifications to pump suctions and discharge pipings including valve, gates, motors, variable frequency drives and associated appurtenances to maintain firm pumping capacity or modulate the pump rate provided that the modifications will not result in a reduction in the firm pumping capacity or discharge head or an increase in the peak pumping rate of the pumping station as originally designed;

f. Replacement, realignment of existing forcemain(s) including valves, gates, and associated appurtenances provided that the modifications will not reduce the flow capacity or increase the total dynamic head and transient in the forcemain.

2. Sewage Treatment Plant

1. Sewers and appurtenances

    a. Replacement, realignment of existing sewers (including pipes and channels) or construction of new sewers, including manholes, valves, gates, weirs and associated appurtenances within the a sewage treatment plant, provided that the modifications will not add new influent source(s) or result in an increase in flow from existing sources as originally approved and that the modifications will remove hydraulic bottlenecks or improve the conveyance of sewage into and through the Works.

2. Flow Distribution Chambers/Splitters

    a. Replacement or modification of existing flow distribution chamber/splitters or construction of new flow distribution chamber/splitters, including replacements or installation of sluice gates, weirs, valves for distribution of flows to the downstream process trains, provided that the modifications will not result in a change in flow distribution ratio to the downstream process trains as originally designed.

3. Imported Sewage Receiving Facility

    a. Replacement, relocation or installation of loading bays, connect/disconnect hook-up systems and unloading/transferring systems;

    b. Replacement, relocation or installation of screens, grit removal units and compactors;

    c. Replacement, relocation or installation of pumps, such as dosing pumps and transfer pumps, valves, piping and appurtenances;

    d. Replacement, relocation or installation of storage tanks/chambers and spill containment systems;

    e. Replacement, relocation or installation of flow measurement and sampling equipment;

    f. Changes to the source(s) or quantity from each source, provided that changes will not result in an increase in the total quantity and waste loading of each type of Imported Sewage already approved for co-treatment.

4. Preliminary Treatment System

    a. Replacement of existing screens and grit removal units with equipment of the same or higher process performance technology, including where necessary replacement or upgrading of existing screenings dewatering washing compactors, hydrocyclones, grit classifiers, grit pumps, air blowers conveyor system, disposal bins and other ancillary equipment to the screening and grit removal processes.

    b. Replacement or installation of channel aeration systems, including air blowers, air supply main, air headers, air laterals, air distribution grids and diffusers.

5. Primary Treatment System

    a. Replacement of existing sludge removal mechanism, including sludge chamber;

    b. Replacement or installation of scum removal mechanism, including scum chamber;

    c. Replacement or installation of primary sludge pumps, scum pumps, provided that:the modifications will not result in a reduction in the firm pumping capacity or discharge head that the primary sludge pump(s) and scum pump(s) are originally designed to handle.

6. Secondary Treatment System

    1. Biological Treatment

        a. Conversion of complete mix aeration tank to plug-flow multi-pass aeration tank, including modifications to internal structural configuration;

        b. Addition of inlet gates in multi-pass aeration tank for step-feed operation mode;

        c. Partitioning of an anoxic/flip zone in the inlet of the aeration tank, including installation of submersible mixer(s);

        d. Replacement of aeration system including air blowers, air supply main, air headers, air laterals, air distribution grids and diffusers, provided that the modifications will not result in a reduction in the firm capacity or discharge pressure that the blowers are originally designed to supply or in the net oxygen transferred to the wastewater required for biological treatment as originally required.

    2. Secondary Sedimentation

        a. Replacement of sludge removal mechanism, including sludge chamber;

        b. Replacement or installation of scum removal mechanism, including scum chamber;

        c. Replacement or installation of return activated sludge pump(s), waste activated sludge pump(s), scum pump(s), provided that the modifications will not result in a reduction in the firm pumping capacity or discharge head that the activated sludge pump(s) and scum pump(s) are originally designed to handle.

7. Post-Secondary Treatment System

    a. Replacement of filtration system with equipment of the same filtration technology, including feed pumps, backwash pumps, filter reject pumps, filtrate extract pumps, holding tanks associated with the pumping system, provided that the modifications will not result in a reduction in the capacity of

the filtration system as originally designed.

8. Disinfection System

    1. UV Irradiation

        a. Replacement of UV irradiation system, provided that the modifications will not result in a reduction in the design capacity of the disinfection system or the radiation level as originally designed.

    2. Chlorination/Dechlorination and Ozonation Systems

        a. Extension and reconfiguration of contact tank to increase retention time for effective disinfection and reduce dead zones and minimize short-circuiting;

        b. Replacement or installation of chemical storage tanks, provided that the tanks are provided with effective spill containment.

9. Supplementary Treatment Systems

    1. Chemical systems

        a. Replacement, relocation or installation of chemical storage tanks for existing chemical systems only, provided that the tanks are sited with effective spill containment;

        b. Replacement or installation of chemical dosing pumps provided that the modifications will not result in a reduction in the firm capacity that the dosing pumps are originally designed to handle.

        c. Relocation and addition of chemical dosing point(s) including chemical feed pipes and valves and controls, to improve phosphorus removal efficiency;

        d. Use of an alternate chemical provided that it is a non-proprietary product and is a commonly used alternative to the chemical approved in the Works, provided that the chemical storage tanks, chemical dosing pumps, feed pipes and controls are also upgraded, as necessary..

10. Sludge Management System

    1. Sludge Holding and Thickening

        a. Replacement or installation of sludge holding tanks, sludge handling pumps, such as transfer pumps, feed pumps, recirculation pumps, provided that modifications will not result in reduction in the solids storage or handling capacities;

    2. Sludge Digestion

a. Replacement or installation of digesters, sludge handling pumps, such as transfer pumps, feed pumps, recirculation pumps, provided that modifications will not result in reduction in the solids storage or handling capacities;

b. replacement of sludge digester covers.

3. Sludge Dewatering and Disposal

a. Replacement of sludge dewatering equipment, sludge handling pumps, such as transfer pumps, feed pumps, cake pumps, loading pumps, provided that modifications will not result in reduction in solids storage or handling capacities.

4. Processed Organic Waste

a. Changes to the source(s) or quantity from each source, provided that changes will not result in an increase in the total quantity already approved for co-processing.

11. Standby Power System

1. Replacement or installation of standby power system, including feed from alternate power grid, emergency power generator, fuel supply and storage systems, provided that the existing standby power generation capacity is not reduced.

12. Pilot Study

1. Small side-stream pilot study for existing or new technologies, alternative treatment process or chemical, provided:

a. all effluent from the pilot system is hauled off-site for proper disposal or returned back to the sewage treatment plant for at a point no further than immediately downstream of the location from where the side-stream is drawn;

b. no proprietary treatment process or propriety chemical is involved in the pilot study;

c. the effluent from the pilot system returned to the sewage treatment plant does not significantly alter the composition/concentration of or add any new contaminant/inhibiting substances to the sewage to be treated in the downstream process;

d. the pilot study will not have any negative impacts on the operation of the sewage treatment plant or cause a deterioration of effluent quality;

e. the pilot study does not exceed a maximum of two years and a notification of completion shall be submitted to the District Manager within one month of completion of the pilot project.

13. Lagoons

    a. installing baffles in lagoon provided that the operating capacity of the lagoon system is not reduced;

    b. raise top elevation of lagoon berms to increase free-board;

    c. replace or install interconnecting pipes and chambers between cells, provided that the process design operating sequence is not changed;

    d. replace or install mechanical aerators, or replace mechanical aerators with diffused aeration system provided that the mixing and aeration capacity are not reduced.

3. Final Effluent Disposal Facilities

    a. Replacement or realignment of the Final Effluent channel, sewer or forcemain, including manholes, valves and appurtenances from the end of the treatment train to the discharge outfall section, provided that the sewer conveys only effluent discharged from the Sewage Treatment Plant and that the replacement or re-aligned sewer has similar dimensions and performance criteria and is in the same or approximately the same location and that the hydraulic capacity will not be reduced.

This page contains an image of the form entitled "Notice of Modification to Sewage Works". A digital copy can be obtained from the District Manager.

Ontario

Ministry of the Environment, Conservation and Parks

Notice of Modification to Sewage Works

RETAIN COPY OF COMPLETED FORM AS PART OF THE ECA ON-SITE PRIOR TO THE SCHEDULED IMPLEMENTATION DATE.

Part 1 – Environmental Compliance Approval (ECA) with Limited Operational Flexibility

(Insert the ECA's owner, number and issuance date and notice number, which should start with "01" and consecutive numbers thereafter)

ECA Number	Issuance Date (mm/dd/yy)	Notice number (if applicable)

ECA Owner	Municipality

Part 2: Description of the modifications as part of the Limited Operational Flexibility

(Attach a detailed description of the sewage works)

Description shall include:
1. A detail description of the modifications and/or operations to the sewage works (e.g. sewage work component, location, size, equipment type/model, material, process name, etc.)
2. Confirmation that the anticipated environmental effects are negligible.
3. List of updated versions of, or amendments to, all relevant technical documents that are affected by the modifications as applicable, i.e. submission of documentation is not required, but the listing of updated documents is (design brief, drawings, emergency plan, etc.)

Part 3 – Declaration by Professional Engineer

I hereby declare that I have verified the scope and technical aspects of this modification and confirm that the design:
1. Has been prepared or reviewed by a Professional Engineer who is licensed to practice in the Province of Ontario;
2. Has been designed in accordance with the Limited Operational Flexibility as described in the ECA;
3. Has been designed consistent with Ministry's Design Guidelines, adhering to engineering standards, industry's best management practices, and demonstrating ongoing compliance with s.53 of the Ontario Water Resources Act; and other appropriate regulations.

I hereby declare that to the best of my knowledge, information and belief the information contained in this form is complete and accurate

Name (Print)	PEO License Number

Signature	Date (mm/dd/yy)

Name of Employer

Part 4 – Declaration by Owner

I hereby declare that:
1. I am authorized by the Owner to complete this Declaration;
2. The Owner consents to the modification; and
3. This modifications to the sewage works are proposed in accordance with the Limited Operational Flexibility as described in the ECA.
4. The Owner has fulfilled all applicable requirements of the *Environmental Assessment Act*.

I hereby declare that to the best of my knowledge, information and belief the information contained in this form is complete and accurate

Name of Owner Representative (Print)	Owner representative's title (Print)

Owner Representative's Signature	Date (mm/dd/yy)

Schedule F

Methodology for Calculating and Reporting Monthly Average Effluent Concentration, Annual Average Effluent Concentration and Monthly Geometric Mean Density

1. Monthly Average Effluent Concentration

Step 1: Calculate the arithmetic mean of all Single Sample Results of the concentration of a contaminant in the Final Effluent sampled or measured during a calendar month and proceed as follows depending on the result of the calculation:

a. If the arithmetic mean does not exceed the compliance limit for the contaminant, then report and use this arithmetic mean as the Monthly Average Effluent Concentration for this parameter where applicable in this Approval;

b. If the arithmetic mean exceeds the compliance limit for the contaminant and there was no Bypass Event during the calendar month, then report and use this arithmetic mean as the Monthly Average Effluent Concentration for this parameter where applicable in this Approval;

c. If the arithmetic mean exceeds the compliance limit for the contaminant and there was Bypass Event(s) during the calendar month, then proceed to Step 2;

d. If the arithmetic mean does not exceed the compliance limit for the contaminant and there was Bypass Event(s) during the calendar month, the Owner may still elect to proceed to Step 2 calculation of the flow-weighted arithmetic mean.

Step 2: Calculate the flow-weighted arithmetic mean of all Single Sample Results of the concentration of a contaminant in the Final Effluent sampled or measured during a calendar month and proceed depending on the result of the calculation:

a. Group No Bypass Days (**NBPD**) data and Bypass Days (**BPD**) data during a calendar month separately;

b. Calculate the arithmetic mean of all Single Sample Results of the concentration of a contaminant in the Final Effluent sampled or measured on all NBPD during a calendar month and record it as **Monthly Average NBPD Effluent Concentration**;

c. Obtain the "**Total Monthly NBPD Flow**" which is the total amount of Final Effluent discharged on all NBPD during the calendar month;

d. Calculate the arithmetic mean of all Single Sample Results of the concentration of a contaminant in the Final Effluent sampled or measured on all BPD during a calendar month

and record it as **Monthly Average BPD Effluent Concentration**;

e. Obtain the "**Total Monthly BPD Flow**" which is the total amount of Final Effluent discharged on all BPD during the calendar month;

f. Calculate the flow-weighted arithmetic mean using the following formula:

[(Monthly Average NBPD Effluent Concentration × Total Monthly NBPD Flow) + (Monthly Average BPD Effluent Concentration × Total Monthly BPD Flow)] ÷ (Total Monthly NBPD Flow + Total Monthly BPD Flow)

It should be noted that in this method, if there are no Bypass Event for the month, the calculated result would be the same as the non-flow-weighted arithmetic mean method;

g. Report and use the lesser of the flow-weighted arithmetic mean obtained in Step 2 and the arithmetic mean obtained in Step 1 as the Monthly Average Effluent Concentration for this parameter where applicable in this Approval.

2. Annual Average Effluent Concentration

Step 1: Calculate the arithmetic mean of all Single Sample Results of the concentration of a contaminant in the Final Effluent sampled or measured during a calendar year and proceed as follows depending on the result of the calculation:

a. If the arithmetic mean does not exceed the compliance limit for the contaminant, then report and use this arithmetic mean as the Annual Average Effluent Concentration for this parameter where applicable in this Approval;

b. If the arithmetic mean exceeds the compliance limit for the contaminant and there was no Bypass Event during the calendar year, then report and use this arithmetic mean as the Annual Average Effluent Concentration for this parameter where applicable in this Approval;

c. If the arithmetic mean exceeds the compliance limit for the contaminant and there was Bypass Event(s) during the calendar year, then proceed to Step 2;

d. If the arithmetic mean does not exceed the compliance limit for the contaminant and there was Bypass Event(s) during the calendar year, the Owner may still elect to proceed to Step 2 calculation of the flow-weighted arithmetic mean.

