

Project File Report

Logie St. and Ridout St. Sewage Pumping Station Upgrades

City of Kawartha Lakes
Lindsay, Ontario

June 27, 2025
Jp2g Project # 24-3-7800





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1 Introduction

1.1 Background

The City of Kawartha Lakes (City) is initiating a planning process to expand the wastewater collection system for the community of Lindsay. The community of Lindsay is rapidly expanding with new developments and requires upgrades to the wastewater collection system to support the increasing needs of the residents of the community.

To support new developments, upgrades to the wastewater collection system will be required.

These upgrades and recommendations will be carried out as a Schedule 'B' project under the terms of the Municipal Class Environmental Assessment (Class EA) process, which is approved under the Environmental Assessment Act. A Notice of Commencement was released on October 2nd, 2024, to mark the beginning of the project. A Public Information Centre (PIC) was held on May 29th, 2025, during which proposed alternatives and the preferred alternative were presented. A notice of completion will be issued subsequent to this report.

1.2 Study Areas

The relevant area of study includes the Logie and Ridout sewage pumping stations, the existing forcemain and gravity sewer between them, and the existing forcemains from the Ridout St. SPS to the discharge maintenance hole. Also included is the forcemain from the Ridout SPS to the discharge maintenance hole inclusive. This EA considers solutions within the study area.

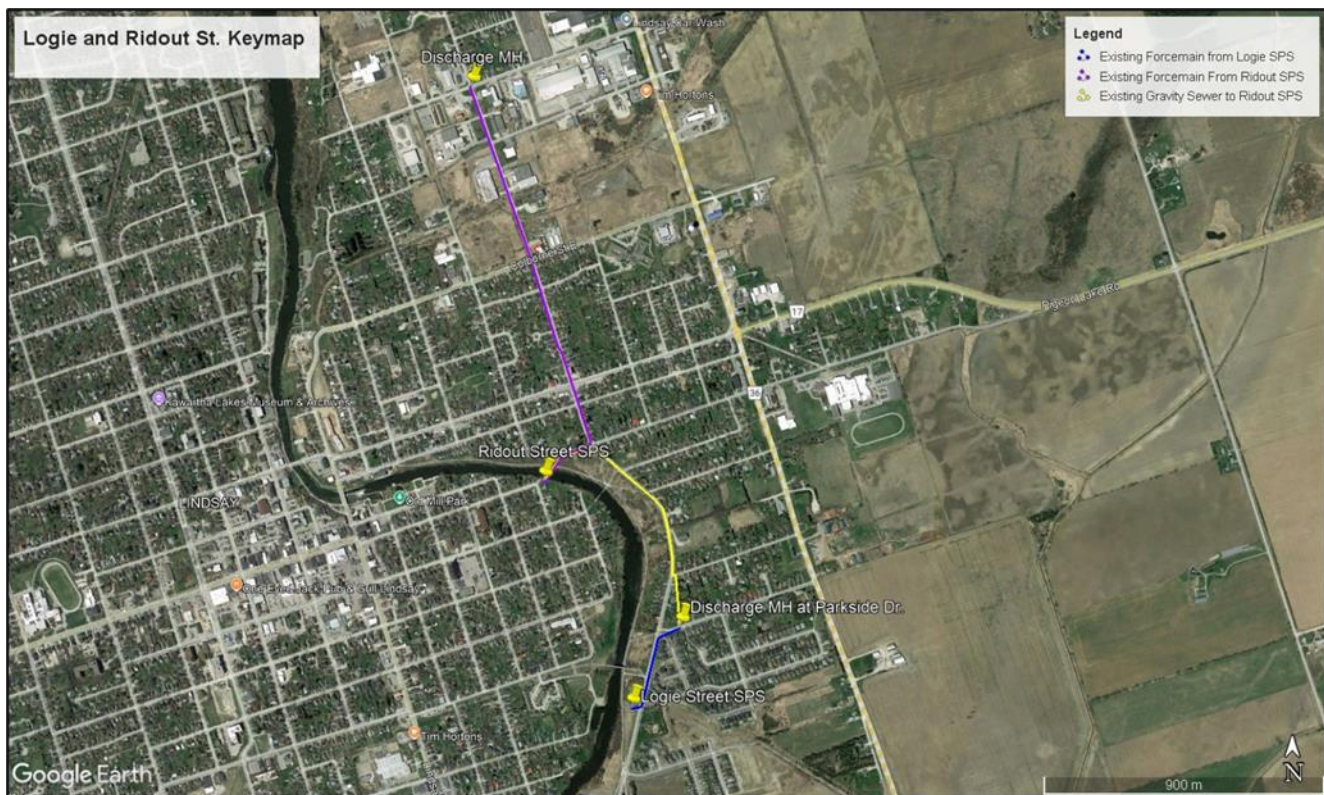


Figure 1: Aerial View of Relevant Study Areas

1.3 Municipal Class Environmental Assessment Process

In Ontario, municipal water and wastewater projects are subject to the provisions of the Municipal Class Environmental Assessment (2000, amended in 2007, 2011 and 2015). The Class Environmental Assessment (Class EA) is an approved planning document which describes the process that proponents must follow in order

to meet the requirements of the Environmental Assessment Act (EAA) of Ontario. The Class EA approach allows for the evaluation of the environmental effects of carrying out a project and alternative methods, includes mandatory requirements for public input, and expedites the environmental assessment of smaller recurring projects.

The Class EA planning process was developed to ensure that the potential social, economic, and natural environmental effects are considered in planning water, storm water and sewage projects. Class EAs are a method of dealing with projects which display the following important common characteristics: recurring, usually small in nature, usually limited in scale, predictable range of environmental effects, and responsive to mitigation measures.

Projects which do not display these characteristics must undergo an individual environmental assessment. The Class EA planning process represents an alternative for Ontario municipalities to carry out individual environmental assessments for most municipal sewage, storm water management, and water projects. Since sewage, storm water management, and water projects undertaken by municipalities under the Class EA planning process vary in their environmental impact, such projects are classified in terms of schedules.

EXHIBIT A.2. MUNICIPAL CLASS EA PLANNING AND DESIGN PROCESS

NOTE: This flow chart is to be read in conjunction with Part A of the MCEA

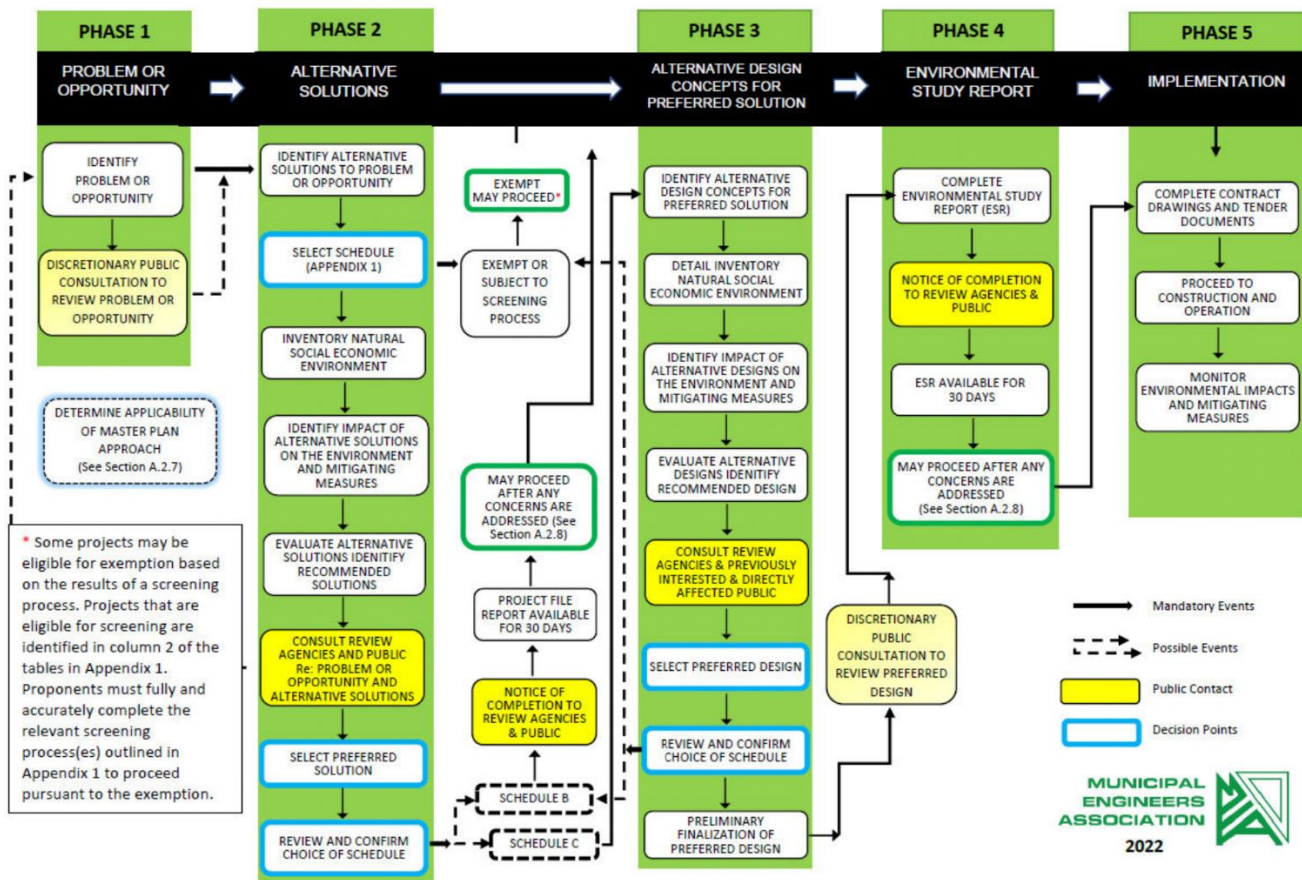


Figure 2: Municipal Class EA Planning and Design Process Flow Diagram

Schedule A projects are limited in scale, have minimal adverse effects and include the majority of municipal sewage, storm water management, and water operations as well as maintenance activities. These projects are pre-approved and may proceed to implementation without any further requirements under the provisions of the Class EA planning process. Schedule A+ projects are also pre-approved; however, the public must be informed prior to implementation.



Schedule B projects have the potential for some adverse environmental effects. The proponent is required to undertake a screening process involving mandatory contact with directly affected public and with relevant government agencies to ensure that they are aware of the project and that their concerns are addressed. If there are no outstanding concerns, then the proponent may proceed to implementation. If, however, the screening process raises a concern which cannot be resolved, then the Part II Order ("bump-up") procedure may be invoked; alternatively, the proponent may elect voluntarily to plan the project as a Schedule C undertaking. Typically, Schedule B projects involve extensions to existing Municipal infrastructure such as sewage collection systems and water distribution systems.

Schedule C projects have the potential for significant environmental effects and must proceed under the full planning and documentation procedures specified in the Class EA process. Schedule C projects require that an ESR be prepared and submitted for review by the public. If concerns are raised that cannot be resolved, the "bump-up" procedure may be invoked, which may result in the requirement to complete a full environmental assessment. Typically, these projects involve the construction of Municipal infrastructure such as wastewater treatment facilities, new sewage collection and water distribution systems, and water treatment facilities.

Proponents then proceed through the planning process beginning with Phase 1 (Problem Definition) and advancing towards the end of Phase 2 (Evaluation of Alternative Solutions), where the preferred alternative solution is determined. Having determined the preferred alternative solution, the appropriate project schedule and process for the completion of the project can be followed.

For a Schedule B project, Phase 1 defines the nature and extent of the problem and the project opportunity. Often a discretionary public meeting is held to inform interested parties of the EA planning process and to discuss the problem.

Phase 2 involves the identification of the alternative solutions. Also included is an inventory of the natural, social, and economic environment; the identification of the impacts of alternative solutions on the environment; the identification of mitigation measures; an evaluation of alternative solutions; consultation with review agencies and the public regarding the identified problem and alternative solutions; the identification of the preferred alternative solution; and confirmation of the path or schedule to follow for the balance of the Class EA process. Public consultation is mandatory at this phase and includes review agencies and the affected public. The appropriate EA schedule for the project is also identified.

Phases 3 and 4 are relevant to a Schedule "C" EA. Phase 3 involves the identification of alternative designs for the selected alternative solution. Also included are a detailed inventory of the natural, social, and economic environment relating to the selected alternative solution; the identification of the impacts of alternative designs on the environment; the identification of mitigation measures; consultation with review agencies and the public regarding the alternative designs; and the identification of the recommended alternative design. Public consultation is mandatory at this phase and includes review agencies and the affected public.

Phase 4 represents the culmination of the planning and design process as set out in the Class EA. Phase 4 involves the completion of the documentation including the ESR, if required, and the Notice of Completion. The ESR documents all of the activities undertaken through Phases 1, 2, and 3 including the consultation. The ESR is filed with the Clerk of the Municipality and is placed on the public record for at least 30 days to allow for public review. The public and mandatory agencies are notified through the Notice of Completion, which also discloses the Part II Order ("bump-up") provisions.

Phase 5 is the implementation phase of the Class EA process. Phase 5 includes final design, construction plans and specifications, tender documents, and construction and operation. It also includes monitoring for environmental provisions and commitments (e.g. mitigation measures) as defined in the ESR.

There is an opportunity for any interested parties to request a Part II Order that results in the project being bumped up from a Class Environmental Assessment to an Individual Environmental Assessment. The "bump-up" opportunity exists at the Notice of Completion stage and must be filed with the Minister of Environment within



thirty (30) days of the notice date. The Notice of Completion occurs near the end of Phase 4 for Schedule C projects. The Notice of Completion signifies that the Class EA process has been completed for the project and that the resulting document has been placed on public record.

For projects subject to the provisions of the Class Environmental Assessment Process, a person or agency with a significant concern must communicate the concern to the proponent any time between Phases 2 and 4. If the concern cannot be resolved between the party and the proponent, then that person or agency can request a Part II Order from the Minister. This must be done during the thirty-day public review period after the Notice of Completion has been issued.

The Environmental Assessment Branch of the Ministry of the Environment then has forty-five days to prepare a report to the Minister, who then has twenty-one days to decide. The Minister may deny the request, deny the request with conditions, refer to the Environmental Assessment Advisory Committee, or comply with the request. Obviously, since the Part II Order procedure is arduous, an individual or agency with a significant and legitimate concern is wise to engage in an early and meaningful dialogue with the proponent. The process is specifically referenced in the Notice and addressed in detail during the PICs.

This project is a Schedule “B” Class EA.

The **Proponent** for the project is:

City of Kawartha Lakes

26 Francis Street

Lindsay, ON

K9V 5R8

Attention: Marten Leclerc, Senior Engineering Tech

The **Consulting Engineer** is:

Greer Galloway, a division of Jp2g Consultants Inc.

1620 Wallbridge Loyalist Rd.

Belleville, ON

K8N 4Z5

Attention: Tony Guerrero, P.Eng.



2 Problem or Opportunity

2.1 Opportunity Statement

Upgrades to the capacity of the existing wastewater collection system are required to support new and future developments within the South-East area of Lindsay.

2.2 Existing System

The Community of Lindsay has an existing wastewater collection system comprised of approximately 117 linear kilometres of gravity sewer and 9 sewage pumping stations to distribute wastewater to the Lindsay Waste Pollution Control Plant (Appendix A).

The sewage pumping stations pertaining to this project are the Logie St. and Ridout St. SPS sites. The Logie St. SPS catchment area includes residential, commercial, and institutional flows from properties east of the Scugog river and south of Horton Pl./Ellis Cr as per the City's Existing Wastewater Infrastructure Map (Appendix B). The Logie St. SPS currently pumps wastewater to a discharge maintenance hole located on Parkside Dr. via a 250mm diameter, 350m long forcemain. Wastewater then flows by gravity across the Scugog River to the Ridout St. SPS via gravity sewers and a river crossing siphon. The Ridout St. SPS receives flows from various gravity mains within its own sewer shed in addition to flows from the Logie St. and Mary St. SPS sewer sheds. The Ridout St. SPS pumps wastewater back across the Scugog River to a discharge manhole located at the intersection of St David St. and Needham St. via a 500mm forcemain. Wastewater then flows from the discharge maintenance hole to the Lindsay Water Pollution Control Plant (WPCP) for treatment. There is also an abandoned, 400mm forcemain running from the Ridout St. SPS to the discharge manhole.

2.3 Growth

Proposed and future developments within the South-East area of Lindsay including the development of the Gateway Subdivision is resulting in a substantial enlargement to the Logie St. SPS sewer shed. A new SPS designated as Highway 7 SPS within the Gateway Subdivision has been proposed which will service the subdivision as well as a number of additional properties. The Highway 7 SPS will be a tributary to the Logie St SPS. As such, the Logie St SPS requires substantial capacity upgrades to accommodate the additional flows due to the proposed expansion of the wastewater collection system.

Assessment of future flows confirms that the proposed and future developments slated for the Logie St. SPS sewer shed will contribute an additional 150 L/s in the short term and 220 L/s in the long term of wastewater flow to the SPS. This results in a total build out flow requirement of 250 L/s for the Logie St. SPS. The City's latest wastewater modeling confirms that the Ridout St. SPS will require a capacity increase to 320 L/s in the estimated 5-year future.



3 Evaluation of Alternative Solutions

3.1 Alternative Solutions

The following alternative solutions to address the need for additional capacity of the wastewater collection system to support the needs of the community of Lindsay were considered:

- 1) Do Nothing / Limit Growth
- 2) Staged Upgrade of Logie St. SPS and Minor Upgrades to Ridout St. SPS
- 3) Full Upgrade of Logie St. SPS and Minor Upgrades to Ridout St. SPS
- 4) Full Upgrades of Logie St. SPS and Ridout St. SPS

3.2 Evaluation of Alternatives

Selection of a preferred solution involves evaluating the relative merits of each alternative from a technical perspective as well as assessing the potential impacts on the natural, cultural, social, and economic environments. Technical considerations include the ability to satisfy the problem statement while meeting applicable regulations, codes, and standards (including requirements for MECP approvals). Natural environment includes impacts to groundwater, surface water, terrestrial and aquatic environments, and species at risk. Cultural environment refers to cultural heritage and archaeological resources. Social environment includes impacts to people and communities (e.g., property impacts, noise, odour, aesthetics, recreation). Economic environment includes capital and operating costs as well as impacts on commercial or other activities contributing to overall economic health.

A description of each alternative and evaluation of environmental impacts is presented below.

3.2.1 Alternative 1: Do Nothing / Limit Growth

This alternative would have the lowest capital cost and would involve continuing to use the existing wastewater system without any changes. This alternative is not feasible as the current collection system will not be able to support the proposed developments.

3.2.2 Alternative 2: Staged Upgrade of Logie St. SPS and Minor Upgrades to Ridout St. SPS

Alternative 2 will provide a staged upgrade to the Logie St. SPS by utilizing the abandoned forcemain and deferring the full build out upgrades. This option includes the replacement of the Logie St. SPS wetwell with a new wetwell, allowing for the necessary storage volume and sufficient space to install three new sewage pumps. As a partial upgrade, two new sewage pumps will be installed within the wetwell, each capable of providing 180 L/s of flow for a firm capacity of 180 L/s for the station. This option also includes associated electrical upgrades to support the new SPS.

A new 500 mm diameter forcemain will be constructed from Logie St. SPS to connect to the existing abandoned 400 mm forcemain from Ridout St SPS to the existing discharge point. The connection point from the new forcemain to the abandoned forcemain will be at the intersection of Riverview Rd and Logie St. This results in a new 500 mm forcemain length of approximately 1000 m to connect to the abandoned 400 mm forcemain.

Ultimately, the station will be upgraded in the future to add a third pump providing 180 L/s and the station will operate with two duty pumps and the third pump as a backup. The two duty pumps operating together will provide a firm capacity flow of approximately 250 L/s to meet the full build-out design requirements. The 500 mm forcemain will also be disconnected from the abandoned forcemain and be extended the remaining distance of 1200 m up to the discharge point. These upgrades to Logie St. divert existing flows away from Ridout St. SPS and therefore, minor upgrades to aging equipment will be required at Ridout SPS. It is recommended that the City proactively replace the aging pumps at Ridout St. SPS with higher capacity pumps to meet the future demands of the station and avoid duplicate costs in the near (estimated 5-year) future. Ridout St. SPS will be



upgraded with three (3) new pumps to provide a firm station capacity of 320 L/s in addition to associated electrical equipment, valves, and piping upgrades.

For this option, Logie St. SPS being upgraded by a staged approach will allow for significant short term cost savings likely in the range of \$1.7 million that can be deferred to a later time. Diverting flows from Logie St. SPS to be pumped directly to the discharge point will limit much of the required works for Ridout St. SPS upgrades. Additional work will be required in the future to install a third pump and extend the new 500 mm forcemain up to the discharge point.

3.2.3 Alternative 3: Full Upgrade of Logie St. SPS and Minor Upgrades to Ridout St. SPS

Alternative 3 will provide the full build out upgrade to the Logie St. SPS immediately. This option includes the replacement of the Logie St. SPS wetwell with a new wetwell allowing for the necessary storage volume. The wetwell will be equipped with three new pumps providing 180 L/s of flow each. This will provide the station with a firm capacity of 250 L/s to meet the full buildout flow requirements.

A new 500 mm diameter forcemain will be constructed from Logie St. SPS to the existing discharge point. This results in a new 500 mm forcemain length of approximately 2200 m to connect to the discharge point. These upgrades to Logie St. divert existing flows away from Ridout St. SPS and therefore, Ridout St. SPS will only require minor upgrades to pumps and any aging equipment. It is recommended that the City proactively replace the aging pumps at Ridout St. SPS with higher capacity pumps to meet the future demands of the station and avoid duplicate costs in the near (estimated 5-year) future. Ridout St. SPS will be upgraded with three (3) new pumps to provide a firm station capacity of 320 L/s in addition to related electrical equipment, valves, and piping upgrades.

For this option, Logie St. SPS will be fully upgraded to be capable of handling all proposed and anticipated growth in the future. Diverting flows from Logie St. SPS to be pumped directly to the discharge point will limit much of the required works for Ridout St. SPS upgrades. This option will result in significantly higher costs in the short term for the construction of the new 500 mm forcemain for the full distance of 2200 m and the third pump as compared to Alternative 2. Additionally, if developments proceed at the anticipated pace, higher operating costs will be incurred in the short term due to the Logie St. SPS pumps operating inefficiently at the existing lower flows.

3.2.4 Alternative 4: Full Upgrades of Logie St. SPS and Ridout St. SPS

Alternative 4 will provide a full build out upgrade to both Logie St. SPS and Ridout St. SPS. This option will not divert any flows away from the Ridout St. SPS. This option will continue pumping sewage from Logie St. SPS to Ridout St. SPS through the gravity sewer and siphon across the river and all sewage will then be pumped from Ridout St. SPS to the existing discharge point.

This option requires major upgrades to both Logie St. SPS and Ridout St SPS including new wet wells with sufficient storage volume at both stations. Logie St. SPS will be equipped with three pumps (two duty, one standby) each providing of 180 L/s of flow. The two duty pumps in the new Logie St. wet well will have a firm capacity of 250 L/s to meet the full build out requirement. Ridout St. SPS will be equipped with three new pumps each providing 380 L/s of flow. Ridout St. SPS will continue to operate with two duty pumps and the third pump being a backup. The two duty pumps together will provide a firm capacity flow of approximately 570 L/s to meet the full build-out requirement.