Step 2: Calculate the flow-weighted arithmetic mean of all Single Sample Results of the concentration of a contaminant in the Final Effluent sampled or measured during a calendar year and proceed depending on the result of the calculation:

a. Group No Bypass Days (**NBPD**) data and Bypass Days (**BPD**) data during a calendar year

separately;

b. Calculate the arithmetic mean of all Single Sample Results of the concentration of a contaminant in the Final Effluent sampled or measured on all NBPD during a calendar year and record it as **Annual Average NBPD Effluent Concentration**;

c. Obtain the "**Total Annual NBPD Flow**" which is the total amount of Final Effluent discharged on all NBPD during the calendar year;

d. Calculate the arithmetic mean of all Single Sample Results of the concentration of a contaminant in the Final Effluent sampled or measured on all BPD during a calendar year and record it as **Annual Average BPD Effluent Concentration**;

e. Obtain the "**Total Annual BPD Flow**" which is the total amount of Final Effluent discharged on all BPD during the calendar year;

f. Calculate the flow-weighted arithmetic mean using the following formula:

[(Annual Average NBPD Effluent Concentration × Total Annual NBPD Flow) + (Annual Average BPD Effluent Concentration × Total Annual BPD Flow)] ÷ (Total Annual NBPD Flow + Total Annual BPD Flow)

It should be noted that in this method, if there are no Bypass Event for the calendar year, the calculated result would be the same as the non-flow-weighted arithmetic mean method;

g. Report and use the lesser of the flow-weighted arithmetic mean obtained in Step 2 and the arithmetic mean obtained in Step 1 as the Annual Average Effluent Concentration for this parameter where applicable in this Approval.

3. Monthly Geometric Mean Density

Geometric mean is defined as the n^{th} root of the product of n numbers. In the context of calculating Monthly Geometric Mean Density for *E. coli*, the following formula shall be used:

$$\sqrt[n]{x_1 x_2 x_3 \cdots x_n}$$

in which,

"n" is the number of samples collected during the calendar month; and

"x" is the value of each Single Sample Result.

For example, four weekly grab samples were collected and tested for *E. coli* during the calendar month. The *E. coli* densities in the Final Effluent were found below:

Sample Number	*E. coli* Densities* (CFU/100 mL)
1	10
2	100
3	300
4	50

The Geometric Mean Density for these data:

$$\sqrt[4]{10 \times 100 \times 300 \times 50} = 62$$

*If a particular result is zero (0), then a value of one (1) will be substituted into the calculation of the Monthly Geometric Mean Density. If the MPN method is utilized for E. coli analysis, values in the table shall be MPN/100 mL.

Schedule G

Municipal and Local Services Board Wastewater System
Profile Information Form

(For reference only, images of the form are attached on the next four pages. A digital copy can be obtained from the District Manger.)

Ontario

Ministry of the Environment, Conservation and Parks

Municipal and Local Services Board Wastewater System Profile Information Form

The information in this form is necessary to administer the Ministry's approvals, compliance and enforcement programs with respect to wastewater treatment and collection systems owned by municipalities and local services boards. These programs are authorized under the *Ontario Water Resources Act*, the *Environmental Protection Act*, the *Nutrient Management Act* and their respective regulations.

Email the completed form to: waterforms@ontario.ca
For any questions call 1-866-793-2588.

[A] SYSTEM PROFILE INFORMATION

Wastewater System Number *(if assigned)*

☐ New Profile
☐ Update Existing Profile

Name of System

Name of Municipality or Local Services Board

Level of Treatment (select one*)
☐ Primary
☐ Secondary
☐ Tertiary
☐ Secondary Equivalent
☐ Other (specify):
**See Terms and Concepts on page 4*

Population Served | Population (Design)

Type of System
☐ Treatment & Collection System ☐ Collection System Only

Design Rated Capacity (m^3/day) | Peak Flow Rate (m^3/day) | Current Environmental Compliance Approval (ECA) Number | Current ECA Issue Date (yyyy/mm/dd):

The treatment plant receives sewage from: (Check all that applies.* If you have checked more than one option below, indicate the approximate %)
☐ Sanitary Sewer ☐ Combined Sewer
☐ Nominally Separated Sewer ☐ Partially Separated Sewer **See Terms and Concepts on page 4*

[B] OWNER INFORMATION

Legal Name of Municipality or Local Services Board

Unit No	Street No.	Street Name.	Street Type (St, Rd, etc)	Street Direction (N,S,E,W)

PO Box	City/Town	Postal Code

☐ Dr ☐ Miss ☐ Mr ☐ Mrs ☐ Ms	Owner Contact First Name	Owner Contact Last Name	Owner Contact Job Title

Tel. No. ( ) - ext.	Fax Number ( ) -	Email address

[C] OPERATING AUTHORITY ☐ Check if same as owner

Legal Name of Operator

Unit No	Street No.	Street Name.	Street Type (St, Rd, etc)	Street Direction (N,S,E,W)

PO Box	City/Town	Postal Code

☐ Dr ☐ Miss ☐ Mr ☐ Mrs ☐ Ms	Operator Contact First Name	Operator Contact Last Name	Operator Contact Job Title

Tel. No. ( ) - ext.	Fax Number ( ) -	Email address

[D] 24/7 CONTACT

☐ Dr ☐ Miss ☒ Mr ☐ Mrs ☐ Ms	First Name	Last Name	Job Title

Tel. No. ( ) - ext.	Fax Number ( ) -	Email address

[E] SYSTEM CIVIC LOCATION ADDRESS (I.E. ADDRESS OF TREATMENT PLANT)

Unit No	Street No.	Street Name.	Street Type (St, Rd, etc)	Street Direction (N,S,E,W)

PO Box	City/Town	Postal Code

If the Wastewater System has no street address

Geographical Township	Lot	Concession

Geographical Referencing (if known, enter the Geographical Reference Information for this Wastewater System)

Map Datum	Geo-Referencing Method	Accuracy Estimate	Location Reference	
Latitude	**Longitude**	**Zone**	**Easting**	**Northing**

[F] TREATMENT PROCESS

Preliminary	Primary	Secondary	Secondary Equivalent	Post-Secondary	Additional Treatment
☐ Screening	☐ Settling/sedimentation/ clarification	☐ Conventional Activated Sludge (CAS)	☐ Aerated Lagoon	☐ Filtration	☐ Phosphorous Removal ☐ Biological ☐ Chemical
☐ Shredding/ grinding	☐ Scum Removal	☐ Extended Aeration	☐ Facultative Lagoon	☐ Clarification	If chemical is used, specify:
☐ Grit Removal	☐ Polymer Addition	☐ Membrane Bioreactor (MBR)	☐ Anaerobic Lagoon	☐ Intermittent Sand Filter (after lagoons)	☐ Nitrification
☐ Other(specify):	☐ Other(specify):	☐ Sequencing Batch Reactor (SBR)	☐ Aerobic Lagoon	☐ Polishing Wetlands	☐ Denitrification
		☐ Rotating Biological Contactor (RBC)	☐ Other(specify):	☐ Polishing Lagoons	☐ Other(specify):
		☐ Trickling Filter (TF)		☐ Other(specify):	
		☐ Biological Aerated Filter (BAF)			
		☐ Other(specify):			

[G] DISINFECTION

Method of Disinfection	Disinfection Period
☐ Chlorination If you chlorinate, do you practice de-chlorination? ☐ Yes ☐ No	☐ Continuous ☐ Seasonal
☐ Ultraviolet Irradiation	☐ Continuous ☐ Seasonal
☐ Other (specify):	☐ Continuous ☐ Seasonal

[H] SLUDGE	
Sludge Stabilization Process	Method of Sludge Disposal/Utilization
☐ Aerobic Digestion	☐ Agricultural
☐ Anaerobic Digestion	☐ Landfill
☐ Drying & Pelletization	☐ Incineration
☐ Lime Treatment	☐ Other (specify):
☐ Composting	
☐ Other (specify):	

Available Sludge Storage Capacity (m^3):

[I] EFFLUENT	
Effluent Disposal Method	Effluent Discharge Frequency
☐ Surface Water Receiving Water Body Name:	☐ Continuous ☐ Seasonal
☐ Subsurface	☐ Continuous ☐ Seasonal
☐ Other (specify):	☐ Continuous ☐ Seasonal

Is the effluent discharged in a vulnerable area identified in the local source protection assessment report approved under the Clean Water Act, 2006?
☐ Yes ☐ No

[J] INFLUENT

Does the plant receive sewage from another municipality or local services board either through an interconnected collection system or hauled sewage?
☐ Yes ☐ No
(if yes, name(s) of other municipality or local services board):

Plant receives:
☐ Leachate (approximate annual volume in m^3):
☐ Septage (approximate annual volume in m^3):
☐ Industrial input (approximate annual volume in m^3):
or (approximate volume in %):

Terms and Concepts

The following Terms and Concepts are provided to assist you when completing Wastewater System Profile Information Form.

In order to determine the level of treatment that applies to the wastewater system, the effluent quality objectives that the wastewater treatment plant was designed to meet must be considered. The process based approach often used in the past has led to confusion and is open to interpretation due to recent developments and practices in the wastewater treatment industry. For example, a plant with a high rate filter (often referred to as a tertiary filter) after its secondary treatment was considered a tertiary treatment in the past since the filter was designed and operated to produce a tertiary quality effluent. However, secondary plants are now being constructed with these filters as a safeguard against any potential secondary clarifier performance degradation and not for the purpose of ensuring tertiary treatment performance. Also, new technologies have evolved that can produce tertiary quality effluent without having these high rate filters (e.g., membrane bioreactors). Lagoons were considered in the past as being capable of providing only secondary equivalent treatment. However, with add-on treatment after the lagoons (e.g. intermittent sand filters), many lagoon treatment systems are capable of producing secondary or tertiary quality effluent.

During the establishment of sewage works, site-specific effluent limits (including averaging periods) are provided by the Ministry's Regional Technical Support Section, considering the assimilative capacity of the receivers and the minimum treatment requirements provided in Procedure F-5-1. The designer of the sewage works then selects objective values that are acceptable to the Ministry and are less (i.e. more stringent) than the effluent limits , in order to provide an adequate safety factor based on the designer's confidence/experience with the technology chosen and other site-specific conditions. The sewage works are then designed (and operated) to meet these design objectives in a reliable and consistent manner. Therefore, the values that are to be used in the determination of the level of treatment that applies to the sewage works must be based on the design objectives, and not the effluent limits.

Two common parameters used in almost all sewage works designs and performance evaluations are $CBOD_5$ (carbonaceous biochemical oxygen demand) (BOD_5 – biochemical oxygen demand - for primary sewage works) and total suspended solids (TSS). Therefore, it is logical that the **objective values** of these two parameters are used to determine the level of treatment at the sewage works.

Level of Treatment:

Primary:
Wastewater treatment plants that have only settling/sedimentation (with or without chemical addition) and providing 30% and 50% or better reduction of BOD_5 and TSS respectively are considered primary plants (MOE Procedures F-5-1 and F-5-5).

Secondary:
Wastewater treatment plants that have biological processes (e.g. activated sludge process and its variations, fixed film processes) or physical-chemical processes producing an effluent quality of $CBOD_5$ and TSS of 15 mg/L or better are considered secondary plants (MOE Design Guidelines for Sewage Works, 2008).

Secondary Equivalent:
Wastewater treatment plants producing an effluent quality of $CBOD_5$ of 25 mg/L and TSS of 30 mg/L or better are considered as secondary equivalent plants.

Note: Wastewater treatment plants that provide only primary settling of solids and the addition of chemicals to improve the removal of TSS (and phosphorus) are not considered as secondary treatment plants or secondary equivalent plants (MOE Design Guidelines for Sewage Works, 2008).

Tertiary:
Wastewater treatment plants that have biological processes (e.g. activated sludge process and its variations, fixed film processes) and/or physical-chemical processes producing an effluent quality of $CBOD_5$ and TSS of 5 mg/L or better are considered tertiary plants.

Note: Biological processes such as nitrification, denitrification and enhanced biological phosphorus removal can be part of either a secondary or tertiary treatment plant. They may be described as secondary treatment plant with nitrification, secondary treatment plant with enhanced biological phosphorus removal, tertiary treatment plant with nitrification etc.

Sewer System Type:

Sanitary Sewers:
Pipes that convey sanitary sewage flows made up of wastewater discharges from residential, commercial, institutional and industrial establishments plus extraneous flow components from such sources as groundwater and surface run off.

Combined Sewers:
Pipes that convey both sanitary sewage and stormwater runoff through a single-pipe system.

Partially Separated Sewers:
Exist when either a portion of the combined sewer area was retrofitted to separate (sanitary and storm) sewers and/or a service area with combined sewers has had a new development area with separate sewers added to the service area; whatever the case may be, the final flows will be combined sewage.

Nominally Separated Sewers:
These sewers are constructed as separate sewers, but the sanitary sewers accept stormwater from roof and foundation drains (i.e., these are separated sewers in name only).

Upon issuance of the environmental compliance approval, I hereby revoke Approval No(s). 0955-8MKJNP issued on October 12, 2011.

In accordance with Section 139 of the *Environmental Protection Act,* you may by written notice served upon me and the Ontario Land Tribunal within 15 days after receipt of this notice, require a hearing by the Tribunal. Section 142 of the *Environmental Protection Act* provides that the notice requiring the hearing ("the Notice") shall state:

a. The portions of the environmental compliance approval or each term or condition in the environmental compliance approval in respect of which the hearing is required, and;
b. The grounds on which you intend to rely at the hearing in relation to each portion appealed.

Pursuant to subsection 139(3) of the *Environmental Protection Act,* a hearing may not be required with respect to any terms and conditions in this environmental compliance approval, if the terms and conditions are substantially the same as those contained in an approval that is amended or revoked by this environmental compliance approval.