A new 500 mm forcemain will be constructed from Logie St. SPS to the existing gravity sewer connecting across the river to Ridout St. SPS. The gravity sewer and siphon will also require additional upgrades to accommodate the increased flows. The existing 500 mm forcemain and the existing 400 mm abandoned forcemain will be twinned to split the flows from the Ridout SPS to the existing discharge point.

No forcemain upgrade will be needed from Ridout St. to the discharge point. Ridout St. SPS would also be fully refurbished as part of the upgrades with this option. This option, however, will result in the highest overall costs from the capital costs of upgrading both stations and the operating costs of pumping all flows from Logie St. SPS twice. This option will also have additional environmental and economic impact due to construction works done around the river crossing.



4 Evaluation of Alternatives

4.1 Alternatives Evaluation Matrix

The above alternative solutions have been compared for their viability against various criteria including meeting the flow capacity requirements, capital and operating costs, impacts on archeological resources, terrestrial habitats and wildlife, and ease of integration and constructability. The evaluation matrix is provided below (Figure 3).

City of Kawartha Lakes Logie and Ridout Sewage Pumping Stations									
Project No. 2437800									
Evaluation of Alternative Solutions									
Description/Elements		Alternative 1		Alternative 2		Alternative 3		Alternative 4	
		Do Nothing		Logie St. Staged Upgrade		Logie St. Full Upgrade		Logie St. and Ridout St. Full Upgrades	
	Weighing Factor	Score	Weighted Score	Score	Weighted Score	Score	Weighted Score	Score	Weighted Score
Meet Flow Capacity Requirements	0.25	0	0	4	1	5	1.25	5	1.25
Site/Neighbourhood/Impact/Noise/Odour/Aesthetics	0.05	5	0.25	4	0.2	4	0.2	1	0.05
Property Acquisition/Availability	0.05	5	0.25	5	0.25	5	0.25	5	0.25
Expansion Potential	0.2	0	0	5	1	0	0	0	0
Ease of Integration/Constructability	0.05	5	0.25	4	0.2	3	0.15	1	0.05
Terrestrial Habitat/Wildlife	0.05	5	0.25	3	0.15	3	0.15	1	0.05
Archaeological Resources	0.05	5	0.25	4	0.2	4	0.2	4	0.2
Operability	0.1	0	0	4	0.4	4	0.4	3	0.3
Capital/Operating Costs	0.2	5	1	4	0.8	3	0.6	1	0.2
Total Weighted Score	1		2.25		4.2		3.2		2.35

*Scoring: 5 is the highest (best). The highest scoring alternative reflects the preferred solution

Figure 3: Alternatives Evaluation Matrix



5 Preferred Alternative

The preferred alternative for the upgrades is Alternative 2 or 3 due to having less overall capital and operational costs as well as reduced environmental and economic impacts from avoiding upgrades to the gravity sewer and siphon at the river crossing. Alternative 2 will allow for substantial cost savings for the short term if the abandoned forcemain can be utilized. The completed CCTV inspection and air pressure tests of the forcemain indicate the forcemain is in sufficient condition to be used as part of the SPS upgrades. Additionally, the road allowance along St David St. has been reviewed and sufficient space is available for the installation of a new 500 mm forcemain section as part of the Alternative 2 and 3 upgrades. The final route of the new forcemain will be determined during the design stage.

The preferred alternative will be Alternative 2. Logie St. will be equipped with a new wet well of sufficient storage volume and equipped with two pumps providing approximately 180 L/s of flow. A new 500 mm forcemain of approximately 1000 m in length will be constructed from Logie St. SPS to connect to the 400 mm abandoned forcemain. Future upgrades will include the addition of a third pump into the wet well and the extension of the 500 mm forcemain an additional 1200 m to the discharge point. Approximately 2700 additional homes to the existing 295 residential units can be serviced by the interim upgrade before the third pump and extended 500 mm forcemain are required.

The interim upgrade with Alternative 2 will provide substantial cost savings in the short term compared to Alternative 3, likely in the range of \$1.7 million.

5.1 Mitigating Measures

Minimal impact to the natural environment is expected as the construction for the upgrades to the pumping station and new forcemain will be within the existing SPS site and road right of way. The Logie St. SPS is in close proximity to the Scugog river, so strict application of environmental protection measures such as silt fencing and sediment control will be implemented. See the Environmental Site Assessment available in Appendix C.

5.2 Estimated Cost

The high-level estimated cost of the Alternative 2 sewage pumping station and forcemain upgrades is approximately \$7,000,000 including HST. The cost estimate breakdown for the preferred alternative (Alternative 2) is included in Appendix D.



6 Existing Environmental Inventory

A detailed inventory was taken as part of the Environmental Site Assessment. The Environmental Site Assessment is available in Appendix C.

6.1 Land Use and Planning

The study areas have a mixture of land uses. The Logie St. SPS site is located within the George St. ROW. The proposed forcemain as well as existing abandoned forcemain to be used lies within the road ROW's of George St., Logie St., Riverview Rd., and St David St.

6.2 Natural Environment

6.2.1 Environmental Site Assessment

The environmental concerns pertaining to the site location are inventoried in the Environmental Site Assessment available in Appendix C.

6.3 Archaeological, Heritage, and Cultural Potential

The archeological features are inventoried in the Stage 1 and 2 Archeological Assessment Report available in Appendix E. The report concluded that there is no presence of any archeological resources of cultural value or interest.

The following screening checklists developed by MCM were completed as a part of the Project File (see Appendix F).

- 1) Criteria for Evaluating Potential for Built Heritage Resources and Cultural Heritage Landscapes
- 2) Criteria for Evaluating Archaeological Potential
- 3) Criteria for Evaluating Marine Archaeological Potential

The results of checklist (1) was that there is low potential for built heritage or cultural heritage landscape on the property.

As the site has been subjected to recent intensive disturbances for the construction of the existing pumping station, the conclusion of checklists (2) and (3) is that there is low potential for archaeological and marine archaeological resources at the site.

Recommendations found in the Stage 1 and 2 Archaeological Assessment (Appendix E) shall be followed.



7 Consultation

7.1 Notice of Commencement

The Notice of Commencement (available in Appendix G) dated October 3rd, 2024, was published on the City of Kawartha Lakes website available at the following link:

<https://www.kawarthalakes.ca/en/news/notice-of-commencement-logie-and-ridout-street-sps-class-environmental-assessment.aspx>

The notice provided contact information for the project and invited public participation and comments.

7.2 Public Information Centre

The notice of the PIC was advertised on the City's website (see following link) and distributed by email to relevant agencies, first nations groups, and public stakeholders using the notice prepared in Appendix H.

<https://www.kawarthalakes.ca/en/news/notice-of-public-information-centre-logie-st-and-ridout-st-sewage-pumping-station-upgrades.aspx>

7.3 Agency Consultation

Consultation with review agencies has been undertaken throughout the project to establish requirements for approvals, determine the need for technical studies, evaluate environmental impacts of potential solutions, and develop mitigating measures.

Project Notices were circulated to the list of project contacts (available in Appendix I). Records of correspondence, and responses from review agencies including MECP and MCM are included in Appendix J.

Highlights of Agency Consultation/Correspondence:

Emails:

- Notice of Commencement – Logie St. and Ridout St. Sewage Pumping Station Upgrades – MCM response
- Notice of Commencement – Logie St. and Ridout St. Sewage Pumping Station Upgrades – MECP response

Automatic Responses have not been included.

7.4 First Nations Consultation

Consultation with First Nations groups has been undertaken throughout the project to assess the impacts of the project on Aboriginal or treaty rights.

Project Notices were circulated to the list of project contacts (available in Appendix I). Records of correspondence, and responses First Nations groups are included in Appendix K.

Highlights of First Nations Consultation/Correspondence:

Emails:

- Notice of Commencement – Logie St. and Ridout St. Sewage Pumping Station Upgrades – Hiawatha First Nations Response
- Notice of Commencement – Logie St. and Ridout St. Sewage Pumping Station – Kawartha Nishnawbe Response
- Notice of Commencement – Logie St. and Ridout St. Sewage Pumping Station – Huronne-Wendat Response

Automatic Responses have not been included.



The original notice with information regarding the EA process and goals of the project were distributed to First Nations groups in October 2024. The EA report and Notice of Completion will be provided to the contacts for each group.

7.5 Public Consultation

Consultation with interested public stakeholders has been undertaken throughout the project.

Project Notices were circulated to the list of project contacts (available in Appendix I) and posted to the City of Kawartha Lakes website (link below).

<https://www.kawarthalakes.ca/en/municipal-services/major-projects.aspx>

Questions and responses from and to interested members of the public can be found in Appendix L. Automatic responses have not been included.

7.6 Notice of Completion

SECTION TO BE UPDATED. NOTICE OF COMPLETION TO BE INCLUDED IN APPENDIX M.



8 Conclusion

The City of Kawartha Lakes has identified a need for upgrades to the wastewater collection system within the rapidly expanding community of Lindsay. To support new developments within the Logie St. SPS sewer shed, upgrades to the pumping station are required.

Additional flow capacity will be required to support the new developments slated for the Logie St. SPS sewer shed. Four alternatives were considered to address the required capacity upgrades to the wastewater collection system. Detailed evaluations of the alternatives resulted in a preferred alternative being identified. The preferred alternative is to complete staged upgrades at the Logie St. SPS and minor upgrades to the Ridout St. SPS. The upgrades include a new wet well with space for 3 submersible pumps and sufficient storage space to support the full build out requirements. Initially, 2 pumps each with a capacity of 180 L/s will be installed in a duty-standby configuration for a firm capacity of 180 L/s for the station. A new, approximately 1 km long, 500 mm diameter forcemain will be installed from the Logie St SPS and connect to the existing 400 mm diameter abandoned forcemain. Ultimately, the Logie St. SPS will be upgraded in the future by adding a third pump with a capacity of 180 L/s and operate with two duty pumps and the third pump as a backup. The fully upgraded station will have a firm capacity of 250 L/s, meeting the full build out requirement. Future upgrades will also include the disconnection of the 500mm forcemain from the abandoned 400mm forcemain and the extension of the 500mm forcemain to the discharge maintenance hole. It is the aging pumps at the Ridout St. SPS will be replaced with higher capacity pumps to meet the future demands of the station and avoid duplicate costs in the near (estimated 5-year) future. Ridout St. SPS will be upgraded with three (3) new pumps each with capacity of 230 L/s to provide a firm station capacity of 320 L/s in addition to related electrical equipment, valve, and piping upgrades. This option constitutes the final selected alternative.

Yours truly,

Greer Galloway, a division of Jp2g Consultants Inc.

Tony Guerrero, P.Eng.
Vice President, Senior Project Manager

End of report.



Appendix A: ECA for the City of Kawartha Lakes Wastewater Collection System

ENVIRONMENTAL COMPLIANCE APPROVAL For a Municipal Sewage Collection System

ECA Number: 141-W601

Issue Number: 1

Pursuant to the *Environmental Protection Act*, R.S.O. 1990, c. E. 19 (EPA), and the regulations made thereunder and subject to the limitations thereof, this environmental compliance approval is issued under section 20.3 of Part II.1 of the EPA to:

Kawartha Lakes, The Corporation of the City of

**322 Kent St P.O. Box 9000
Lindsay, ON K9V 5R8**

For the following Sewage Works:

City of Kawartha Lakes Wastewater Collection System

This Environmental Compliance Approval (ECA) includes the following:

Schedule	Description
Schedule A	System Information
Schedule B	Municipal Sewage Collection System Description
Schedule C	List of Notices of Amendment to this ECA: Additional Approved Works
Schedule D	General
Schedule E	Operating Conditions
Schedule F	Residue Management

All prior ECAs, or portions thereof, issued by the Director for Sewage Works described in section 1 of Schedule B are revoked and replaced by this Approval.

DATED at TORONTO this 12th day of October, 2022

Signature



Aziz Ahmed, P.Eng.
Director, Part II.1, *Environmental Protection Act*

Schedule A: System Information

System Owner	Kawartha Lakes, The Corporation of the City of
ECA Number	141-W601
System Name	City of Kawartha Lakes Wastewater Collection System
ECA Issue Date	October 12th, 2022

1.0 ECA Information and Mandatory Review Date

ECA Issue Date	October 12th, 2022
Application for ECA Review Due Date	October 15, 2026

- 1.1 Pursuant to section 20.12 of the EPA, the Owner shall submit an application for review of the Approval no later than the Application for ECA Review Date indicated above.

2.0 Related Documents

- 2.1 STPs, Satellite Treatment Facilities, and Pumping Stations connected to the Authorized System that are not part of the Authorized System:

System/Facility Name	Wastewater System Number	Location	ECA Number	Issue Date
Bobcaygeon Water Pollution Control Plant	110002498	127 Boyd Street, Bobcaygeon, ON	3028-AEUKDQ	April 10, 2017
Coboconk Sewage Lagoons	120002353	6688 Highway 35, Coboconk, Kawartha Lakes, ON	9527-AHVRDY	March 17, 2017
Coboconk Sewage Pumping Station 4	120002353	6688 Highway 35, Coboconk, Kawartha Lakes, ON	9527-AHVRDY	March 17, 2017
Fenelon Falls Water Pollution Control Plant	110001612	216 Ellice Street S, Fenelon Falls, ON	3688-BW3RGB	Jan 15, 2021
King's Bay Environmental Centre	110003665	233 South crest Drive,	7037-A77JLP	Feb 16, 2016

		City of Kawartha Lakes, ON		
Lindsay Water Pollution Control Plant	110000383	48 Lagoon Road, Lindsay, ON	1696-BPLL4R	June 29, 2020
Lindsay Sewage Pumping Station - Lindsay St N Leachate	110000383	350 Lindsay St. N, Lindsay, ON	N/A	N/A
Lindsay Sewage Pumping Station - North Leachate	110000383	48 Lagoon St, Lindsay, ON	8668-92MTK7	December 19, 2012
Lindsay Sewage Pumping Station - Middle Leachate	110000383	48 Lagoon St, Lindsay, ON	8668-92MTK7	December 19, 2012
Lindsay Sewage Pumping Station - South Leachate	110000383	48 Lagoon St, Lindsay, ON	8668-92MTK7	December 19, 2012
Omemee Sewage Lagoon	110001630	267 Beaver Rd, City of Kawartha Lakes, ON	2737-B4DH46	Sept 28, 2018

2.2 Other Documents

Document Title	Version
Design Criteria for Sanitary Sewers, Storm Sewers, and Force mains for Alterations Authorized under Environmental Compliance Approval	v.1.1 (Jul 28, 2022)

3.0 Asset Management Plan

Document Title	Version
City of Kawartha Lakes Asset Management Plan	v.1 (May 2017)

4.0 Pollution Prevention and Control Plan (if applicable)

Document Title	Version
N/A	

5.0 Operating Authority

Wastewater Collection System or Operational Subsystems	Operating Authority
<p><u>Linear/Horizontal Wastewater Infrastructure:</u></p> <p>Bobcaygeon Wastewater Collection System Coboconk Wastewater Collection System Fenelon Falls Wastewater Collection System King's Bay Wastewater Collection System Lindsay Wastewater Collection System Omeme Wastewater Collection System</p>	<p>City of Kawartha Lakes</p>
<p><u>Vertical Wastewater Infrastructure:</u></p> <p>Bobcaygeon Sewage Pumping Station 1 – Need St. Bobcaygeon Sewage Pumping Station 2 – Lance St. Bobcaygeon Sewage Pumping Station 3 – Bolton St. Bobcaygeon Sewage Pumping Station 4 – Main St. Bobcaygeon Sewage Pumping Station 5 – Front St. Bobcaygeon Sewage Pumping Station 6 – Anne St. Bobcaygeon Sewage Pumping Station 7 – 8 Navigators Trail Bobcaygeon Sewage Pumping Station 8 – 54 Navigators Trail Bobcaygeon Sewage Pumping Station 9 – Mill St. Bobcaygeon Sewage Pumping Station 10 – Little Bob Dr. Bobcaygeon Sewage Pumping Station 11 – Riverside Dr. Coboconk Sewage Pumping Station 1 – South Water St. Coboconk Sewage Pumping Station 2 – Water St. Coboconk Sewage Pumping Station 3 – Hwy 35 Fenelon Falls Sewage Pumping Station 1 – Ellice St. Fenelon Falls Sewage Pumping Station 2 – Colborne St. Fenelon Falls Sewage Pumping Station 3 – Francis St. E. Lindsay Sewage Pumping Station – Fairgrounds Lindsay Sewage Pumping Station – Wellington St. Lindsay Sewage Pumping Station – Rivera Park Lindsay Sewage Pumping Station – Jennings Creek Lindsay Sewage Pumping Station – Mary Street E. Lindsay Sewage Pumping Station – Logie St. Lindsay Sewage Pumping Station – Ridout St. Lindsay Sewage Pumping Station – Riverview Lindsay Sewage Pumping Station – Lindsay St. N. Omeme Wastewater Collection System Omeme Sewage Pumping Station 1 – Church St. Omeme Sewage Pumping Station 2 – Sturgeon Rd.</p>	<p>Ontario Clean Water Agency</p>

Schedule B: Municipal Sewage Collection System Description

System Owner	Kawartha Lakes, The Corporation of the City of
ECA Number	141-W601
System Name	City of Kawartha Lakes Wastewater System
ECA Issue Date	October 12th, 2022

1.0 System Description

- 1.1 The following is a summary description of the Sewage Works comprising the Municipal Sewage Collection System:

Overview

The City of Kawartha Lakes Wastewater Collection System consists of works for the collection and transmission of sewage for 6 subsystems located throughout the municipality. In total there is approximately 170 km of sanitary sewer piping and twenty-eight [28] sewage pumping stations. Wastewater collection flows will discharge to six [6] wastewater treatment facilities. Each wastewater subsystem description is included below

Wastewater Subsystems:

The Bobcaygeon Sewage Collection System consists of works for the collection and transmission of sewage, consisting of approximately 25 km in total linear length of gravity sewers discharging to one of eleven sewage pumping stations, eventually leading to Bobcaygeon Water Pollution Control Plant.

The Coboconk Sewage Collection System consists of works for the collection and transmission of sewage, consisting of 3.5 km of sanitary sewer piping, three sewage pumping stations that eventually discharges into the Coboconk Sewage Lagoons.

The Fenelon Falls Sewage Collection System consists of works for the collection and transmission of sewage, comprising of approximately 13.4 km in total linear length of gravity sewers discharging to three sewage pumping stations, eventually leading to the Fenelon Falls Water Pollution Control Plant.

The King's Bay Environmental Sewage Collection System consists of works for the collection and transmission of sewage, comprising of approximately 1.5 km of sanitary sewer piping that discharges to the King's Bay Environmental Centre.

The Lindsay Sewage Collection System consists of works for the collection and transmission of sanitary sewage, comprising of approximately 117 km in total linear length of gravity sewers and 9 sewage pumping stations that eventually discharge to the Lindsay Water Pollution Control Plant.

The Omemee Sewage Collection System consists of works for the collection and transmission of sewage, comprising approximately 8.2 km in total linear length of gravity sewers discharging to two sewage pumping stations, eventually leading to the Omemee Sewage Lagoon.

Sewage Collection System

1.2 The Authorized System comprises:

1.2.1 The Sewage Works described and depicted in each document or file identified in column 1 of Table B1.

Table B1: Infrastructure Map	
Column 1 Document or File Name	Column 2 Date
Bobcaygenon_Sanitary_Sewer_System_Map_Sept_2021_1	September 2021
Coboconk_Sanitary_Sewer_Sytem_Map_Sept_2021_1	September 2021
Fenelon_Sanitary_Sewer_System_Map_Sept_2021_1	September 2021
KingsBay_Sanitary_Sewer_System_Map_Sept_2021_1	September 2021
Lindsay_Sanitary_Sewer_System_Map_Sept_2021_1	September 2021
Omemee_Sanitary_Sewer_System_TileMaps	September 29, 2021

1.2.2 Sewers, forcemains, pumping stations and other Sewage Works that have been added, modified, replaced, or extended through authorization provided in a Schedule C Notice respecting this Approval, where Completion occurs on or after the date identified in column 2 of Table B1 for each document or file identified in column 1.

1.2.3 Sewers, forcemains, pumping stations and other Sewage Works that have been added, modified, replaced, or extended through authorization provided in Schedule D of this Approval, where Completion occurs on or after the date identified in column 2 of Table B1 for each document or file identified in column 1.

1.2.4 Any Sewage Works described in conditions 1.3, through 1.7 below.

Sewage Pumping Stations

1.3 The following are Sewage pumping stations in the Authorized System:

Bobcaygeon Sewage Pumping Station 1

Asset ID and Name	Bobcaygeon Sewage Pumping Station 1 – Need St
Site Location	0 Need St, Bobcaygeon, City of Kawartha Lakes, ON
Latitude and Longitude	44.5387040, -78.541356
Coordinates (optional)	Not available
Description	Sewage pumping station with a 3.2 m x 3.4 m x 7.8 m SWD wet well
Pumping Station Capacity	Not Available
Equipment	Equipped with three (3) 20 hp submersible pumps (2 duty, 1 standby), each rated at 17.8 L/s. The station is connected to a 970 m long 200 mm diameter forcemain along Boyd Street complete with 3 check valves, 4 gate valves, 1 level sensor, and 1 level meter. Station discharges to the Bobcaygeon Water Pollution Control Plant Station also has a 100 mm diameter bypass connection to provide external pumping to the forcemain.
Emergency Storage	Not applicable
Equipment: Associated controls and Appurtenances	System controls and indicator alarms control by communications system sent to Bobcaygeon WPCP
Sewage Pumping Station – Collection System Overflow	Not applicable
Receiving Stations (if applicable)	Not applicable
Odour Control Units	N/A
Standby Power	Standby power supplied by generator at Bobcaygeon WPCP.
Notes	N/A

Bobcaygeon Sewage Pumping Station 2

Asset ID and Name	Bobcaygeon Sewage Pumping Station 2 – Lance St
Site Location	0 Lance St, Bobcaygeon, City of Kawartha Lakes, ON
Latitude and Longitude	44.533150, -78.550940
Coordinates (optional)	Not available
Description	Sewage pumping station with a 2.4 m diameter 6.7 m SWD wet well
Pumping Station Capacity	Not Available
Equipment	Equipped with two (2) 7.5 hp submersible pumps (one duty, one standby), each rated at 13.9 L/s. Station complete with 2 check valves, 3 gate valves, 1 level sensor, and 1 level meter. The station is connected to a 170 m 150 mm diameter forcemain along King Street, discharging to Manhole 135 to

	Bobcaygeon Sewage Pumping Station 1 – Need St and then to Bobcaygeon WPCP. Station also has a 100 mm diameter bypass connection to provide external pumping to the forcemain.
Emergency Storage	Not applicable
Equipment: Associated controls and Appurtenances	System controls and indicator alarms control by communications system sent to Bobcaygeon WPCP
Sewage Pumping Station – Collection System Overflow	Not applicable
Receiving Stations (if applicable)	Not applicable
Odour Control Units	Not applicable
Standby Power	Standby power supplied by a 45-kW diesel generator set with a 910L fuel tank.
Notes	Not applicable