The Notice should also include:

1. The name of the appellant;
2. The address of the appellant;
3. The environmental compliance approval number;
4. The date of the environmental compliance approval;
5. The name of the Director, and;
6. The municipality or municipalities within which the project is to be engaged in.

And the Notice should be signed and dated by the appellant.

This Notice must be served upon:

Registrar*
Ontario Land Tribunal
655 Bay Street, Suite 1500
Toronto, Ontario
M5G 1E5
OLT.Registrar@ontario.ca

and

The Director appointed for the purposes of Part II.1 of the *Environmental Protection Act*
Ministry of the Environment, Conservation and Parks
135 St. Clair Avenue West, 1st Floor
Toronto, Ontario
M4V 1P5

*** Further information on the Ontario Land Tribunal's requirements for an appeal can be obtained directly from the Tribunal at: Tel: (416) 212-6349 or 1 (866) 448-2248, or www.olt.gov.on.ca**

The above noted activity is approved under s.20.3 of Part II.1 of the *Environmental Protection Act.*

DATED AT TORONTO this 25th day of September, 2024



Aziz Ahmed, P.Eng.

Director
appointed for the purposes of Part II.1 of the
Environmental Protection Act

LW/

c: District Manager, DWECD, MECP London - District
Kevin Vitone P.Eng.
Process Engineer, Stantec Consulting

F.2 Technical Memorandum 2

Stantec

Memo

To:	Municipality of Thames Centre	From:	Stantec Consulting, London, ON
Project/File:	165630251	Date:	August 6, 2024

Reference: Municipality of Thames Centre-Thorndale Wastewater Treatment Plant Expansion Options Evaluation

1 Introduction

The Municipality of Thames Centre wastewater infrastructure will require expansion to accommodate planned growth to 2046. Stantec Consulting Ltd. (Stantec) was retained by the Municipality of Thames Centre to undertake Schedule 'C' Municipal Class Environmental Assessments (MCEA) and to identify problems & opportunities, identify alternative solutions, and define implementation plans for the expansion of the municipality's wastewater treatment plant (WWTP).

The purpose of this memorandum is to present and evaluate the feasible alternative designs to determine the preferred alternative to expand the WWTP on the existing site and further develop a strategy for implementation. This memorandum will form the basis for upcoming consultation with review agencies and the public prior to confirmation of the preferred alternative design solution.

2 Background

This project is being undertaken as part of the Municipal Engineers Association (MEA) Class Environmental Assessment (Class EA) process, as updated in 2023) and is addressing the requirements of a Schedule 'C' Class EA.

The Municipality of Thames Centre completed a *Water and Wastewater Master Plan Update* (2019). The preferred wastewater strategy was:

- Expansion of the Thorndale Wastewater Treatment Plant Facility (WWTF) and Thorndale SPS to service development within Peripheral Lands (lands as identified in the Master Plan), and
- Potential upgrade of downstream sewers in areas of Thorndale WWTF buildout of Peripheral Lands occurs at higher densities

The key sanitary capital projects required to achieve this strategy were identified as an Upgrade of the Thorndale WWTF and Thorndale SPS as required to service development growth. The document also proposed future growth sanitary mains for application when planning servicing future development lands.

The Master Plan was completed according to Approach 1 of the Master Plan process, which involves a broad scope and level of assessment. An Approach 1 Master Plan set out the Phase 1 Problem and Opportunity Statement, as well as a broad assessment of existing and future wastewater infrastructure to identify a proposed capital program. However, an Approach 1 Master Plan requires additional work which

would be required to complete the MCEA process for the Schedule B or C projects (e.g., detailed inventory of the environment, impacts assessment and development of mitigation measures – all specific to a particular project).

For Schedule C projects such as an expansion of the capacity of a wastewater treatment plant, the proponent must complete the remaining components of MCEA Phases 1 through 4.

These phases include:

- Phase 1: Problem and Opportunity Statement
- Phase 2: Inventory of the Natural, Social Built and Economic Environments and the Identification and Evaluation of Alternative Solutions
- Phase 3: Impact Assessment and Assessment of Alternative Designs
- Phase 4: Preparation of an Environmental Study Report (ESR) (Phase 4) for review period.

Phases 3 and 4 include identifying and evaluating a range of alternative design concepts, identifying a preferred design, and documenting the decision-making process and consultation activities within an Environmental Study Report (ESR). The preferred alternatives are being evaluated for further planning and preliminary design, and future phasing and planning level costing. The ESR will be subject to 30-day public review, after which the project may proceed to Detailed Design and construction.

3 Wastewater Treatment Plant Expansion Needs and Constraints

The municipality's wastewater is conveyed to the WWTP via a 450mm gravity sewer to the main pumping station including three (3) submersible sewage pumps (two duty, one standby), both duty pumps providing a firm pump station capacity of 28.2 L/s conveying raw sewage via a 200 mm diameter forcemain to the inlet works of the Thorndale Wastewater Treatment Plant. The existing WWTP has a rated capacity of 674 m^3/d annual average flow and a peak design flow of 2,436 m^3/d. The plant has two (2) parallel Sequencing Batch Reactors (SBR) - Intermittent Cycle Extended Aeration System (ICEAS) basins where the decant is discharged to an effluent UV disinfection system.

The alternative solution to accommodate the future servicing needs for the WWTP up to 2046, ranges from limiting growth to WWTP expansion within the existing site footprint. The high-level options will be presented in this memorandum. These options seek to maintain use of the existing processes as much as possible, and where practical, while providing the necessary treatment capacity to accommodate future growth.

The following is a summary of WWTP planning constraints and needs, discussing:

- The WWTP requires an expansion by 2032 to increase its rated capacity to 741 m^3/d and peak design flow to 3,706 m^3/d to meet 20-year design average daily and peak hourly flows.

  - The influent design loads are anticipated to increase proportionally with service population and combined with the need for continuous nitrification, will require an increase in secondary treatment capacity.
  - The existing plant may experience high peak flows during the Spring and is believed to be influenced by inflow and infiltration (I/I). To meet future growth, it will require minor capacity increase for raw sewage pumping, headworks flow split modification, additional sludge holding tank volume, flow equalization and additional secondary treatment trains.
- Appropriate effluent limits and objectives for the upgraded WWTP facility shall be considered.
  - It is expected that tertiary treatment (or filtration) will be required to meet any new non-compliance limits for Total Phosphorus (TP) and Total Ammonia Nitrogen (TAN). Existing limits are expected to be achieved with expanded secondary treatment on a monthly average basis.
- The existing WWTP site has enough space for expansion.
  - There is available land that is open space for WWTP expansion within the existing site footprint.

4 Alternative Solutions

Phase 2 of the Municipal Class EA Process includes an inventory of the Natural, Social, Cultural and Economic Environments, and the identification and evaluation of Alternative Solutions to address the Problem and Opportunity Statement.

The inventory and Problem Opportunity Statement are to be included separately in the ESR.

The following provides the identification and evaluation of Alternative Solutions.

4.1 Identification of Alternative Solutions

The preferred wastewater servicing approach from the Master Plan Update (2019) was reviewed which identified that expansion at the existing Thorndale WWTP was the preferred strategy for the Municipality to address wastewater servicing in the community.

This approach was used to develop a range of Long List Alternative Solutions to support the expansion of capacity. In addition, two other alternatives “Do Nothing” and “Limit Future Growth” were also included for consideration.

The following Alternative Solutions were identified:

- **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 at the Existing Site Requiring Site Expansion –**Consider possible site infrastructure that may require infrastructure upgrades to complete the expansion.

A preliminary screening was conducted to determine whether the alternatives had the potential to align with the problem opportunity statement and the Master Plan Update (2019).

Table 1 Screening of Alternative Solutions

Alternative Solution	Discussion	Result
Do Nothing	• Do nothing would involve no upgrades to the existing facility, however it would also lead to no increases in capacity • This alternative cannot address the Problem and Opportunity Statement as there are no capacity increases to meet demand growth to 2046	Not carried forward
Limit Future Growth	• Thorndale is indicated as a Growth area within the Municipality of Thames Centre Official Plan • Limiting growth would not align with the official plan, and would not avoid the future need to expand the plant beyond its current rated capacity	Not carried forward
Upgrades at the Existing Site	• This alternative has the potential to address the Problem Opportunity Statement to address capacity requirements. • This alternative aligns with the Master Plan Update (2019) to address capacity increase needs • Requirements for site size would be addressed in the Alternative Designs phase	Carried forward
Upgrades Requiring Site Expansion	• This alternative has the potential to address the Problem and Opportunity Statement to address capacity requirements should additional land be available • The existing WWTP site has enough space for expansion and there is open space	Carried forward

Alternative Solution	Discussion	Result
	available within the site footprint.	

Upgrades at the Existing Site and Upgrades Requiring Site Expansion were carried forward for the evaluation of Alternative Solutions.

4.2 Evaluation Criteria

A qualitative analysis was completed, which included the following Evaluation Criteria.

The criteria for the evaluation of the alternatives fall into four main categories as presented in **Table 2**:

- Natural environment;
- Cultural environment;
- Socio-Economic environment; and
- Technical environment.

Table 2 Alternative evaluation criteria

Category	Criteria
Natural Environment	**Aquatic Environment** • Potential to impact fish and fish habitat • Potential to impact surface water quality and quantity
	Terrestrial Environment • Potential to impact wildlife/habitat (i.e., Species-at-Risk, spawning areas, significant ecological areas, etc.) • Potential to affect vegetation (i.e., wooded areas, wetlands, conservation areas, etc.) • Potential to impact individual trees or landscaped features
Cultural Environment	**Archaeological Resources** • Potential to impact undisturbed lands
	Built Heritage Resources / Cultural Landscape • Potential to impact known built heritage resources or cultural landscapes/features
Socio-Economic Environment	**Noise/Vibration & Air Quality** • Potential to impact noise sensitive areas (i.e., residential dwellings, daycares, etc.) during construction • Potential to affect local air quality during construction. • Potential to affect local air quality during operational phase.
	Property Requirements • Requires acquisition of private property

Category	Criteria
	Aesthetics • Potential to impact visual aesthetics of study area
	Land Use • Potential to impact existing and future designated land use and/or community use
	Consistency with Municipal Planning Objectives and Existing/Proposed Development • Satisfies the goals and objectives of the Town's Official Plan • Consistency with municipal/regional policies • Potential to support existing and future development within the area
	Health & Safety • Potential to impact health and safety of residents • Potential to impact health and safety of employees • Potential impacts to groundwater quality (i.e., wells, effect Source Water Protection area, etc.) • Potential to encounter contaminated subsurface conditions
	Community Access • Disruption to existing traffic, private property, and business access during construction • Disruption to existing traffic, private property, and business access during operation
Technical Environment	**Functionality/Reliability of Wastewater Treatment** • Treated effluent quality. • Reliability of the treatment process • Potential for risk of sewage backups and impacts to collection system
	Monitoring Requirements & Efficiencies • Impacts to operational monitoring requirements and efficiency
	Cost • Relative capital, operational and maintenance costs ($)
	Utilities • Potential to impact existing utilities
	Constructability & Feasibility • Potential to disrupt existing traffic, property access or functionality of existing facilities during construction. • Location, depth of excavation, soil conditions, rock removal, groundwater control, in-water works, workable construction area, construction duration
	Expandability • Potential to be expanded or flexible to meet future population needs
	Climate Change • Ability to increase resilience to climate change (i.e., severe weather events) within the study area. • Impacts to known climate change contributors (i.e., GHG emissions)

4.3 Evaluation of Alternative Solutions

An evaluation of Alternative Solutions was completed in **Table 3**:

Table 3 Evaluation of alternative solution

Category	**Upgrades at the Existing Site**	**Upgrades Requiring Site Expansion**
Social-Economic Environment	• Same level of impact due to construction related impacts (noise, vibration, dust) • No change required to future land use • Site would continue to protect health and safety through site regulatory requirements	• Same level of impact due to construction related impacts (noise, vibration, dust) • Minor removal of nearby land from the industrial park • Site would continue to protect health and safety through site regulatory requirements
	Preferred	**Not Preferred**
Cultural Environment	• Archaeological investigation already completed for the site and no further archaeological assessment was required. • No cultural heritage resources within the project footprint	• Archaeological investigation already completed for the site and no further archaeological assessment was required. • No cultural heritage resources are within 50 m of the project footprint.
	Preferred	**Not Preferred**
Natural Environment	• Least natural environment impacts as work would occur onsite where no significant natural features are present. • Both alternatives discharge treated effluent using an existing outfall to the Thames River. • A UTRCA regulatory area (drainage swale) is present on the South portion of the site which may require	• Limited natural features are in the area within 120 m of the site boundaries (meadow with potential for migratory birds). Mitigation measures are available including use of timing windows. • Both alternatives discharge treated effluent using an existing outfall to the Thames River. • A UTRCA regulatory area is present (drainage swale) on

Category	Upgrades at the Existing Site	Upgrades Requiring Site Expansion
	additional permitting if project elements are within this boundary. • Limited potential additional investigations as work are within the Thorndale WWTP site.	the South portion of the site which may require additional permitting if project elements are within this boundary. • Additional investigations would be required in detailed design based on the final site footprint, if selected.
	Preferred	**Not Preferred**
Technical	• Same technical requirements as the expansion would address and meet municipal and Ministry requirements. • Best makes use of existing infrastructure, and space is available for treatment options for capacity expansion. • Least construction complexity as work is contained on-site. • Process improvements on site can address capacity and enhance system redundancy.	• Same technical requirements as the expansion would address and meet municipal and Ministry requirements. • Preliminary investigations indicate that treatment options are available that do not require additional property. • Increases construction complexity as work is outside of the existing footprint and additional subsurface and environmental investigations would be required for site. • Process improvements on site can address capacity and enhance system redundancy.
	Preferred	**Preferred**
Financial	• Lower lifecycle costs compared to acquisition of additional property. • No property acquisition cost • Similar operation and maintenance costs	• Higher lifecycle costs due to property acquisition and infrastructure if larger storage tanks are required • Higher estimated capital cost if alternatives are to be considered with higher storage tank requirements. • Higher property acquisition costs than work on the existing site.