Bobcaygeon Sewage Pumping Station 3

Asset ID and Name	Bobcaygeon Sewage Pumping Station 3 – Bolton St
Site Location	11 Bolton St, Bobcaygeon, City of Kawartha Lakes, ON
Latitude and Longitude	44.53798, -78.54608
Coordinates (optional)	Not available
Description	Sewage pumping station with a 3.0 m diameter 6.6 m SWD wet well
Pumping Station Capacity	Not Available
Equipment	Equipped with two (2) 10 hp submersible pumps (one duty, one standby), each rated at 6.7 L/s at 15.8 m TDH, 2 Check valves, 2 gate valves, and 1 level sensor. The station is connected to a 190 m long 100 mm diameter forcemain along Main Street, discharging to Manhole 187 and from there to Bobcaygeon Sewage Pumping Station 4 – Main St. Station also has a 100 mm diameter bypass connection to provide external pumping to the forcemain.
Emergency Storage	Not applicable
Equipment: Associated controls and Appurtenances	System controls and indicator alarms control by communications system sent to Bobcaygeon WPCP
Sewage Pumping Station – Collection System Overflow	Not applicable
Receiving Stations (if applicable)	Not applicable
Odour Control Units	Not applicable
Standby Power	Standby power supplied by generator at the Bobcaygeon Water Treatment Plant.
Notes	Not applicable

Bobcaygeon Sewage Pumping Station 4

Asset ID and Name	Bobcaygeon Sewage Pumping Station 4 – Main St
Site Location	0 Main St, Bobcaygeon, City of Kawartha Lakes, ON
Latitude and Longitude	44.539842, -78.546735
Coordinates (optional)	Not available
Description	Sewage pumping station with a 2.1 m diameter 5.6 m SWD wet well
Pumping Station Capacity	Not Available
Equipment	Equipped with two (2) 2.4 hp submersible pumps (one duty, one standby), each rated at 6.3 L/s, 2 check valves, 3 gate valves, 1 level sensor, and 1 level meter. Station connected to 100 mm diameter forcemain along Main Street that is 80 m long, discharging to Manhole 91 and from there to Bobcaygeon Sewage Pumping Station No. 6 and then to Bobcaygeon WPCP
Emergency Storage	Not applicable
Equipment: Associated controls and Appurtenances	System controls and indicator alarms control by communications system sent to Bobcaygeon WPCP
Sewage Pumping Station – Collection System Overflow	200 mm diameter emergency overflow to the Big Bob River
Receiving Stations (if applicable)	Not applicable
Odour Control Units	Not applicable
Standby Power	Standby power supplied by generator at the Bobcaygeon Water Treatment Plant.
Notes	Not applicable

Bobcaygeon Sewage Pumping Station 5

Asset ID and Name	Bobcaygeon Sewage Pumping Station 5 – Front St
Site Location	190 Front St W, Bobcaygeon, City of Kawartha Lakes, ON
Latitude and Longitude	44.536587, -78.555552
Coordinates (optional)	Not available
Description	Sewage pumping station with a 2.4 m diameter 7.5 m SWD wet well
Pumping Station Capacity	Not Available
Equipment	Equipped with two (2) 3 hp submersible pumps (one standby, one standby), each rated at 13.9 L/s at 8.1 m TDH, 2 check valves, 2 gate valves, 1 level sensor, and 1 level meter. Station connected to 150 mm diameter forcemain that is 240 m in length, along Front Street, discharging to Manhole 100 and from there to Bobcaygeon Sewage Pumping Station 6 – Anne St and then to Bobcaygeon WPCP
Emergency Storage	Not applicable
Equipment: Associated	System controls and indicator alarms control by

controls and Appurtenances	communications system sent to Bobcaygeon WPCP
Sewage Pumping Station – Collection System Overflow	N/A
Receiving Stations (if applicable)	Not applicable
Odour Control Units	Not applicable
Standby Power	Not applicable
Notes	Not applicable

Bobcaygeon Sewage Pumping Station 6

Asset ID and Name	Bobcaygeon Sewage Pumping Station 6 – Anne St
Site Location	47 Anne St, Bobcaygeon, City of Kawartha Lakes, ON
Latitude and Longitude	44.542418, -78541170
Coordinates (optional)	Not available
Description	Sewage pumping station with a 4.0 m x 4.1 m x 7.5 m SWD wet well
Pumping Station Capacity	Not Available
Equipment	Equipped with three (3) 20 hp submersible pumps (two duty, one standby), each rated at 30.5 L/s, 3 check valves, 3 gate valves, 1 level sensor, and 1 level meter. Station connected to a 300 mm diameter forcemain along East Street 1160 m long, discharging to the Bobcaygeon WPCP. Station also has a 100 mm diameter bypass connection to provide external pumping to the forcemain.
Emergency Storage	Not applicable
Equipment: Associated controls and Appurtenances	System controls and indicator alarms control by communications system sent to Bobcaygeon WPCP
Sewage Pumping Station – Collection System Overflow	Not applicable
Receiving Stations (if applicable)	Not applicable
Odour Control Units	Not applicable
Standby Power	Standby power supplied by a 100-kW diesel generator with a 910L fuel tank
Notes	Not applicable

Bobcaygeon Sewage Pumping Station 7

Asset ID and Name	Bobcaygeon Sewage Pumping Station 7 – 8 Navigators Trail
Site Location	8 Navigators Trail, Bobcaygeon, City of Kawartha Lakes, ON
Latitude and Longitude	44.539818, -78.535243
Coordinates (optional)	Not available

Description	Sewage pumping station with one 3.0 m diameter x 5.4 m SWD wet well style located across from #9 Navigators Trail (between #6 & #22)
Pumping Station Capacity	Not Available
Equipment	Equipped with three (3) 20 hp submersible pumps (two duty, one standby), each rated at 42.0 L/s, 2 check valves, 3 gate valves, 1 level sensor, and 1 level meter. Station connection to 250 mm diameter forcemain that is 140 m long along Navigators Trail, discharging to a 300 mm diameter forcemain on Boyd Street and there to the Bobcaygeon WPCP. Station also has a 100 mm diameter bypass connection to provide external pumping to forcemain.
Emergency Storage	Not applicable
Equipment: Associated controls and Appurtenances	System controls and indicator alarms control by communications system sent to Bobcaygeon WPCP
Sewage Pumping Station – Collection System Overflow	Not applicable
Receiving Stations (if applicable)	Not applicable
Odour Control Units	Not applicable
Standby Power	Standby power supplied by generator at Bobcaygeon WPCP
Notes	Not applicable

Bobcaygeon Sewage Pumping Station 8

Asset ID and Name	Bobcaygeon Sewage Pumping Station 8 – 54 Navigators Trail
Site Location	54 Navigators Trail, Bobcaygeon, City of Kawartha Lakes, ON
Latitude and Longitude	44.540616, -78.530163
Coordinates (optional)	Not available
Description	Sewage pumping station with a 2.4 m diameter 4.0 m SWD wet well
Pumping Station Capacity	Not Available
Equipment	Equipped with two (2) 5 hp submersible pumps (one duty, one standby), each rated at 18.9 L/s, 2 check valves, 3 gate valves, 1 level sensor, and 1 level meter. Station connected to 150 mm diameter forcemain that is 380 m long along Navigators Trail, discharging to a Manhole 35P1 to Bobcaygeon Sewage Pumping Station 7 – 8 Navigators Trail and then to Bobcaygeon WPCP. Station also has a 100 mm diameter bypass connection to provide external pumping to the forcemain.
Emergency Storage	Not applicable
Equipment: Associated controls and Appurtenances	System controls and indicator alarms control by communications system sent to Bobcaygeon WPCP
Sewage Pumping Station –	Not applicable

Collection System Overflow	
Receiving Stations (if applicable)	Not applicable
Odour Control Units	Not applicable
Standby Power	Standby power supplied by generator at Bobcaygeon WPCP
Notes	Not applicable

Bobcaygeon Sewage Pumping Station 9

Asset ID and Name	Bobcaygeon Sewage Pumping Station 9 – Mill St
Site Location	0 Mill St, Bobcaygeon, City of Kawartha Lakes, ON
Latitude and Longitude	44.534405, -78.532662
Coordinates (optional)	Not available
Description	Sewage pumping station with a 2.4 m diameter 5.2 m SWD wet well
Pumping Station Capacity	Not Available
Equipment	Equipped with two (2) 5 hp submersible pumps (one duty, one standby), each rated at 18.9 L/s, 2 check valves, 3 gate valves, 1 level sensor, and 1 level meter. Station connection to 150 mm diameter forcemain that is 360 m long along Mill Street, discharging to Manhole 42P2 and from there to Bobcaygeon Sewage Pumping Station 7 – 8 Navigator Trail. Station also has a 100 mm diameter bypass connection to provide external pumping to the forcemain.
Emergency Storage	Not applicable
Equipment: Associated controls and Appurtenances	System controls and indicator alarms control by communications system sent to Bobcaygeon WPCP
Sewage Pumping Station – Collection System Overflow	Not applicable
Receiving Stations (if applicable)	Not applicable
Odour Control Units	Not applicable
Standby Power	Standby power supplied by generator at Bobcaygeon WPCP
Notes	Not applicable

Bobcaygeon Sewage Pumping Station 10

Asset ID and Name	Bobcaygeon Sewage Pumping Station 10 – Little Bob Dr
Site Location	39 Little Bob Drive, Bobcaygeon, City of Kawartha Lakes, ON
Latitude and Longitude	44.530977, -78.533202
Coordinates (optional)	Not available
Description	Sewage pumping station with a 2.0 m diameter 6.8 m SWD wet

	well
Pumping Station Capacity	Not Available
Equipment	Equipped with two (2) 5 hp submersible pumps (one duty, one standby) each rated at 15.0 L/s, 2 check valves, 2 plug valves, 3 gate valves, 1 level sensor, and 1 level meter. Station connected to 60 m long 150 mm diameter forcemain along Little Bob Drive, discharging to Manhole 441, to Bobcaygeon Sewage Pumping Station 1 – Need St and then to Bobcaygeon WPCP. Station also has a 100 mm diameter bypass connection to provide external pumping to the forcemain.
Emergency Storage	Not applicable
Equipment: Associated controls and Appurtenances	System controls and indicator alarms control by communications system sent to Bobcaygeon WPCP
Sewage Pumping Station – Collection System Overflow	Not applicable
Receiving Stations (if applicable)	Not applicable
Odour Control Units	Not applicable
Standby Power	Standby power supplied by a 25 kW diesel generator set with a 910L fuel tank.
Notes	Not applicable

Bobcaygeon Sewage Pumping Station 11

Asset ID and Name	Bobcaygeon Sewage Pumping Station 11 – Riverside Dr
Site Location	179 Riverside Drive, Bobcaygeon, City of Kawartha Lakes, ON
Latitude and Longitude	44.546852, -78.534343
Coordinates (optional)	Not available
Description	Sewage pumping station with a 2.0 m diameter 7.2 m SWD wet well
Pumping Station Capacity	Not Available
Equipment	Equipped with two (2) 5 hp submersible pumps (one standby), each rated at 14.1 L/s, 2 check valves, 2 plug valves, 2 gate valves, 1 level sensor, and 1 level meter. Station connected to 150 mm diameter forcemain that is 800 m long along Riverside Drive, discharging to Manhole 433 to Bobcaygeon Sewage Pumping Station 6 – Anne St and then to Bobcaygeon WPCP. Station also has a 100 mm diameter bypass connection to provide external pumping to the forcemain.
Emergency Storage	Not applicable
Equipment: Associated controls and Appurtenances	System relay controls and indicator alarms control by communications system sent to Bobcaygeon WPCP