Category	Upgrades at the Existing Site	Upgrades Requiring Site Expansion
	Preferred	**Not preferred**
Overall	**Most Preferred**	**Least Preferred**

4.4 Identification of the Preferred Alternative Solution

The analysis in **Table 3** identified that Upgrades at the Existing Site of the Thorndale WWTP is reconfirmed as the preferred alternative solution. As mentioned in Section 3, the existing WWTP site has enough space for expansion and there is open space available within the site footprint.

4.5 Confirmation of the Municipal Class Environmental Assessment Schedule

The Municipal Class EA document (2000, as amended 2023) identifies that the following wastewater categories may apply under the Sewage Treatment Facilities under Table B: Municipal Water and Wastewater Projects.

- **29c** Construct new sewage treatment plant or expand existing sewage treatment plant beyond existing rated capacity including outfall to receiving water body – Schedule C project
- **30a** Establish sewage flow equalization tankage for influent and/or effluent control within existing sewer system or at existing sewage treatment plants, or at existing pumping stations where no property acquisition is required - Schedule B project with eligibility for Archaeology Screening
- **31c** Establish new lagoons or expand existing lagoons or install new or additional sewage storage tanks which will increase beyond existing rated capacity – Schedule C.

The project was established as a Schedule C project due to the potential for increases to the WWTP capacity and addition of equalization tankage. The project will discharge to a receiving waterbody using the existing outfall sewer.

Process changes to meet this capacity increase are described as part of the Alternative Designs evaluation in subsequent sections. Therefore, a Schedule C project (Phases 1-4) is confirmed as the appropriate Schedule to follow.

5 Alternative Designs

5.1 Expansion Options Long List Development

Alternative Designs are developed as part of Phase 3 of the Municipal Class EA process to describe the methods of implementing the following preferred Alternative Solutions. For this project, the alternative design evaluation considered a major item of identification of alternative treatment options to address work on the existing Thorndale WWTP site.

A long list of wastewater treatment options potentially suited to expand the existing WWTP has been developed. **Table 4** provides a general description of all options as presented below. However, alone these technologies and processes might not meet the required level of treatment and plant capacity expansion, therefore tertiary treatment shall be further process description for each treatment option as well as relative advantages/disadvantages.

Each of the long-listed treatment options have been selected for its ability to provide a 10-20% capacity increase as it will be required for the expanded Thorndale WWTP. Several technologies and treatment intensification options, such as Sequencing Batch Reactors (SBR) and Membrane Bioreactor (MBR), could be considered in conjunction with the options considered.

Table 4 Long list of WWTP Expansion Alternative Designs

Treatment	Process Description	Advantages	Disadvantages
Re-rate the existing Sequencing Batch Reactors (SBRs)	• Re-rating the existing two (2) available SBRs for small flow increment increase. • The duration of the phases, dissolved oxygen concentration, and mixing conditions shall be changed in accordance with the particular requirements of the treatment plant.	• Lowest unit cost for construction and operation of the available treatment processes. • Very little operator training required. • Minimal construction.	• Potentially inefficient treatment. • Existing SBR design basis may not allow for the flow/load increase requirement. • Based on the current wastewater strength, which are significantly higher than the original design basis, the limits may not be met.
Sequencing Batch Reactors (SBR)+ EQ tank	• Biological treatment and solids/liquid separation are achieved in a single vessel by sequencing the “react”, “settle”, and “decant” operations. • 1 or 2 SBR reactors shall be added based on the vendor recommendation. • An equalization tank is required to cover the observed peak flows.	• SBR process can be expanded with flow/load increase. • The process has already been in use and the operator skill is available.	• Requires O&M. • Complicated programming required for plant automation resulting in long commissioning period and troubleshooting if issues arrive during operation. • As a mechanical plant process, higher construction, and O&M costs versus re-rating option.

Treatment	Process Description	Advantages	Disadvantages
Sequencing Batch Reactors (SBR) + EQ tank+ filters for TP removal	• Biological treatment and solids/liquid separation are achieved in a single vessel by sequencing the “react”, “settle”, and “decant” operations. • Biological treatment and filtration are achieved in a 2-step process involving sequencing batch reactor for biological treatment and solids/liquid separation, followed by sand or cloth media filtration for particulates filtration. • An equalization tank is required to cover the observed peak flows. • TP removal is usually achieved by adding a coagulant such as alum or ferric solutions. Nitrification may need to be encouraged by adding a caustic in low alkalinity wastewater.	• Excellent tertiary effluent quality. • SBR/filter process can be expanded with flow/load increase. • The process has already been in use and the operator skill is available.	• Requires O&M. • Complicated programming required for plant automation resulting in long commissioning period and troubleshooting if issues arrive during operation. • As a mechanical plant process, higher construction, and O&M costs versus re-rating option.
Extended Aeration (EA) + filters for TP removal	• Biological treatment and filtration are achieved in a process involving extended aeration for biological treatment, secondary clarifier for solids/liquid separation, followed by filtration for particulates filtration.	• Excellent “tertiary” effluent quality. • Extended Aeration/filter process can be expanded with flow/load increase. • Eliminates screening.	• Occasionally variable treatment performance due to inability to pace aeration to changing wastewater strength. • High cost of construction to convert SBR process to Extended Aeration system. • Requires operator skill and O&M. • Long planning and commissioning period.

Treatment	Process Description	Advantages	Disadvantages
Membrane bioreactor (MBR)	• Biological treatment and filtration are achieved in a 1-step process involving aeration tanks for biological treatment and ultra-filtration membranes for solids/liquid separation and particulates filtration.	• Excellent tertiary effluent quality, representing best available technology. • MBR process is modular and is easily expanded with flow/load increase. • Package MBR processes can be purchased. • It is possible to operate MBR processes at higher mixed liquor suspended solids (MLSS) concentrations compared to conventional settlement separation systems, thus reducing the reactor volume to achieve the same loading rate.	• As an advanced mechanical plant process, typically higher operating and maintenance costs for chemicals, electricity, membrane replacement vs other mechanical plants. • High cost of construction to convert SBR process to MBR. • Requires operator skill and O&M. • Long planning and commissioning period.

5.2 Long List Alternative Design Screening

A series of critical “YES / NO” type questions can be asked to screen the various expansion options described in **Table 5** to help identify a short-list of treatment process options for further evaluation. The questions selected for screening the options are as follows:

1. Is there sufficient space for a new process?
2. Potential for MECP to approve the new process and issue a letter of conformance?
3. Are there other proven installations in Ontario?
4. Are there suitable sludge management options available?
5. Does the process maximize and optimize the use of existing infrastructure?
6. Will the process provide capacity to service growth and allow for expansion beyond the 20-year planning horizon?
7. Does the solution support the Strategic Needs and Official Plan direction of the Municipality?

Table 5 Long list Alternative Design Options Screening

Process	Sufficient Space?	MECP Approval?	Proven Installs?	Sludge Plan?	Use Existing Infrastructure?	Future Expansion?	Strategic need?	PASS / FAIL - Comments
Re-rating	YES	YES	YES	YES	YES	NO	YES	FAIL – insufficient flow/load for future expansions.
SBR	YES	YES	YES	YES	YES	YES	YES	PASS – carried forward for further evaluation.
SBR + filters	YES	YES	YES	YES	YES	YES	YES	PASS – carried forward for further evaluation.
EA + filters	YES	YES	YES	YES	NO	YES	YES	FAIL – Can have high construction cost, poor use of existing mechanical treatment plant infrastructure.
MBR	YES	YES	YES	YES	NO	YES	YES	FAIL – Can have high construction cost, poor use of existing mechanical treatment plant infrastructure.

The short-list of Alternative Designs was identified based on the results of the screening assessment are:

- **Alternative 1** – WWTP Sequencing Batch Reactor with Equalization Tank Upgrade; and
- **Alternative 2** – WWTP Sequencing Batch Reactor with Equalization Tank and Filtration Upgrade.

These alternatives will be further explored and evaluated in the following sections.

6 Short Listed Alternative Design Options

6.1 Alternative 1 – WWTP Sequencing Batch Reactor with Equalization Tank Upgrade

A SBR with equalization (EQ) tank expansion involves providing additional capacity to accommodate growth using the same technology as existing within the treatment plant. Alternative 1 includes expanding the WWTP by adding a new SBR system to increase the plant's secondary treatment capacity. As described in **Table 6,** this alternative seeks to maintain use of the existing processes, where practical. The alternative also can provide new infrastructure where necessary to increase treatment capacity to accommodate future growth. Furthermore, the layout of the sanitary collection system can be maintained with this WWTP expansion option.

Table 6 Alternative 1 Upgrades by Unit Process

Unit Process	Description of Upgrades
Raw Sewage Pumping	• Reusing or making minor modifications to the raw sewage pumps in the existing control building (meet the 2046 peak flow of 3,706 m^3/d). • Reusing forcemain from raw sewage pumping to headworks building and adding a twin 200mm forcemain to the headworks for additional conveyance. • Addition of ~1000^3 equalization tank to equalize the SBR influent flow rates and reduce the size/cost of downstream processes such as disinfection. Installation of necessary pump(s) valves, piping & mixer for equalization tank.
Preliminary Treatment (Screening and Grit Removal)	• Reusing the existing screening and grit removal equipment (meet the 2046 peak flow of 3,706 m^3/d). • Installing odour control measures for the equalization tank and other necessary processes.
Secondary Treatment	• Re-use of the existing two (2) parallel Sequencing Batch Reactors (SBR) - Intermittent Cycle Extended Aeration System (ICEAS) basins. • Installing one (1) new Sequencing Batch Reactors (SBR) - Intermittent Cycle Extended Aeration System (ICEAS) basins to meet effluent requirements for the upgraded plant. • Installing new blower equipment and building to service the old & new plants.
Chemical Treatment (phosphorus removal system)	• Reuse of the existing chemical storage tanks with new pump installations to service the new SBRs.
Disinfection, and Effluent Pumping	• Re-use of a existing disinfection, and effluent pumping building to accommodate improved effluent quality and 2046 peak flow of 3,706 m^3/d.

Unit Process	Description of Upgrades
Solids Management	• Reusing the available sludge holding tank and installing an additional sludge storage tank to increase on-site storage capacity. • Reserving space on site for potential future WAS thickening and dewatering to suit year-round solids management strategies that maximize beneficial nutrient re-use and minimize cost.

Should Alternative 1 be the preferred option, additional studies will be required to qualify the natural, archeological, and cultural impacts and mitigation measures.

Table 7 provides a summary of the advantages and disadvantages of a SBR expansion.

Table 7 Summary of Advantages and Disadvantages of alternative 1- WWTP SBR Treatment Upgrade

Advantages	Disadvantages
• Proven technology • Well-understood capital and long-term O&M requirements	• Larger footprint to accommodate expanded capacity. • Some opportunities available through equipment selection, controls, anoxic selectors, etc. • Added complexity of operating the new secondary treatment processes in conjunction with the existing plant. • May not be able to achieve low TP as low as 0.15 mg/L monthly non-compliance limit. • MECP approvals challenges regarding the effluent TP concentrations.

The following **Figure 1** and **Figure 2** indicate the potential footprint and process flow diagram for alternative 1, respectively.

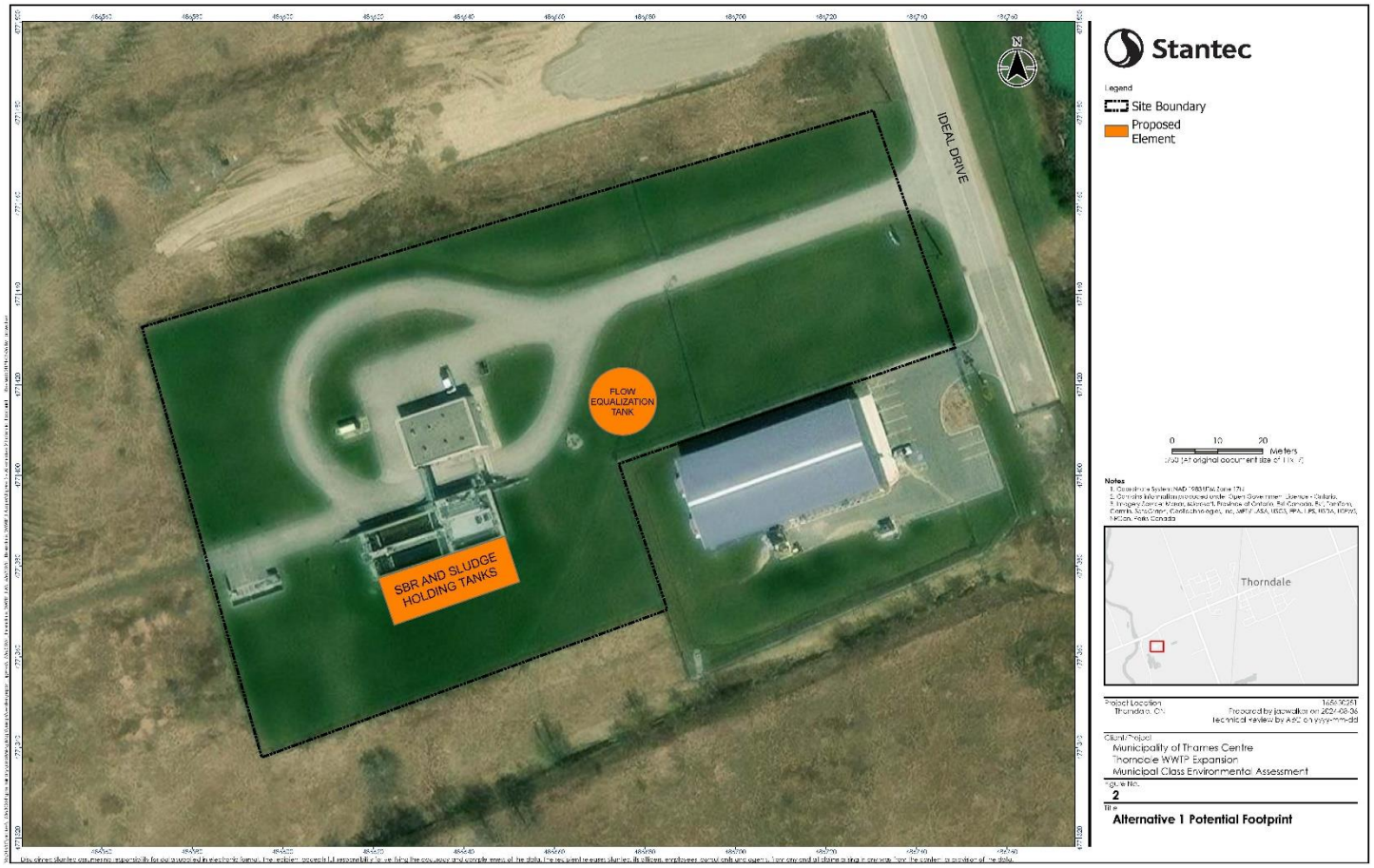


Figure 1 Alternative 1 Potential Footprint

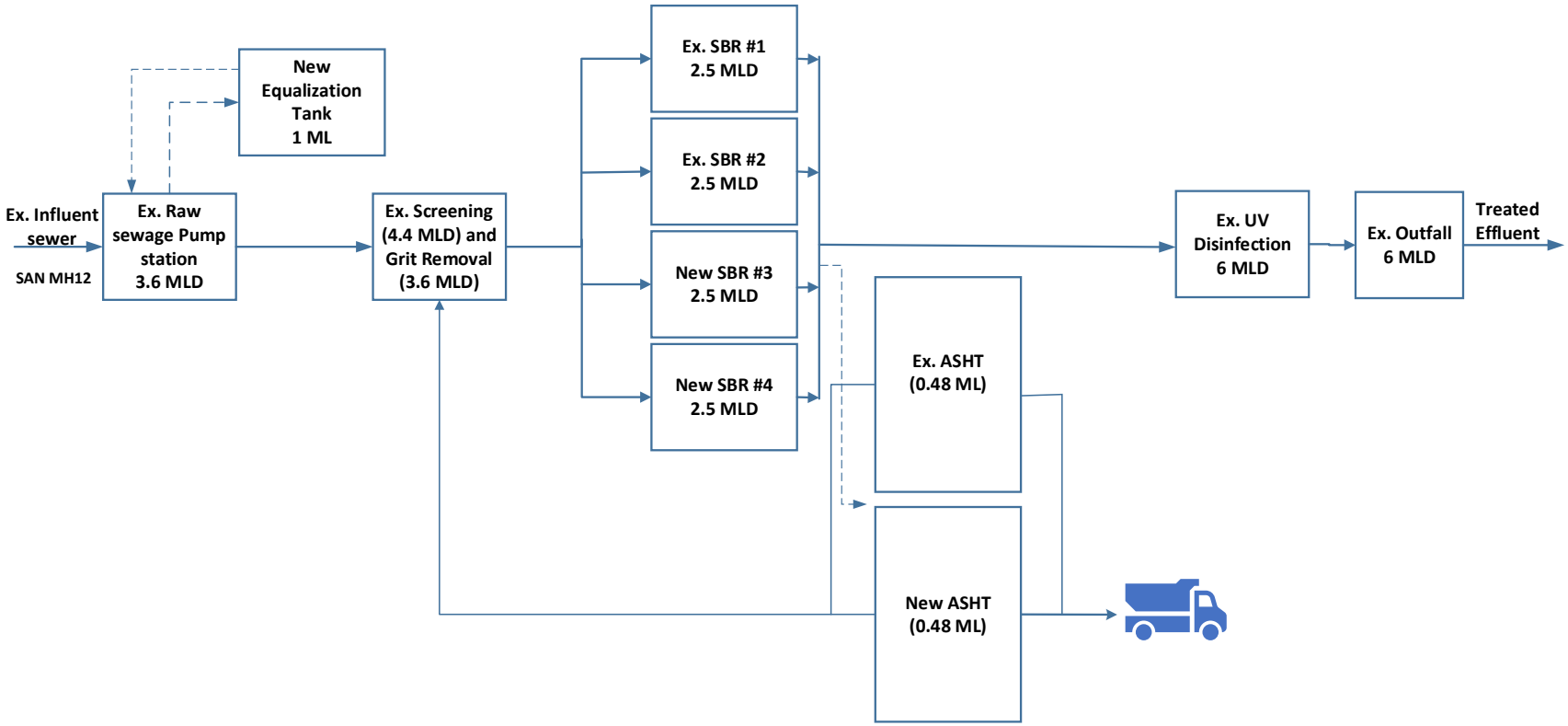


Figure 2 Alternative 1 Process Flow Diagram

6.2 Alternative 2 – WWTP Sequencing Batch Reactor with Equalization Tank and Filtration Upgrade

A SBR with EQ tank and filtration system expansion involves providing additional capacity and treatment to accommodate growth using the same technology as existing within the treatment plant. Alternative 2 includes expanding the WWTP by adding a new SBR system (one (1) reactor based on vendor proposal will be added) to increase the plant's secondary treatment capacity and addition of filtration system to support higher influent/raw wastewater concentrations and meet future effluent requirements. As described in **Table 8**, this alternative seeks to maintain use of the existing processes, where practical, while providing new infrastructure where necessary to increase treatment capacity to accommodate future growth. Furthermore, the layout of the sanitary collection system can be maintained with this WWTP expansion option.

Alternative 2 includes expanding the WWTP by reusing the existing secondary treatment system and add capacity by adding SBRs and filtration to provide clarification and improve effluent quality to tertiary treatment level. Existing WWTP infrastructure will be reused in conjunction with new tanks and buildings required for Alternative 2, as described in **Table 8**. Furthermore, the layout of the sanitary collection system can be maintained with this WWTP expansion option.

Table 8 Alternative 2 Upgrade by Unit Process

Unit Process	Description of Upgrades
Raw Sewage Pumping	• Reusing or making minor modifications to the raw sewage pumps in the existing control building (meet the 2046 peak flow of 3,706 m^3/d). • Reusing forcemain from raw sewage pumping to headworks building and adding a twin 200mm forcemain to the headworks for additional conveyance. • Addition of ~1000^3 equalization tank to equalize the SBR influent flow rates and reduce the size/cost of downstream processes such as disinfection. Installation of necessary pump(s) valves, piping & mixer for equalization tank.
Preliminary Treatment (Screening and Grit Removal)	• Reusing the existing screening and grit removal equipment (meet the 2046 peak flow of 3,706 m^3/d). • Installing odour control measures for the equalization tank and other necessary processes.
Secondary Treatment	• Re-use of the existing two (2) parallel Sequencing Batch Reactors (SBR) - Intermittent Cycle Extended Aeration System (ICEAS) basins. • Installing one (1) new Sequencing Batch Reactors (SBR) - Intermittent Cycle Extended Aeration System (ICEAS) basins to meet effluent requirements for the upgraded plant. • Installing new blower equipment and building to service the old & new plants.
Chemical Treatment (phosphorus removal system)	• Reuse of the existing chemical storage tanks with new pump installations to service the new SBRs.
Tertiary Treatment, Disinfection	• Construction of a new Filtration with the re-use of existing disinfection, and effluent pumping building to accommodate improved effluent quality and 2046 peak flow of 3,706 m^3/d.

Unit Process	Description of Upgrades
Solids Management	• Reusing the available sludge holding tank and installing an additional sludge storage tank to increase on-site storage capacity. • Reserving space on site for potential future WAS thickening and dewatering to suit year-round solids management strategies that maximize beneficial nutrient re-use and minimize cost.

Similar to Alternative 1, a portion of the existing land will be required to provide adequate space for new infrastructure. However, new infrastructure required for Alternative 2, including filtration, has a bigger proposed footprint than Alternative 1 but it is not constrained by the existing plant's footprint.

Table 9 provides a summary of the advantages and disadvantages of an SBR+ filtration expansion.

Table 9 Summary of Advantages and Disadvantages of Alternative 2- WWTP SBR+ filtration Treatment Upgrade

Advantages	Disadvantages
• Proven technology – used at facilities in Ontario and North America. • Well-understood capital and long-term O&M requirements. • Simplified MECP approvals due to higher process efficiency and resiliency. • Ability to achieve very low TP (<0.1 mg/L as monthly non-compliance limit). • Lower capital cost.	• Larger footprint to accommodate expanded capacity. • Some opportunities available through equipment selection, controls, anoxic selectors, etc. • Added complexity of operating the new secondary treatment processes in conjunction with the existing plant. • Higher initial cost.

The following **Figure 3** and **Figure 4** indicate the potential footprint and process flow diagram for alternative 2, respectively.