Sewage Pumping Station – Collection System Overflow	Not applicable
Receiving Stations (if applicable)	Not applicable
Odour Control Units	Not applicable
Standby Power	Standby power supplied by the 100-kW diesel generator at Sewage Pumping Station No. 6
Notes	Not applicable

Coboconk Sewage Pumping Station 1

Asset ID and Name	Coboconk Sewage Pumping Station 1 – South Water St
Site Location	South Water Street, Coboconk, City of Kawartha Lakes, ON
Latitude and Longitude	44.656849, -78.797769
Coordinates (optional)	N/A
Description	Sewage Pumping Station 1 with 2.4 m diameter concrete wet well, located on S Water Street and approximately 80 m southwest of Queen St, beside 19 Water St.
Pumping Station Capacity	13.96 L/s (from design brief)
Equipment	2 Submersible pumps (1 duty, 1 standby), each rated at 8.19 L/s at a total dynamic head of 10.7 m. The station is connected to 260 m of 100 mm diameter forcemain complete with 2 gate valves, 2 check valves, level meter, level sensor, internal piping, and electrical system.
Emergency Storage	Not applicable
Equipment: Associated controls and Appurtenances	System controls and indicator alarms controlled by local PLC which communicates with Coboconk Sewage Pumping Station 3 – Hwy 35
Sewage Pumping Station – Collection System Overflow	Not applicable
Receiving Stations (if applicable)	Not applicable
Odour Control Units	Not applicable
Standby Power	Standby power supply provided by 125 kW diesel generator with 1135 L capacity fuel tank attached to SPS 3
Notes	Not applicable

Coboconk Sewage Pumping Station 2

Asset ID and Name	Coboconk Sewage Pumping Station 2 – Water St
Site Location	3 Water St., Coboconk, City of Kawartha Lakes, ON
Latitude and Longitude	44.658556, -78.797488
Coordinates (optional)	Not available
Description	Sewage pumping station 2 with 3 m diameter concrete wet

	well, located approximate 30 m southwest of Cameron Street.
Pumping Station Capacity	22.42L/s (from design brief)
Equipment	2 Submersible pumps (1 duty, 1 standby), each rated at 8.19 L/s at a total dynamic head of 10.7 m. The station is connected to 260 m of 100 mm diameter forcemain complete with 2 gate valves, 2 check valves, level meter, level sensor, internal piping, and electrical system.
Emergency Storage	Not applicable
Equipment: Associated controls and Appurtenances	System controls and indicator alarms controlled by local PLC which communicates with Coboconk SPS 3
Sewage Pumping Station – Collection System Overflow	Not applicable
Receiving Stations (if applicable)	Not applicable
Odour Control Units	Not applicable
Standby Power	Standby power supply provided by 125 kW diesel generator with 1135 L capacity fuel tank attached to Coboconk Sewage Pumping Station 3 – Hwy 35
Notes	Not applicable

Coboconk Sewage Pumping Station 3

Asset ID and Name	Coboconk Sewage Pumping Station 3 – Hwy 35
Site Location	Highway 35, Coboconk, City of Kawartha Lakes, ON
Latitude and Longitude	44.66058, -78.79922
Coordinates (optional)	Not available
Description	Sewage Pumping Station 3 with 3.6 m diameter concrete wet well, located on Main Street (Highway 35), approximately 75 m southeast of Grandy Road.
Pumping Station Capacity	Not Available
Equipment	2 Submersible pumps (1 duty, 1 standby), each rated at 19.5 L/s at a total dynamic head of 28.3 m. The station discharges to 1.1 km of 150 mm diameter forcemain complete with 2 gate valves, 2 check valves, 1 magnetic flow meter, 1 level meter, 1 level sensor, internal piping, and electrical system.
Emergency Storage	Not applicable
Equipment: Associated controls and Appurtenances	System controls and indicator alarms controlled by local PLC which communicates to Coboconk Service Centre.
Sewage Pumping Station – Collection System Overflow	Not applicable
Receiving Stations (if applicable)	Not applicable
Odour Control Units	Not applicable
Standby Power	Standby power supply provided by 125 kW diesel generator with 1135 L capacity fuel tank

Notes	Contains a continuous phosphorous removal system consisting of 2 metering pumps with a 22,600 L capacity chemical storage tank. Attached to the 150 mm diameter forcemain. Discharges to the lagoon.
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Fenelon Falls Sewage Pumping Station 1

Asset ID and Name	Fenelon Falls Sewage Pumping Station 1 – Ellice St
Site Location	61 Ellice St, Fenelon Falls, City of Kawartha Lakes, ON
Latitude and Longitude	44.529968, -78.733943
Coordinates (optional)	Not available
Description	Sewage pumping station 1 with a 14.4 m ³ wet well/drywell type located on the east side of Ellice Street between Juniper Street and Wychwood Crescent
Pumping Station Capacity	Not Available
Equipment	Contains three (3) variable speed pumps (two duty, one standby), each rated at 60 L/s at 21 m TDH; complete with 4 plug valves, 3 check valves, 1 level meter, level sensor, internal piping, and electrical system. The station is connected to 644 m long, 200 mm diameter forcemain along Ellice Street, eventually discharging to Fenelon Falls Water Pollution Control Plant.
Emergency Storage	Equipped with a 24 m x 6.25 m x 6.57 m depth wet weather flow detention tank with a 400 mm diameter inlet pipe connected to wet well and a 300 mm diameter outlet pipe connected to the existing pump suction.
Equipment: Associated controls and Appurtenances	System controls and indicator alarms controlled by local PLC which communicates with Fenelon Falls Water Pollution Control Plant
Sewage Pumping Station – Collection System Overflow	Not applicable
Receiving Stations (if applicable)	Not applicable
Odour Control Units	Not applicable
Standby Power	One (1) 75 kW diesel generator set with 935 L fuel tank
Notes	Not applicable

Fenelon Falls Sewage Pumping Station 2

Asset ID and Name	Fenelon Falls Sewage Pumping Station 2 – Colborne St
Site Location	1 Colborne St, Fenelon Falls, City of Kawartha Lakes, ON
Latitude and Longitude	44.535925, -78.736196
Coordinates (optional)	Not available
Description	Sewage pumping station with a 38.7 m ³ wet well located on the extension of Oak Street, approximately 76 m east of

	Colborne St.
Pumping Station Capacity	Not Available
Equipment	Equipped with 2 Submersible pumps (1 duty, 1 standby), each rated at 50 L/s at a total dynamic head of 13 m, complete with 2 gate valves, 2 check valves, 1 magnetic flow meter, 1 level meter, 1 level sensor, internal piping, and electrical system. The station is connected to 278 m of 200 mm diameter forcemain along Colborne Street. Discharges to a sanitary manhole at the intersection of Lindsay Street and Helen Street.
Emergency Storage	Not applicable
Equipment: Associated controls and Appurtenances	System controls and indicator alarms controlled by local PLC which communicates with Fenelon Falls Water Pollution Control Plant
Sewage Pumping Station – Collection System Overflow	200 mm diameter emergency overflow from the wet well to Fenelon River
Receiving Stations (if applicable)	Not applicable
Odour Control Units	Not applicable
Standby Power	One (1) 80 kW diesel generator set with fuel tank
Notes	Not applicable

Fenelon Falls Sewage Pumping Station 3

Asset ID and Name	Fenelon Falls Sewage Pumping Station 3 – Francis St E
Site Location	170 Francis St E, Fenelon Falls, City of Kawartha Lakes, ON
Latitude and Longitude	44.531371, -78.727577
Coordinates (optional)	Not available
Description	Sewage pumping station with an 18m ³ wet well on the south side of Francis Street, approximately 120 m west of Concession Street
Pumping Station Capacity	Not Available
Equipment	Equipped with two (2) submersible pumps (one duty, one standby), each rated at 6.2 L/s at 15.2 TDH, complete with 2 gate valves, 2 check valves, level meter, level sensor, internal piping, and electrical system. The station is connected to 566 m long 100 mm diameter forcemain along Francis Street and discharges to a manhole 40 m east of Clifton Street
Emergency Storage	Not applicable
Equipment: Associated controls and Appurtenances	System controls and indicator alarms controlled by local PLC which communicates with Fenelon Falls Water Pollution Control Plant
Sewage Pumping Station – Collection System Overflow	200 mm diameter emergency overflow from the wet well to Fenelon River
Receiving Stations (if applicable)	Not applicable

Odour Control Units	Not applicable
Standby Power	Provided by portable generator
Notes	Not applicable

Lindsay Sewage Pumping Station - Fairgrounds

Asset ID and Name	Lindsay Sewage Pumping Station - Fairgrounds
Site Location	The Lindsay Fairgrounds - 354 Angeline Street South, City of Kawartha Lakes, ON (located at northeast of the intersection of Highway No. 7 and Angeline Street)
Latitude and Longitude	44.32929, -78.73751
Coordinates (optional)	Not available
Description	Sewage pumping station with a 4.0 m square precast concrete wet well
Pumping Station Capacity	Not Available
Equipment	Equipped with two (2) submersible pumps, each rated at 18 L/sec at 22 m TDH, 2 gate valves, 2 check valves, 1 flow meter, and connected to a 150 mm diameter sanitary forcemain on Angeline St S to MH1584 to MH 1512 then to gravity sewer.
Emergency Storage	Not applicable
Equipment: Associated controls and Appurtenances	System controls and indicator alarms controlled by local PLC which communicates with Lindsay WPCP
Sewage Pumping Station – Collection System Overflow	Not applicable
Receiving Stations (if applicable)	Not applicable
Odour Control Units	Not applicable
Standby Power	One (1) 60 kW diesel generator set with 488L fuel tank
Notes	Not applicable

Lindsay Sewage Pumping Station – Wellington St

Asset ID and Name	Lindsay Sewage Pumping Station – Wellington St
Site Location	0 Wellington St, Lindsay, City of Kawartha Lakes, ON
Latitude and Longitude	44.35785, -78.73705
Coordinates (optional)	Not available
Description	Sewage pumping station with wet well
Pumping Station Capacity	Not Available
Equipment	Equipped with two 2.4 Hp submersible pumps (1 duty and 1 standby), complete with 2 gate valves, 2 check valves, 1 level indicator and all necessary piping and electrical for operations.