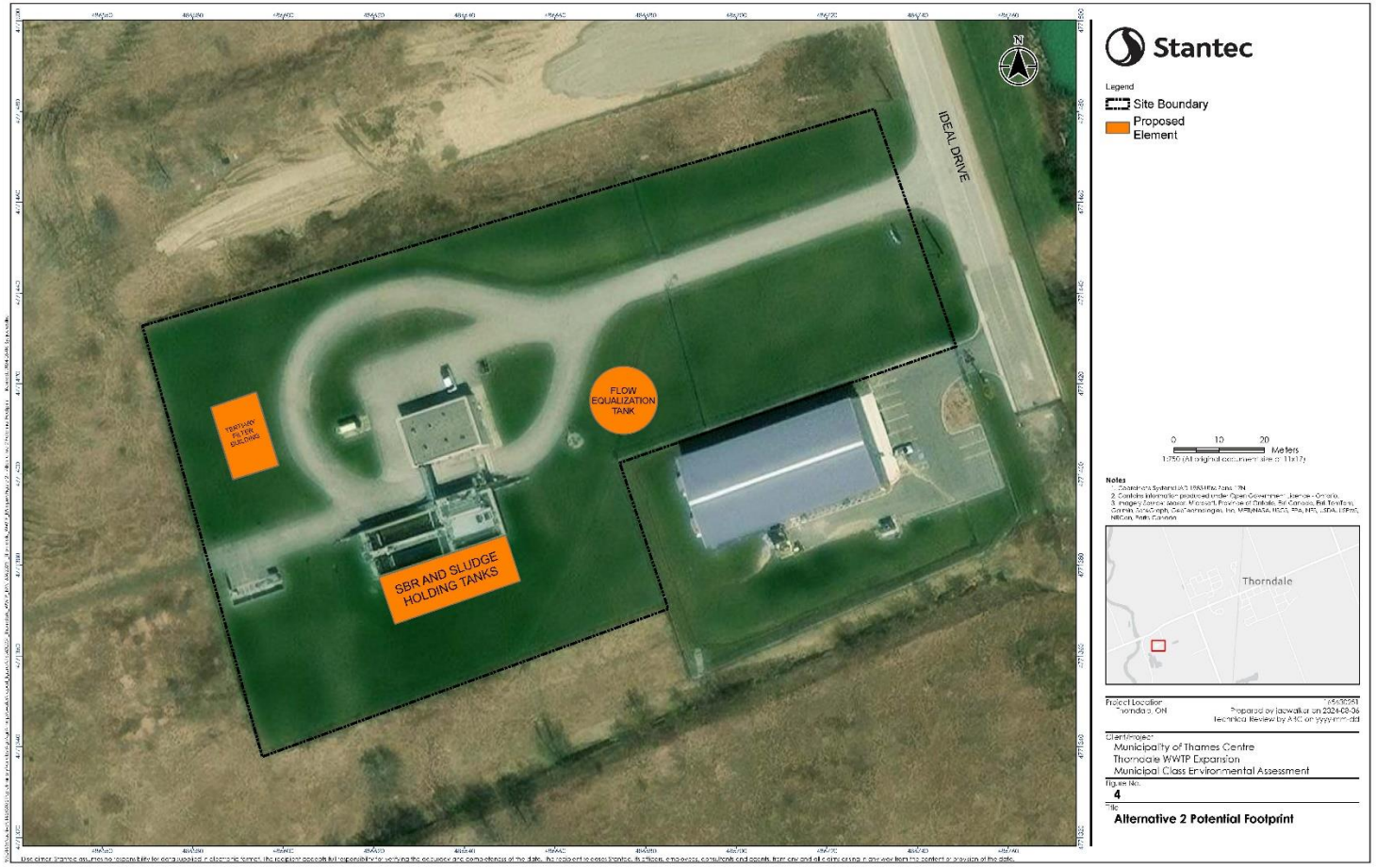


Figure 3 Alternative 2 Potential Footprint

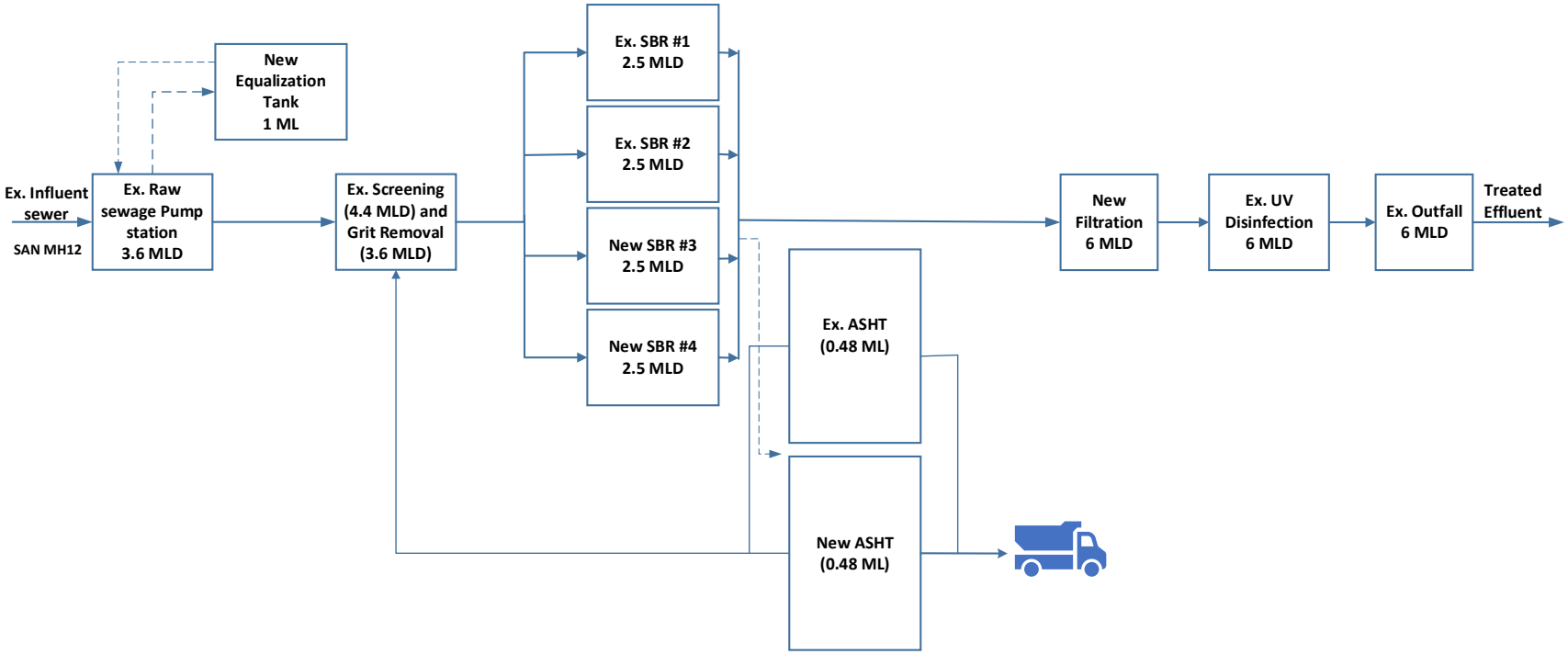


Figure 4 Alternative 2 Process Flow Diagram

6.3 Life Cycle Cost Analysis

An opinion of probable construction cost (Class 4 estimate (-30% to +50%) in $CAD 2022) and preliminary 20-year life cycle cost analysis were developed for both alternatives. The result is shown in **Table 10**. Detailed breakdown of the cycle cost analyses is provided in **Appendix A**.

Table 10 Cost Estimate

Process System	Opinion of Probable Cost (2024 $CAN)		Proposed Upgrades and Notes
	Alternative 1 – WWTP SBR+EQ Tank	Alternative 2 – WWTP SBR+EQ Tank+ Filtration Upgrade	
WWTP Expansion 2030 – 2032: Increase WWTP Capacity to ADF = 741, m3/d and PF = 3,706 m3/d			
Division 1 - General	$ 190,000.00	$ 340,000.00	Both alternatives estimated at 5% of overall construction costs to cover general administrative construction documentation, commissioning, submittals, O&M, mobilization & demobilization, insurance & bonding etc.
Division 2 - Site Construction	$ 360,000.00	$ 650,000.00	Alternative 1 includes costs of civil work for new EQ tank, new underground pipe between inlet SPS & EQ tank + new buried, Alternative 2 includes Alternative 1 + new underground civil works to install sewers between SBR effluent, new filter building & back to UV with civil works for filter building included + landscaping.
Division 3 - Concrete	$ 740,000.00	$ 1,590,000.00	Alternative 1 includes structural for new EQ tank foundation + SBR tank and sludge holding tank & associated coatings. Alternative 2 includes Alternative 1 + filter building foundation + precast filter building.
Division 4 - Masonry	$ -	$ -	N/A
Division 5 - Metals	$ 60,000.00	$ 90,000.00	Includes miscellaneous metals for tanks EQ tanks and Filter building for Alternative 2
Division 6 - Wood & Plaster	$ -	$ -	N/A
Division 7 - Thermal & Moisture Protection	$ 20,000.00	$ 70,000.00	Insulation of foundations for new tanks & Filter building for Alternative 2
Division 8 Windows & Doors	$ -	$ 30,000.00	Windows & doors included for filter building in alternative 2
Division 9 - Finishes	$ 30,000.00	$ 70,000.00	Includes finishes for floors, walls, pipes.
Division 10 - Specialties	$ -	$ 10,000.00	filter accessories and additional building specialties.

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Reference: Thorndale Water Treatment Plant Expansion Options Evaluation

Process System	Opinion of Probable Cost (2024 $CAN)		Proposed Upgrades and Notes
	Alternative 1 – WWTP SBR+EQ Tank	**Alternative 2 – WWTP SBR+EQ Tank+ Filtration Upgrade**	
Division 11 - Equipment	$ 1,950,000.00	$ 3,040,000.00	Equipment scope for Alternative 1 includes new SBR supply and aeration equipment, new glass fused steel EQ tank and associated mixers & pumps. Alternative 2 includes scope of Alternative 1 plus new tertiary disk filtration to treat peak instantaneous flow of 3,706 m^3/d.
Division 12 - Furnishings	$ -	$ -	N/A
Division 13 - Special Construction	$ 40,000.00	$ 60,000.00	Includes commissioning for all new piping and mechanical equipment.
Division 14 - Hoisting Devices	$ 10,000.00	$ 10,000.00	includes lifting devices for tank cleaning & equipment removal.
Division 15 - Mechanical	$ 210,000.00	$ 550,000.00	Alternative 1 cost include piping, valves, insulation, plumbing and drainage. Alternative 2 costs expand to include HVAC costs for the tertiary treatment building.
Division 16 - Electrical	$ 350,000.00	$ 670,000.00	Alternative 1 Costs to meet the increased electrical demand from Headworks/secondary/Disinfection equipment required to meet projected peak instantaneous flow of 3,706 m^3/d. Alternative 2 expands to include the electrical demand for tertiary filtration equipment.
Sub-Total	**$ 3,960,000.00**	**$ 7,180,000.00**	N/A
Contingency, & Engineering (30%)	**$ 1,190,000.00**	**$ 2,160,000.00**	Includes 20% construction contingency, 10% engineering (includes design and contract administration). Contractor's overhead and profit is assumed to be included in items above. Cash allowance has been excluded from this estimate.
Total Construction Cost	**$ 5,150,000.00**	**$ 9,340,000.00**	Estimated values are class 4 level estimates with error margins -30%/+50% at this preliminary stage.

7 Alternative Evaluation

Table 11 shows the evaluation of the alternatives for the WWTP expansion.

Table 11 Evaluation Summary for WWTP Expansion

Evaluation Criteria		Alternative Design Solutions	
Factors	**Measures**	**Alternative 1: WWTP Sequencing Batch Reactor with Equalization Tank Upgrade**	**Alternative 2: WWTP Sequencing Batch Reactor with Equalization Tank and Filtration Upgrade**
Natural Environment			
Aquatic Environment	• Potential to impact fish and fish habitat. • Potential to impact water quality and quantity.	• Low potential to impact fish and fish habitat since the capacity expansion will not require a new effluent outfall pipe into Thames River. However, minor impacts from increased effluent loadings. • Low potential to impact water quality and quantity due to site's proximity to the Thames River and potential runoff during construction. However, impacts may be mitigated through design and construction management measures.	• Low potential to impact fish and fish habitat as expansion will not require new effluent outfall pipe into Thames River. However, minor impacts from increased effluent loadings. • Low potential to impact water quality and quantity due to site's proximity to the Thames River and potential runoff during construction. However, impacts may be mitigated through design and construction management measures.
Terrestrial Environment	• Potential to impact wildlife/habitat (i.e., Species-at-Risk, spawning areas, significant ecological areas, etc.). • Potential to affect vegetation (i.e., wooded areas, wetlands, conservation areas, etc.). • Potential to impact individual trees or landscaped features.	• Low potential to impact wildlife/habitat, including bird nesting and bat habitat, as the construction of the new SBR reactors and EQ and sludge tanks would not extend past existing site into surrounding land. • Low vegetation removals required where expansion is required. • Low potential to impact individual trees that would require removal to accommodate expansion due to additional SBR reactors, EQ, and sludge tanks.	• Low potential to impact wildlife/habitat, including bird nesting and bat habitat, as the construction of the new SBR reactors and EQ and sludge tanks and Tertiary/Disinfection Building would not extend past existing site into surrounding land. • Low vegetation removals required where expansion is required. • Low potential to impact individual trees that would require removal to accommodate expansion due to additional SBR reactors, EQ and sludge tanks and tertiary/disinfection Building.
Natural Environment Summary		**Least preferred**	**Preferred**
Cultural Environment			
Archaeological Resources	• Potential to impact artifacts.	• Low potential to impact undisturbed lands since the expansion would take place within the existing developed site. The business park in which the WWTP is situated underwent a Stage 1 archaeological assessment which identified that the site was previously disturbed (former gravel pit) and no further archaeological investigation was required.	• Low potential to impact undisturbed lands since the expansion would take place within the existing developed site. The business park in which the WWTP is situated underwent a Stage 1 archaeological assessment which identified that the site was previously disturbed (former gravel pit) and no further archaeological investigation was required.
Built Heritage Resources / Cultural Landscape	• Potential to impact known built heritage resources or cultural landscapes/features.	• No impact to built heritage or cultural landscapes/features. There are no structures within 50 m of the existing structure.	
Cultural Environment Summary		**Preferred**	**Preferred**

Evaluation Criteria		Alternative Design Solutions	
Factors	**Measures**	**Alternative 1: WWTP Sequencing Batch Reactor with Equalization Tank Upgrade**	**Alternative 2: WWTP Sequencing Batch Reactor with Equalization Tank and Filtration Upgrade**
Socio-Economic Environment			
Noise/Vibration & Air Quality	• Potential to impact noise sensitive areas (i.e., residential dwellings, daycares, etc.) during construction. • Potential to affect local air quality during construction. • Potential to affect local air quality during operational phase.	• Moderate potential for temporary noise impacts caused by construction vehicles. • Moderate potential for temporary impacts to local air quality due to construction equipment exhaust/dust. • Low potential for impacts to local air quality during operation phase due to occasional odours.	• Moderate potential for temporary noise impacts caused by construction vehicles. • Moderate potential for temporary impacts to local air quality due to construction equipment exhaust/dust. • Low potential for impacts to local air quality during operation phase due to occasional odours.
Property Requirements	• Requires acquisition of private property.	• No impact to private property.	
Aesthetics	• Potential to impact visual aesthetics of study area	• Low potential to impact visual aesthetics of the study area since the site is already used as a WWTP.	
Land Use	• Potential to impact existing and future designated land use and/or community use	• No impact to existing or designated land use. Community use will not be impacted since the public does not use the WWTP grounds.	
Consistency with Municipal Planning Objectives & Future Development within the Area	• Satisfies the goals and objectives of the Town's Official Plan • Consistency with municipal/regional policies	• Satisfies the goals of the Municipality of Thames Centre 's Water and Wastewater Master Plan Update to support future projected population growth. The project addresses growth within the 20-year planning horizon (to 2046). • Consistent with municipal/regional policies related to servicing existing and future population in an environmentally responsible manner and account for the health and safety of residents.	
Health & Safety	• Potential to impact health and safety of residents • Potential to impact health and safety of employees • Potential impacts to groundwater quality (i.e., wells, effect Source Water Protection area, etc.) • Potential to encounter contaminated subsurface conditions	• Low potential to impact the health and safety of Town residents. • Improves health and safety of employees through design of new buildings and processes with improved safety features. • Low potential to impact groundwater quality including private wells. • Low potential to encounter contaminated subsurface conditions.	• Low potential to impact the health and safety of Town residents. • Improves health and safety of employees through design of new buildings and processes with improved safety features. • Low potential to impact groundwater quality including private wells. • Low potential to encounter contaminated subsurface conditions.
Community Access	• Disruption to existing traffic, private property, and business access during construction. • Disruption to existing traffic, private property, and business access during operation.	• Low potential to impact traffic during construction since the WWTP is on a local road with one other property south of the WWTP. Access will be maintained during construction. • Decreases impact of traffic due to potential to improve sludge storage and dewatering and reducing frequency of visits by solids disposal trucks.	
Socio-Economic Environment Summary		**Preferred**	**Preferred**

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Reference: Thorndale Water Treatment Plant Expansion Options Evaluation