	The SPS pumps into the forcemain on Wellington St, to the gravity sewer on Lindsay St N.
Emergency Storage	Not applicable
Equipment: Associated controls and Appurtenances	Alarm level indicator sent to Lindsay WPCP
Sewage Pumping Station – Collection System Overflow	Not applicable
Receiving Stations (if applicable)	Not applicable
Odour Control Units	Not applicable
Standby Power	Not applicable
Notes	Not applicable

Lindsay Sewage Pumping Station – Rivera Park

Asset ID and Name	Lindsay Sewage Pumping Station – Rivera Park
Site Location	95 Lindsay St N., Lindsay, City of Kawartha Lakes, ON
Latitude and Longitude	44.36074, -78.73691
Coordinates (optional)	Not available
Description	Sewage pumping station with a 11 m x 1.65 m x 12 m deep wet well
Pumping Station Capacity	Firm rated pumping capacity is 637 l/s
Equipment	Concrete inlet manhole (2.4 m diameter, 11.5 m deep). Concrete wet well consisting of one (1) inlet/splitter chamber (11 m x 1.65 m x 12 m deep) and two (2) wet well pumping cells (5.2 m x 6.0 m x 14.5 m deep) with two (2) submersible pumps installed in each cell (3 duty & 1 standby) rated at a total pumping capacity of 701 L/s with associated process piping and valves. Control building (12 m x 12 m - single story) housing station control. The common discharge header splits the flow between two (2) forcemains through which sewage is pumped to the St. David Street sanitary trunksewer at Needham Street.
Emergency Storage	
Equipment: Associated controls and Appurtenances	System controls and indicator alarms controlled by local PLC which communicates with Lindsay WPCP
Sewage Pumping Station – Collection System Overflow	375 mm pipe overflows to Scugog River
Receiving Stations (if applicable)	Not applicable
Odour Control Units	Odour control system located in Control building
Standby Power	One (1) 600 kW diesel generator set with 2,270 L fuel tank
Notes	Not applicable

Lindsay Sewage Pumping Station – Jennings Creek

Asset ID and Name	Lindsay Sewage Pumping Station - Jennings Creek
Site Location	Part 7, Lot 22, Concession 4, City of Kawartha Lakes, ON (3124 Hwy 35, Lindsay, City of Kawartha Lakes, ON)
Latitude and Longitude	44.35962, -78.76754
Coordinates (optional)	Not available
Description	Sewage pumping station with a 3.9 m x 3.9 m wet well
Pumping Station Capacity	Designed for a peak flow of 275 L/s
Equipment	Equipped with three (3) submersible pumps, two for duty and one for standby, each pump pair has a rated capacity of 275 L/s at a total dynamic head of 46 m, complete with electrical and electronic control systems, ultrasonic level transmitters with back-up float switches, all connected to the control panel, discharge piping, ventilation system, valves, 450mm by-pass piping to the forcemain, a standby generator set, and all other appurtenances. The SPS pumps directly to the WPCP through the 450mm Northwest Trunk Forcemain
Emergency Storage	Not applicable
Equipment: Associated controls and Appurtenances	Not applicable
Sewage Pumping Station – Collection System Overflow	525 mm overflow pipe to drainage ditch then flows in Jennings Creek
Receiving Stations (if applicable)	Not applicable
Odour Control Units	Not applicable
Standby Power	One (1) 400 kW diesel generator set with 935L fuel tank
Notes	Not applicable

Lindsay Sewage Pumping Station – Mary St E

Asset ID and Name	Lindsay Sewage Pumping Station - Mary Street E
Site Location	33 Mary Street East, Lindsay, City of Kawartha Lakes, ON
Latitude and Longitude	44.34773, -78.72764
Coordinates (optional)	Not available
Description	Sewage pumping station located at 33 Mary Street East
Pumping Station Capacity	Not Available
Equipment	Equipped with two (2) submersible pumps (one duty, one standby), one rated at 28 L/s and one at 30 L/s, complete with 2 gate valves, 2 check valves, level meter, level sensor, 2 flow meters (one attached to each pumps effluent line) and internal piping. SPS pumps wastewater to 6" forcemain on George St.
Emergency Storage	Not applicable

Equipment: Associated controls and Appurtenances	System controls and indicator alarms controlled by local PLC which communicates with Lindsay Water Treatment Plant.
Sewage Pumping Station – Collection System Overflow	250 mm pipe overflows to Scugog River
Receiving Stations (if applicable)	Not applicable
Odour Control Units	Not applicable
Standby Power	Provided by 650 kW diesel generator across the street at Lindsay Water Treatment Plant.
Notes	Not applicable

Lindsay Sewage Pumping Station – Logie St

Asset ID and Name	Lindsay Sewage Pumping Station – Logie St
Site Location	Lot 18, Concession 6, City of Kawartha Lakes, ON (0 George St. West, Lindsay, City of Kawartha Lakes, ON)
Latitude and Longitude	44.35070, -78.72361
Coordinates (optional)	Not available
Description	Sewage pumping station with inground concrete wet well, approximately 30 m west from Logie Street. SPS discharges through 525mm forcemain to MH2639 then gravity fed to MH 2638 and 200mm forcemain.
Pumping Station Capacity	Not Available
Equipment	Equipped with two (2) submersible pumps each rated with capacity of 30 L/s at a TDH of 6.7 m (one duty and one standby), liquid level float control system with 2 check valves, 2 gate valves, lockable access hatchway, two (2) goosenecked vents with bird screens, and benching
Emergency Storage	Not applicable
Equipment: Associated controls and Appurtenances	System controls and indicator alarms controlled by local PLC which communicates with Lindsay WPCP
Sewage Pumping Station – Collection System Overflow	Not applicable
Receiving Stations (if applicable)	Not applicable
Odour Control Units	Not applicable
Standby Power	80 kW diesel generator on site with 417 L fuel tank
Notes	Not applicable

Lindsay Sewage Pumping Station – Ridout St

Asset ID and Name	Lindsay Sewage Pumping Station – Ridout St
Site Location	74 Ridout St., Lindsay, City of Kawartha Lakes, ON
Latitude and Longitude	44.35719, -78.72730

Coordinates (optional)	Not available
Description	Sewage pumping station with wet well
Pumping Station Capacity	Not Available
Equipment	Station equipped with 3 submersible pumps (two duty, 1 standby) with a rated capacity of 180 L/s at 29 m TDH, complete with 3 check valves, 6 gate valves, 1 flow meter and all necessary piping and electrical for operations. SPS discharges through 500mm forcemain to the St David St forcemain.
Emergency Storage	Not applicable
Equipment: Associated controls and Appurtenances	System controls and indicator alarms controlled by local PLC which communicates with Lindsay WPCP
Sewage Pumping Station – Collection System Overflow	Not applicable
Receiving Stations (if applicable)	Not applicable
Odour Control Units	Not applicable
Standby Power	One (1) 275 kW diesel generator set with 935L fuel tank
Notes	Not applicable

Lindsay Sewage Pumping Station - Riverview

Asset ID and Name	Lindsay Sewage Pumping Station – Riverview
Site Location	0 Barron Blvd. Lindsay, City of Kawartha Lakes, ON
Latitude and Longitude	44.37782, -78.73905
Coordinates (optional)	N/A
Description	Sewage pumping station with wet well
Pumping Station Capacity	Not Available
Equipment	Two (2) submersible pumps (one duty, 1 standby) with a rated capacity of 8.4 L/s at 13.6 TDH, complete with 2 check valves, 2 gate valves, and all necessary piping and electrical for operations. SPS discharges to forcemain until MH 1076 then gravity fed to WPCP.
Emergency Storage	Not applicable
Equipment: Associated controls and Appurtenances	Level indicator alarm sent to Lindsay WPCP
Sewage Pumping Station – Collection System Overflow	Not applicable
Receiving Stations (if applicable)	Not applicable
Odour Control Units	Not applicable
Standby Power	35 kW diesel generator on site with 448L fuel tank.
Notes	Not applicable

Lindsay Sewage Pumping Station – Lindsay St N

Asset ID and Name	Lindsay Sewage Pumping Station – Lindsay St N
Site Location	350 Lindsay St. N, Lindsay, City of Kawartha Lakes, ON
Latitude and Longitude	44.37582, -78.74449
Coordinates (optional)	Not available
Description	Sewage pumping station with wet well. Receives leachate from leachate collection system attached to Lindsay SPS 10 (Lindsay Street North – Leachate) from Lindsay Street North Landfill (closed).
Pumping Station Capacity	Not Available
Equipment	Equipped with three submersible pumps (2 duty and 1 standby) each rated for 345 L/s at 35 m TDH, complete with 3 check valves, 6 gate valves, and all necessary piping and electrical for operations. Discharges to existing forcemain with 400 mm forcemain. Connected through a 900 mm sanitary sewer connection from existing sewer on Lindsay Street.
Emergency Storage	Not applicable
Equipment: Associated controls and Appurtenances	System controls and indicator alarm relayed by communications system sent to Lindsay WPCP
Sewage Pumping Station – Collection System Overflow	600 mm overflow pipe to Scugog River
Receiving Stations (if applicable)	Not applicable
Odour Control Units	Not applicable
Standby Power	600 kW diesel generator on site with 2,270L fuel tank.
Notes	Not applicable

Omemee Sewage Pumping Station 1

Asset ID and Name	Omemee Sewage Pumping Station 1 – Church St
Site Location	Sturgeon Rd and Church St, Lot 7, Concession 3 and Part 2, Village of Omemee, City of Kawartha Lakes, ON
Latitude and Longitude	44.300280, -78.556219
Coordinates (optional)	Not available
Description	Precast concrete wet well sewage pumping station
Pumping Station Capacity	Rated capacity of 64 L/s with two pumps running
Equipment	Equipped with two (2) submersible pumps (with the provision of future third pump), each pump rated at 45 l/s at 12.2 m TDH, complete with a safety platform, ultrasonic liquid level indicator, float controls, plug valves, check valves and a 75 mm diameter combination vacuum/air release valve, dual 200 mm diameter stainless steel vent pipes with gooseneck and insect screen, a valved flowmeter by-pass chamber located within the wet well. Station is connected to approximately 160 m of 250 mm diameter forcemain along Church Street.

Emergency Storage	Not applicable
Equipment: Associated controls and Appurtenances	System controls and indicator alarms controlled by local PLC which communicates with Sturgeon Road SPS.
Sewage Pumping Station – Collection System Overflow	Not applicable
Receiving Stations (if applicable)	Not applicable
Odour Control Units	Not applicable
Standby Power	a 50-kW diesel engine generator on-site
Notes	Not applicable

Omemee Sewage Pumping Station 2

Asset ID and Name	Omemee Sewage Pumping Station 2 – Sturgeon Rd
Site Location	Sturgeon Rd and Church St, Lot 7, Concession 3 and Part 2 Village of Omemee, City of Kawartha Lakes, ON
Latitude and Longitude	44.297953, -78.559520
Coordinates (optional)	Not available
Description	Precast concrete wet well sewage pumping station
Pumping Station Capacity	Capacity of 122 L/s with two pumps in operation
Equipment	Equipped with two (2) submersible pumps (with the provision of future third pump), each pump rated at 88 L/s at 46 m TDH, complete with a safety platform, aluminum sulfate coagulation system, ultrasonic liquid level indicator, float controls, plug valves, check valves and a 75 mm diameter combination vacuum/air release valve, dual 200 mm diameter stainless steel vent pipes with gooseneck and insect screen and, a valved flowmeter by-pass chamber (located adjacent to the wet well). Station is connected to approximately 1955 m of 300 mm diameter forcemain along Sturgeon Road to the Omemee Sewage Lagoon.
Emergency Storage	Not applicable
Equipment: Associated controls and Appurtenances	System controls and indicator alarms controlled by local PLC.
Sewage Pumping Station – Collection System Overflow	Not applicable
Receiving Stations (if applicable)	Not applicable
Odour Control Units	Not applicable
Standby Power	350 kW diesel generator on site
Notes	Alum dosing system doses alum on sewage pump station effluent line through the use of 2 dosage pumps and chemical storage tank

[Combined Sewage Pumping Stations]

Asset ID and Name	N/A
Site Location	
Latitude and Longitude	
Coordinates (optional)	
Description	
Pumping Station Capacity	
Equipment	
Emergency Storage	
Equipment: Associated controls and Appurtenances	
Sewage Pumping Station – Collection System Overflow	
Receiving Stations (if applicable)	
Odor Control Units	
Standby Power	
Notes	

Real-Time Control

- 1.4 The following are identified Real-Time Control Systems in the Authorized System:

	Description
Process Equipment/System Elements	In-line instrumentation, process control systems and other analytical equipment
Flow Measurement Locations	<p>Bobcaygeon Sewage Collection System:</p> <p>No flow measuring devices in Bobcaygeon Sanitary Sewer Collection system.</p> <p>Coboconk Sewage Collection System:</p> <p>Magnetic flow meter located on influent line at Coboconk Sewage Pumping Station 3 – Hwy 35</p> <p>Fenelon Falls Sewage Collection System:</p> <p>Magnetic flow meter located at Fenelon Falls Sewage Pumping Station 1 - Ellice St wet well discharge line.</p> <p>Additional metering occurs at Fenelon Falls Water Pollution</p>

	<p>Control Plant.</p> <p>King's Bay Sewage Collection System:</p> <p>No flow measuring devices in the King's Bay Wastewater system. All flows in system recorded at King's Bay Environmental Centre.</p> <p>Lindsay Sewage Collection System:</p> <p>One (1) Magnetic flow meter located on discharge header at Lindsay Sewage Pumping Station – Fairgrounds</p> <p>One (1) Magnetic flow meter located on discharge header at Lindsay Sewage Pumping Station – Jennings Creek</p> <p>Two (2) Magnetic flow meters located on each pump discharge line at Lindsay Sewage Pumping Station – Mary St E</p> <p>One (1) Magnetic flow meter located on discharge header at Lindsay Sewage Pumping Station – Ridout</p> <p>One (1) Magnetic flow meter located on discharge header at Lindsay Sewage Pumping Station – Lindsay St N</p> <p>Additional metering occurs at Lindsay WPCP.</p> <p>Omemeew Sewage Collection System:</p> <p>One (1) flow meter located at the Omemeew Sewage Pumping Station 1 - Church St on wet well effluent line</p> <p>One (1) flow meter located at the Omemeew Sewage Pumping Station 2 - Sturgeon Rd on wet well effluent line</p> <p>Additional metering locations at Omemeew Sewage Lagoon.</p>
Level Measurement Locations	One (1) level meter device and one (1) level sensor device inserted at every pumping stations wet well listed in Section 1.3
Other Instrumentation and Controls	System controls, associated valves and communications systems relaying information to centralized hubs within each wastewater subsystem.