Evaluation Criteria		Alternative Design Solutions	
Factors	**Measures**	**Alternative 1: WWTP Sequencing Batch Reactor with Equalization Tank Upgrade**	**Alternative 2: WWTP Sequencing Batch Reactor with Equalization Tank and Filtration Upgrade**
Technical			
Functionality/Reliability of Wastewater Treatment	• Treated effluent quality. • Reliability of the treatment process. • Potential for risk of sewage backups and impacts to collection system.	• Improves and maintains treated effluent quality. • Improves reliability of treatment processes. • Low potential risk for sewage backups and impacts to the collection system.	
Monitoring Requirements & Efficiencies	• Impacts to operational monitoring requirements and efficiency.	• Moderate impact to operational monitoring requirements as the addition of SBR/secondary treatment process will add sampling points that require compliance monitoring and reporting. • High improvement in efficiency of treatment.	• Moderate impact to operational monitoring requirements as the addition of SBR/secondary treatment process will add sampling points that require compliance monitoring and reporting. • Higher improvement in efficiency of treatment with addition of filtration/tertiary treatment.
Cost	• Relative capital, operational and maintenance costs ($)	• Moderate 20-year lifecycle cost. Lower construction cost and O&M cost than Alternative 2.	• High 20-year lifecycle cost. Higher construction cost and O&M cost than Alternative 1.
Utilities	• Potential to impact existing utilities	• Positive impact to the sewer system by reducing surcharge and flooding frequency. • Low impact to other existing utilities. Upgraded hydro connection may be required to be confirmed in detailed design.	
Constructability & Feasibility	• Potential to disrupt existing traffic, property access or functionality of existing facilities during construction. • Location, depth of excavation, soil conditions, rock removal, groundwater control, in-water works, workable construction area, construction duration	• Low impact to existing traffic, property access or functionality of existing facilities during construction. Tie-ins of new infrastructure to existing plant may require short shutdowns or temporary treatment processes.	• Low impact to existing traffic, property access or functionality of existing facilities during construction. Tie-ins of new infrastructure to existing plant may require short shutdowns or temporary treatment processes.
Expandability	• Potential to be expanded or flexible to meet future population needs	• High potential for expansion opportunities beyond the projected 20-year population horizon.	
Climate Change	• Ability to increase resilience to climate change (i.e., severe weather events) within the study area. • Impacts to known climate change contributors (i.e., GHG emissions)	• Moderate improvement in resiliency to climate change due to accommodation of 2041 projection peak flows. • High potential to increase known climate change contributors through construction of several concrete tanks and increased energy consumption, although there are opportunities to implement more energy efficient processes.	• Moderate improvement in resiliency to climate change due to accommodation of 2041 projection peak flows. • High potential to increase known climate change contributors through construction of several concrete tanks and increased energy consumption, although there are opportunities to implement more energy efficient processes.
Technical Summary		**Preferred**	**Least Preferred**
OVERALL CONCLUSION			

LEGEND
Preferred
Least Preferred

8 Conclusions and Next Steps

The preferred alternative for WWTP expansion based on the detailed evaluation is: ***Alternative 1 - WWTP SBR*** with the following key advantages:

- Optimizing use of existing infrastructure, including reusing of the existing SBRs with addition of equalization tanks to buffer peak flows to reach effluent limits.
- Ability to accommodate increased influent loadings.
- Ability to reach effluent limits regarding nutrients, organics, and solids.

It is recommended that the Municipality inspect the existing infrastructure that is proposed to be reused, to confirm their condition is adequate for future use.

Future input from review agencies and the public is necessary and important to assist the Municipality by providing additional information, in reviewing the evaluation and in arriving at the preferred decision.

Regards,

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August 6, 2024

Reference: **Thorndale Water Treatment Plant Expansion Options Evaluation**

Appendix A – Cost Estimates

Alternative 1 Cost Estimate: Additional SBR Train + Sludge Holding Tank, Storage Equalization Tank

ITEM #1 - DIVISION 1

	Item	Description	Total	
DIVISION 1		**GENERAL (ALL LOCATIONS):**		
1	1.1	MOBILIZATION & DEMOBILIZATION		
1	1.2	PERFORMANCE BONDS		
1	1.3	SCHEDULE		
1	1.4	LABOUR & MATERIAL BONDS		
1	1.5	INSURANCE		
1	1.6	BUILDING PERMITS		
1	1.7	PROJECT SIGNAGE		
1	1.8	SHOP DRAWINGS		
1	1.9	START-UP & COMMISSIONING		
1	1.10	RECORD DRAWINGS		
1	1.11	OPERATION & MAINTENANCE MANUALS		
1	1.12	PRE-START HEALTH AND SAFETY REVIEWS		
1	1.13	OTHER ITEMS REQ'D TO COMPLETE DIV 1		
		DIVISION 1 TOTAL:		**$ 190,000.00**
ITEM #2 - NEW THORNDALE WWTP				
DIVISION 2		**SITE CONSTRUCTION:**		
2	2.1	GENERAL SITE ITEMS	$ 22,803.65	
2	2.2	DEWATERING	$ 9,120.00	
2	2.3	EXCAVATION	$ 53,579.09	
2	2.4A	BACKFILL - SELECT NATIVE	$ 15,499.44	
2	2.4B	BACKFILL - GRANULAR 'A'	$ 45,840.77	
2	2.4C	BACKFILL - ENGINEERED FILL	$ -	
2	2.4D	BACKFILL - GRANULAR 'B'	$ 12,217.15	
2	2.5	YARD PIPING	$ 66,742.90	
2	2.6.1	OUTFALL PIPE (EXCL. DIR. DRILL)	$ -	
2	2.6.2	DIRECTIONAL DRILLING	$ -	
2	2.7	SANITARY & STORM SEWERS IN STREETS 'A' & 'B'	$ -	
2	2.8	SITE GRADING	$ 33,369.17	
2	2.9	LANDSCAPING	$ -	
2	2.10	ROADWORKS/SIDEWALKS	$ 63,303.29	
2	2.11	FENCING & GATES	$ -	
2	2.12	SURFACE RESTORATION (TOPSOIL, SEED & MULCH)	$ 18,681.41	
2	2.13	OTHER ITEMS REQ'D TO COMPLETE DIV 2	$ 15,048.00	
		TOTAL THIS SECTION:	$ 356,204.86	**$ 360,000.00**
DIVISION 3		**CONCRETE:**		
2	3.1	CAST-IN-PLACE - ADMIN BUILDING	$ -	
2	3.2	PRE-CAST - ADMIN BUILDING	$ -	
2	3.3	CAST-IN-PLACE - HEADWORKS, SBR & SLUDGE TANKS	$ 725,688.48	
2	3.4	CAST-IN-PLACE - UV CHANNEL	$ -	
2	3.5	CAST-IN-PLACE - EQUIPMENT AND PIPE SUPPORT PADS	$ -	
2	3.6	PRE-CAST - CHAMBERS, MHs, HEADWALLS ETC…	$ -	
2	3.7	INLET PS WETWELL & DROP STRUCTURE	$ -	

2 3.8	OTHER ITEMS REQ'D TO COMPLETE DIV 3	$	13,680.00	
	TOTAL THIS SECTION:	$	739,368.48	**$ 740,000.00**
DIVISION 4	**MASONRY:**			
2 4.1	MASONRY (FACE BLOCK)	$	-	
2 4.2	MASONRY (RE-INF. CONCRETE BLOCK)	$	-	
2 4.3	MASONRY (INTERIOR CONCRETE BLOCK)	$	-	
2 4.4	OTHER ITEMS REQ'D TO COMPLETE DIV 4	$	-	
	TOTAL THIS SECTION:	$	-	**$**
DIVISION 5	**METALS:**			
2 5.1	STRUCTURAL STEEL, LINTELS AND ACCESSORIES	$	-	
2 5.2	PUMPING STATION (PLATFORM, RAILING, HATCHES, ETC…)	$	-	
2 5.3	ADMIN BLDG (RAILING, GRATING, ETC…)	$	-	
2 5.4	PROCESS TANKS (RAILINGS, STAIRS, GRATINGS, ETC…)	$	50,679.38	
2 5.5	UV CHANNEL (RAILINGS, GRATINGS, ETC…)	$	-	
2 5.6	OTHER ITEMS REQ'D TO COMPLETE DIV 5	$	8,208.00	
	TOTAL THIS SECTION:	$	58,887.38	**$ 60,000.00**
DIVISION 6	**WOOD AND PLASTER:**			
2 6.1	ROUGH CARPENTRY	$	-	
2 6.2	FINISH CARPENTRY	$	-	
2 6.3	ARCHITECTURAL WOODWORK	$	-	
2 6.4	OTHER ITEMS REQ'D TO COMPLETE DIV 6	$	-	
	TOTAL THIS SECTION:	$	-	**$**
DIVISION 7	**THERMAL AND MOISTURE PROTECTION:**			
2 7.1	FOUNDATION INSULATION	$	6,718.70	
2 7.2	ROOF MEMBRANE	$	-	
2 7.3	CAVITY WALL INSULATION AND BARRIER	$	-	
2 7.4	METAL FLASHING AND TRIM	$	-	
2 7.5	SEALANTS	$	5,409.53	
2 7.6	MEMBRANE WATERPROOFING	$	3,829.49	
2 7.7	OTHER ITEMS REQ'D TO COMPLETE DIV 7	$	-	
	TOTAL THIS SECTION:	$	15,957.72	**$ 20,000.00**
DIVISION 8	**WINDOWS AND DOORS:**			
2 8.1	DOORS, FRAMES & HARDWARE	$	-	
2 8.2	ALUMINUM WINDOWS	$	-	
2 8.3	OTHER ITEMS REQ'D TO COMPLETE DIV 8	$	-	
	TOTAL THIS SECTION:	$	-	**$**
DIVISION 9	**FINISHES:**			
2 9.1	QUARRY & CERAMIC TILE	$	-	
2 9.2	EPOXY COATING (FLOOR)	$	-	
2 9.3	CHEMICAL RESISTANT COATING	$	4,620.19	
2 9.4	PAINTING (WALLS)	$	-	
2 9.5	PAINTING EPOXY (STEEL)	$	-	
2 9.6	PAINTING (PIPING)	$	1,944.38	
2 9.7	CONCRETE TANK LINING	$	28,321.70	
2 9.8	OTHER ITEMS REQ'D TO COMPLETE DIV 9	$	-	
	TOTAL THIS SECTION:	$	34,886.28	**$ 30,000.00**

DIVISION 10	**SPECIALTIES:**				
2	10.1	GRIT DISPOSAL BIN	$	-	
2	10.2	METAL LOCKERS	$	-	
2	10.3	WASHROOM ACCESSORIES	$	-	
2	10.4	IDENTIFYING DEVICES	$	-	
2	10.5	FIRE EXTINGUISHERS	$	-	
2	10.6	OTHER ITEMS REQ'D TO COMPLETE DIV 10	$	-	
		TOTAL THIS SECTION:	$	-	**$**
DIVISION 11	**EQUIPMENT:**				
2	11.1	SLUDGE LOADING PLATFORM	$	-	
2	11.2.1	SUBMERSIBLE PUMPS (INLET PS)	$	-	
2	11.2.2	SUBMERSIBLE PUMPS (SLUDGE TANKS)	$	29,836.99	
2	11.3	CHEMICAL FEED SYSTEM (INCL. TANK)	$	-	
2	11.4	SLIDE GATES	$	73,150.61	
2	11.5	AUTO-SAMPLERS	$	-	
2	11.6	AUGER SCREEN	$	-	
2	11.7	UV DISINFECTION EQUIPMENT	$	-	
2	11.8	ICEAS SBR PACKAGE SYSTEM (PRE-SELECTED)			
2	11.8.1	PRE-SELECTED EQUIPMENT PRICE	$	819,850.00	
2	11.8.2	SBR AERATION SYSTEM INSTALLATION	$	-	
2	11.8.3	SBR VALVES INSTALLATION	$	-	
2	11.8.4	SBR ELECTRICAL/INSTRUMENTATION INSTALLATION	$	-	
2	11.8.5	OTHER ITEMS REQ'D TO INSTALL SBR	$	-	
2	11.9	SLUDGE TANK COVER (PROVISIONAL)	$	167,732.33	
2	11.10	EQ TANK-DESIGN	$	857,280.00	
2	11.11	OTHER ITEMS REQ'D TO COMPLETE DIV 11	$	2,701.71	
		TOTAL THIS SECTION:	**$**	**1,950,551.64**	**$ 1,950,000.00**
DIVISION 12	**FURNISHINGS :**				
2	12.1	LAB FURNISHINGS	$	-	
2	12.2	OTHER ITEMS REQ'D TO COMPLETE DIV 12	$	-	
		TOTAL THIS SECTION:	$	-	**$**
DIVISION 13	**SPECIAL CONSTRUCTION:**				
2	13.1	COMMISSIONING AND START-UP	$	35,472.24	
2	13.2	OTHER ITEMS REQ'D TO COMPLETE DIV 13	$	-	
		TOTAL THIS SECTION:	$	35,472.24	**$ 40,000.00**
DIVISION 14	**HOISTING DEVICES:**				
2	14.1	LIFTING DAVITS	$	11,517.88	
2	14.2	OTHER ITEMS REQ'D TO COMPLETE DIV 14	$	-	
		TOTAL THIS SECTION:	$	11,517.88	**$ 10,000.00**
DIVISION 15	**MECHANICAL:**				
2	15.1	PROCESS PIPING	$	142,656.41	
2	15.2	PROCESS VALVES	$	31,055.42	
2	15.3	PROCESS AND MECHANICAL IDENTIFICATION	$	7,432.80	
2	15.4	PIPE INSULATION	$	8,934.86	

2	15.5	HVAC SYSTEM - ADMIN BUILDING	$	-	
2	15.6	HVAC SYSTEM - PLANT	$	-	
2	15.7	HVAC BALANCING REPORTS	$	-	
2	15.8	PLUMBING AND DRAINAGE	$	-	
2	15.9	PROCESS PIPING TESTING	$	6,840.00	
2	15.10	OTHER ITEMS REQ'D TO COMPLETE DIV 15	$	17,328.00	
		TOTAL THIS SECTION:	$	214,247.50	**$ 210,000.00**
DIVISION 16		**ELECTRICAL:**			
2	16.1	PRIMARY POWER SUPPLY	$	22,744.78	
2	16.2	SECONDARY POWER SUPPLY	$	9,321.10	
2	16.3	GENERATORS	$	-	
2	16.4	MCC,VFD,AHF & LP/TX	$	46,354.68	
2	16.5	WIRING	$	79,541.90	
2	16.6	HEAT TRACING (PIPES)	$	8,429.16	
2	16.7	CONDUITS	$	39,726.72	
2	16.8	CABLE TRAY	$	15,704.64	
2	16.9	FIELD DS & CPLS	$	-	
2	16.10	INSTRUMENTATION AND CONTROLS	$	31,114.02	
2	16.11	PLC & SCADA (EQUIPMENT AND INSTALL)	$	75,367.68	
2	16.12	BUILDING SERVICES (LIGHTS, POWER, SECURITY)	$	-	
2	16.13	OTHER ITEMS REQ'D TO COMPLETE DIV 16	$	20,352.65	
		TOTAL THIS SECTION:	$	348,657.33	**$ 350,000.00**
		THORNDALE WWTP TOTAL	**No Div 1**		**$ 3,770,000.00**
			All Divs		**$ 3,960,000.00**
			Engineering (+10%)		$ 400,000.00
			Contingency (+20%)		$ 790,000.00
					$ -
					$ 5,150,000.00

Alternative 2 Cost Estimate: Additional SBR Train + Sludge Holding Tank, Storage Equalization Tank, New Tertiary Filter Building

ITEM #1 - DIVISION 1

Item	Description	Total	Total
DIVISION 1	**GENERAL (ALL LOCATIONS):**		
1 1.1	MOBILIZATION & DEMOBILIZATION		
1 1.2	PERFORMANCE BONDS		
1 1.3	SCHEDULE		
1 1.4	LABOUR & MATERIAL BONDS		
1 1.5	INSURANCE		
1 1.6	BUILDING PERMITS		
1 1.7	PROJECT SIGNAGE		
1 1.8	SHOP DRAWINGS		
1 1.9	START-UP & COMMISSIONING		
1 1.10	RECORD DRAWINGS		
1 1.11	OPERATION & MAINTENANCE MANUALS		
1 1.12	PRE-START HEALTH AND SAFETY REVIEWS		
1 1.13	OTHER ITEMS REQ'D TO COMPLETE DIV 1		
	DIVISION 1 TOTAL:		**$ 340,000.00**
ITEM #2 - NEW THORNDALE WWTP			
DIVISION 2	**SITE CONSTRUCTION:**		
2 2.1	GENERAL SITE ITEMS	$ 34,205.47	
2 2.2	DEWATERING	$ 9,120.00	
2 2.3	EXCAVATION	$ 80,368.63	
2 2.4A	BACKFILL - SELECT NATIVE	$ 23,249.16	
2 2.4B	BACKFILL - GRANULAR 'A'	$ 68,761.15	
2 2.4C	BACKFILL - ENGINEERED FILL	$ -	
2 2.4D	BACKFILL - GRANULAR 'B'	$ 18,325.73	
2 2.5	YARD PIPING	$ 66,742.90	
2 2.6.1	OUTFALL PIPE (EXCL. DIR. DRILL)	$ -	
2 2.6.2	DIRECTIONAL DRILLING	$ -	
2 2.7	SANITARY & STORM SEWERS IN STREETS 'A' & 'B'	$ 87,551.32	
2 2.8	SITE GRADING	$ 50,053.75	
2 2.9	LANDSCAPING	$ 37,266.37	
2 2.10	ROADWORKS/SIDEWALKS	$ 126,606.58	
2 2.11	FENCING & GATES	$ -	
2 2.12	SURFACE RESTORATION (TOPSOIL, SEED & MULCH)	$ 28,022.11	
2 2.13	OTHER ITEMS REQ'D TO COMPLETE DIV 2	$ 22,572.00	
	TOTAL THIS SECTION:	$ 652,845.17	**$ 650,000.00**
DIVISION 3	**CONCRETE:**		
2 3.1	CAST-IN-PLACE - ADMIN BUILDING	$ -	
2 3.2	PRE-CAST - ADMIN BUILDING	$ -	
2 3.3	CAST-IN-PLACE - HEADWORKS, SBR & SLUDGE TANKS	$ 725,688.48	
2 3.4	CAST-IN-PLACE - UV CHANNEL	$ -	
2 3.5	CAST-IN-PLACE - EQUIPMENT AND PIPE SUPPORT PADS	$ -	
2 3.6	PRE-CAST - CHAMBERS, MHs, HEADWALLS ETC…	$ -	
2 3.7	INLET PS WETWELL & DROP STRUCTURE	$ -	
2 3.8	CAST-IN-PLACE - FILTER BUILDING	$ 243,000.00	
2 3.9	PRE-CAST - FILTER BUILDING	$ 585,000.00	
2 3.10	CAST-IN-PLACE - EQUIPMENT AND PIPE SUPPORT PADS	$ 19,447.49	
2 3.11	PRE-CAST - CHAMBERS, MHs, HEADWALLS ETC…	$ -	
2 3.12	INLET PS WETWELL & DROP STRUCTURE	$ -	
2 3.13	OTHER ITEMS REQ'D TO COMPLETE DIV 3	$ 13,680.00	
	TOTAL THIS SECTION:	$ 1,586,815.97	**$ 1,590,000.00**

DIVISION 4	**MASONRY:**			
2 4.1	MASONRY (FACE BLOCK)	$	-	
2 4.2	MASONRY (RE-INF. CONCRETE BLOCK)	$	-	
2 4.3	MASONRY (INTERIOR CONCRETE BLOCK)	$	-	
2 4.4	OTHER ITEMS REQ'D TO COMPLETE DIV 4	$	-	
	TOTAL THIS SECTION:	$	-	**$**
DIVISION 5	**METALS:**			
2 5.1	STRUCTURAL STEEL, LINTELS AND ACCESSORIES	$	-	
2 5.2	PUMPING STATION (PLATFORM, RAILING, HATCHES, ETC…)	$	-	
2 5.3	ADMIN BLDG (RAILING, GRATING, ETC…)	$	-	
2 5.4	FILTER BUILDING (RAILING, GRATING, ETC…)	$	33,227.81	
2 5.5	PROCESS TANKS (RAILINGS, STAIRS, GRATINGS, ETC…)	$	50,679.38	
2 5.6	UV CHANNEL (RAILINGS, GRATINGS, ETC…)	$	-	
2 5.7	OTHER ITEMS REQ'D TO COMPLETE DIV 5	$	8,208.00	
	TOTAL THIS SECTION:	$	92,115.19	**$ 90,000.00**
DIVISION 6	**WOOD AND PLASTER:**			
2 6.1	ROUGH CARPENTRY	$	3,936.19	
2 6.2	FINISH CARPENTRY	$	456.00	
2 6.3	ARCHITECTURAL WOODWORK	$	-	
2 6.4	OTHER ITEMS REQ'D TO COMPLETE DIV 6	$	-	
	TOTAL THIS SECTION:	$	4,392.19	**$**
DIVISION 7	**THERMAL AND MOISTURE PROTECTION:**			
2 7.1	FOUNDATION INSULATION	$	6,718.70	
2 7.2	ROOF MEMBRANE	$	41,697.55	
2 7.3	CAVITY WALL INSULATION AND BARRIER	$	-	
2 7.4	METAL FLASHING AND TRIM	$	-	
2 7.5	SEALANTS	$	10,819.06	
2 7.6	MEMBRANE WATERPROOFING	$	7,658.98	
2 7.7	OTHER ITEMS REQ'D TO COMPLETE DIV 7	$	-	
	TOTAL THIS SECTION:	$	66,894.29	**$ 70,000.00**
DIVISION 8	**WINDOWS AND DOORS:**			
2 8.1	DOORS, FRAMES & HARDWARE	$	23,595.26	
2 8.2	ALUMINUM WINDOWS	$	7,646.21	
2 8.3	OTHER ITEMS REQ'D TO COMPLETE DIV 8	$	-	
	TOTAL THIS SECTION:	$	31,241.47	**$ 30,000.00**
DIVISION 9	**FINISHES:**			
2 9.1	QUARRY & CERAMIC TILE	$	-	
2 9.2	EPOXY COATING (FLOOR)	$	13,434.67	
2 9.3	CHEMICAL RESISTANT COATING	$	6,930.29	
2 9.4	PAINTING (WALLS)	$	16,512.67	
2 9.5	PAINTING EPOXY (STEEL)	$	-	
2 9.6	PAINTING (PIPING)	$	1,944.38	
2 9.7	CONCRETE TANK LINING	$	28,321.70	
2 9.8	OTHER ITEMS REQ'D TO COMPLETE DIV 9	$	-	
	TOTAL THIS SECTION:	$	67,143.72	**$ 70,000.00**

DIVISION 10	**SPECIALTIES:**			
2 10.1	GRIT DISPOSAL BIN	$	2,552.69	
2 10.2	METAL LOCKERS	$	-	
2 10.3	WASHROOM ACCESSORIES	$	2,365.73	
2 10.4	IDENTIFYING DEVICES	$	5,281.39	
2 10.5	FIRE EXTINGUISHERS	$	693.12	
2 10.6	OTHER ITEMS REQ'D TO COMPLETE DIV 10	$	-	
	TOTAL THIS SECTION:	$	10,892.93	**$ 10,000.00**
DIVISION 11	**EQUIPMENT:**			
2 11.1	SLUDGE LOADING PLATFORM	$	-	
2 11.2.1	SUBMERSIBLE PUMPS (INLET PS)	$	-	
2 11.2.2	SUBMERSIBLE PUMPS (SLUDGE TANKS)	$	29,463.09	
2 11.3	CHEMICAL FEED SYSTEM (INCL. TANK)	$	-	
2 11.4	SLIDE GATES	$	72,233.93	
2 11.5	AUTO-SAMPLERS	$	-	
2 11.6	AUGER SCREEN	$	-	
2 11.7	UV DISINFECTION EQUIPMENT	$	-	
2 11.8	ICEAS SBR PACKAGE SYSTEM (PRE-SELECTED)			
2 11.8.1	PRE-SELECTED EQUIPMENT PRICE	$	819,850.00	
2 11.8.2	SBR AERATION SYSTEM INSTALLATION	$	-	
2 11.8.3	SBR VALVES INSTALLATION	$	-	
2 11.8.4	SBR ELECTRICAL/INSTRUMENTATION INSTALLATION	$	-	
2 11.8.5	OTHER ITEMS REQ'D TO INSTALL SBR	$	-	
2 11.9	SLUDGE TANK COVER (PROVISIONAL)	$	167,732.33	
2 11.10	GFS EQ TANK-DESIGN	$	857,280.00	
2 11.11	DISK FILTRATION	$	1,093,032.00	
2 11.12	OTHER ITEMS REQ'D TO COMPLETE DIV 11	$	2,701.71	
	TOTAL THIS SECTION:	**$**	**3,042,293.07**	**$ 3,040,000.00**
DIVISION 12	**FURNISHINGS :**			
2 12.1	LAB FURNISHINGS	$	-	
2 12.2	OTHER ITEMS REQ'D TO COMPLETE DIV 12	$	-	
	TOTAL THIS SECTION:	$	-	**$**
DIVISION 13	**SPECIAL CONSTRUCTION:**			
2 13.1	COMMISSIONING AND START-UP	$	63,850.03	
2 13.2	OTHER ITEMS REQ'D TO COMPLETE DIV 13	$	-	
	TOTAL THIS SECTION:	$	63,850.03	**$ 60,000.00**
DIVISION 14	**HOISTING DEVICES:**			
2 14.1	LIFTING DAVITS	$	11,517.88	
2 14.2	OTHER ITEMS REQ'D TO COMPLETE DIV 14	$	-	
	TOTAL THIS SECTION:	$	11,517.88	**$ 10,000.00**
DIVISION 15	**MECHANICAL:**			
2 15.1	PROCESS PIPING	$	285,312.82	
2 15.2	PROCESS VALVES	$	62,110.85	
2 15.3	PROCESS AND MECHANICAL IDENTIFICATION	$	14,865.60	
2 15.4	PIPE INSULATION	$	17,869.73	
15.5	HVAC SYSTEM - FILTER BUILDING	$	57,609.22	
2 15.6	HVAC SYSTEM - PLANT	$	1,824.00	
2 15.7	HVAC BALANCING REPORTS	$	2,330.16	
2 15.8	PLUMBING AND DRAINAGE	$	64,130.47	
2 15.9	PROCESS PIPING TESTING	$	6,840.00	
2 15.10	OTHER ITEMS REQ'D TO COMPLETE DIV 15	$	34,656.00	
	TOTAL THIS SECTION:	$	547,548.84	**$ 550,000.00**

DIVISION 16		**ELECTRICAL:**		
2	16.1	PRIMARY POWER SUPPLY	$ 45,489.56	
2	16.2	SECONDARY POWER SUPPLY	$ 18,642.19	
2	16.3	GENERATORS	$ -	
2	16.4	MCC,VFD,AHF & LP/TX	$ 92,709.36	
2	16.5	WIRING	$ 159,083.81	
2	16.6	HEAT TRACING (PIPES)	$ 16,858.32	
2	16.7	CONDUITS	$ 79,453.44	
2	16.8	CABLE TRAY	$ 31,409.28	
2	16.9	FIELD DS & CPLS	$ -	
2	16.10	INSTRUMENTATION AND CONTROLS	$ 62,228.04	
2	16.11	PLC & SCADA (EQUIPMENT AND INSTALL)	$ 75,367.68	
2	16.12	BUILDING SERVICES (LIGHTS, POWER, SECURITY)	$ 52,364.30	
2	16.13	OTHER ITEMS REQ'D TO COMPLETE DIV 16	$ 40,705.30	
		TOTAL THIS SECTION:	$ 674,311.28	**$ 670,000.00**
		THORNDALE WWTP TOTAL	**No Div 1**	**$ 6,840,000.00**
			All Divs	**$ 7,180,000.00**
			Engineering (10%)	$ 720,000.00
			Contingency (20%)	$ 1,440,000.00
				$ -
				$ 9,340,000.00

Stantec

Stantec is a global leader in sustainable architecture, engineering, and environmental consulting. The diverse perspectives of our partners and interested parties drive us to think beyond what's previously been done on critical issues like climate change, digital transformation, and future-proofing our cities and infrastructure. We innovate at the intersection of community, creativity, and client relationships to advance communities everywhere, so that together we can redefine what's possible.