Combined Sewage Structures

- 1.5 The following are regulators and combined Sewage storage structures in the Authorized System:

Table B2: Identified Combined Sewer Overflow Regulators

Column 1 Asset ID/Name	Column 2 Site Location (Latitude & Longitude)	Column 3 Regulator Capacity (m ³ /s)	Column 4 Overflow Location (Latitude & Longitude)
N/A			

Table B3: Identified Combined Sewage Storage Tanks and Storage Structures

Column 1 Asset ID/Name	Column 2 Site Location (Latitude & Longitude)	Column 3 Regulator Capacity (m ³ /s)	Column 4 Overflow Location (Latitude & Longitude)
N/A			

Collection System Overflow Points

1.6 The following are Collection System Overflow points in the Authorized System:

Table B4: Identified Combined Sewer Overflow Points including Pumping Stations

Column 1 Asset ID / Name	Column 2 Regulator or Combined Sewer Storage Asset ID	Column 3 Overflow Location (Latitude & Longitude)	Column 4 Point of Entry to Receiver (Latitude and Longitude)
N/A			

Table B5: Identified Sanitary Sewer Overflow Points including Pumping Stations

Column 1 Asset ID	Column 2 Asset Name	Column 3 Overflow Location (Latitude & Longitude)	Column 4 Point of Entry to Receiver (Latitude and Longitude)
N/A	Bobcaygeon Sewage Pumping Station 4 – Main St Overflow	44.53980, 78.54665	Big Bob River 44.53980, 78.54665
N/A	Fenelon Falls Sewage Pumping Station 2 – Colborne St Overflow	44.535925, - 78.736196	Fenelon River 44.535925, -78.736196
N/A	Fenelon Falls Sewage Pumping Station 3- Francis St Overflow	44.32929, - 78.73751	Fenelon River 44.531035 – 78.727748
N/A	Lindsay Sewage Pumping Station - Rivera Park Overflow	X44.36115, - 78.73782	Scugog River N/A
	Lindsay Sewage Pumping Station - Jennings Creek Overflow	44.35965, - 78.76738	Jennings Creek 44.35965, -78.76738
N/A	Lindsay Sewage Pumping Station - Mary St E Overflow	44.34772, - 78.72684	Scugog River N/A
N/A	Lindsay Sewage Pumping Station – Lindsay St N Overflow	44.37584, - 78.74448	Scugog River 44.37584, -78.74448

Other Works:

1.7 The following works are part of Authorized System:

Table B6: Other Works			
Column 1 Asset ID / Name	Column 2 Site Location (Latitude & Longitude)	Column 3 Component	Column 4 Description
N/A			

**Schedule C: List of Notices of Amendment to this ECA:
Additional Approved Sewage Works**

System Owner	Kawartha Lakes, The Corporation of the City of
ECA Number	141-W601
System Name	City of Kawartha Lakes Wastewater System
ECA Issue Date	October 12th, 2022

1.0 General

- 1.1 Table C1 provides a list of all notices of amendment to this Approval that have been issued pursuant to clause 20.3(1) of the EPA that impose terms and conditions in respect of the Authorized System after consideration of an application by the Director (Schedule C Notices).

Table C1: Schedule C Notices				
Column 1 Issue #	Column 2 Issue Date	Column 3 Description	Column 4 Status	Column 5 DN#
N/A	N/A	N/A	N/A	N/A

Schedule D: General

System Owner	Kawartha Lakes, The Corporation of the City of
ECA Number	141-W601
System Name	City of Kawartha Lakes Wastewater System
ECA Issue Date	October 12th, 2022

1.0 Definitions

1.1 For the purpose of this Approval, the following definitions apply:

“Adverse Effect(s)” has the same meaning as defined in section 1 of the EPA.

“Alteration(s)” includes the following, in respect of the Authorized System, but does not include repairs to the system:

- a) An extension of the system,
- b) A replacement or retirement of part of the system, or
- c) A modification of, addition to, or enlargement of the system.

“Approval” means this Environmental Compliance Approval including any Schedules attached to it.

“Appurtenance(s)” has the same meaning as defined in O. Reg. 525/98 (Approval Exemptions) made under the OWRA.

“Authorized System” means the Sewage Works comprising the Municipal Sewage Collection System authorized under this Approval”.

“Average Year” means the long term average of flow based on:

- a) Simulation of at least twenty years of rainfall data;
- b) A year in which the rainfall pattern (e.g., intensity, volume, and frequency) is consistent with the long-term mean of the area;
- c) A year in which the runoff pattern resulting from the rainfall (e.g., rate, volume, and frequency) is consistent with the long-term mean of the area; or
- d) Any combination of a), b) and c).

“Collection System Overflow(s)” means a discharge (SSO or CSO) to the environment at designed location(s) from the Authorized System.

“Combined Sewer(s)” means pipes that collect and transmit both sanitary Sewage and other Sewage from residential, commercial, institutional and industrial buildings, and facilities and Stormwater through a single-pipe system, but does not include Nominally Separate Sewers.

“Completion” means substantial performance as described in s.2 (1) of the *Construction Act*, R.S.O. 1990, c. C.30.

“Compound of Concern” means a Contaminant that is discharged from the Facility in an amount that is not negligible.

“Contaminant” has the same meaning as defined in section 1 of the EPA.

“CSO” means a combined sewer overflow which is a discharge to the environment at designated location(s) from a Combined Sewer or Partially Separated Sewer as per Table B4 that usually occurs as a result of precipitation when the capacity of the Sewer is exceeded. An intervening time of twelve hours or greater separating a CSO from the last prior CSO at the same location is considered to separate one overflow Event from another.

“CWA” means the *Clean Water Act*, R.S.O. 2006, c.22.

“Design Criteria” means the design criteria set out in the Ministry’s publication “Design Criteria for Sanitary Sewers, Storm Sewers and Force mains for Alterations Authorized under Environmental Compliance Approval”, (as amended from time to time).

“Design Guidelines for Sewage Works” means the Ministry document titled “Design Guidelines for Sewage Works”, 2008 (as amended from time to time).

“Director” means a person appointed by the Minister pursuant to section 5 of the EPA for the purposes of Part II.1 of EPA (Environmental Compliance Approvals).

“Director Notification Form” means the most recent version of the Ministry form titled Director Notification – Alterations to a Municipal Sewage Collection System, as obtained directly from the Ministry or from the Ministry’s website.

“District Manager” means the district manager or a designated representative of the Local Ministry Office.

“Dry Weather Flow(s)” means Sewage flow resulting from both sanitary Sewage, and infiltration and inflows from foundation drains or other drains occurring during periods with an absence of rainfall or snowmelt.

"EAA" means the *Environmental Assessment Act*, R.S.O. 1990, c. E.18.

"EPA" means the *Environmental Protection Act*, R.S.O. 1990, c.E.19.

"Emergency Situation" means a structural, mechanical, electrical failure, or operational health and safety incident, that causes a temporary reduction in the capacity, function, or performance of any part of the Authorized System or an unforeseen flow condition that may result in:

- a) Danger to the health or safety of any person;
- b) Injury or damage to any property, or serious risk of injury or damage to any property;
- c) Adverse Effect to the Natural Environment; or
- d) Spill.

“Equipment” means equipment or processes described in this Approval and any other equipment or process that supports the operation or maintenance of the Authorized System.

“ESC” means erosion and sediment control.

"Event(s)" means an action or occurrence, at any given location within the Authorized System that causes a Collection System Overflow. An Event ends when there is no recurrence of a CSO or SSO in the collection system at the same location in the 12-hour period following the last Collection System Overflow.

“Facility” means the entire operation located on the property where the Sewage Works or Equipment is located.

“Form A1” means the most recent version of the Ministry form titled Record of Future Alteration Authorized for Equipment Discharging a Contaminant of Concern to the Atmosphere from a Municipal Sewage Collection System, as obtained directly from the Ministry or from the Ministry’s website.

“Form CS1” means the most recent version of the Ministry form titled Record of Future Alteration Authorized for Combined Sewers/Partially Separated Sewers/Combined Sewage Storage Tanks and Storage Structures as obtained directly from the Ministry or from the Ministry’s website.

“Form SS1” means the most recent version of the Ministry form titled Record of Future Alteration Authorized for Separate Sewers/Nominally Separate Sewers/Force mains, as obtained directly from the Ministry or from the Ministry’s website.

“Form SS2” means the most recent version of the Ministry form titled Record of Future Alteration Authorized for Components of the Municipal Sewage Collection System, as obtained directly from the Ministry or from the Ministry’s website.

“Hauled Sewage” has the same meaning as defined in section 1 of Regulation 347 (General – Waste Management) made under the EPA.

“Licensed Engineering Practitioner” means a person who holds a licence, limited licence, or temporary licence under the *Ontario Professional Engineers Act* R.S.O. 1990, c. P.28.

“Local Ministry Office” means the local office of the Ministry responsible for the geographic area where the Authorized System is located.

“Minister” means the Minister of the Ministry, or such other member of the Executive Council as may be assigned the administration of the EPA and OWRA under the *Executive Council Act*, R.S.O. 1990, c. E.25.

“Ministry” means the Ministry of the Minister and includes all employees or other persons acting on its behalf.

“Municipal Sewage Collection System” means all Sewage Works, located in the geographical area of a municipality that collect and transmit Sewage and are owned, or may be owned pursuant to an agreement with a municipality entered into under the *Planning Act* or *Development Charges Act*, 1997, by:

- a) A municipality, a municipal service board established under the *Municipal Act*, 2001 or a city board established under the *City of Toronto Act*, 2006; or
- b) A corporation established under sections 9, 10, and 11 of the *Municipal Act*, 2001 in accordance with section 203 of that Act or under sections 7 and 8 of the *City of Toronto Act*, 2006 in accordance with sections 148 and 154 of that Act.

“Natural Environment” has the same meaning as defined in section 1 of the EPA.

“Nominally Separate Sewer(s)” mean Separate Sewers that also have connections from roof leaders and foundation drains, and are not considered to be Combined Sewers.

“Operating Authority” means, in respect of the Authorized System, the person, entity, or assignee that is given responsibility by the Owner for the operation, management, maintenance or Alteration of the Authorized System or a portion of the Authorized System.

“Owner” for the purposes of this Approval means the [Municipality XYZ or Municipal Services Board XYZ], and includes its successors and assigns.

“OWRA” means the *Ontario Water Resources Act*, R.S.O. 1990, c. O.40.

“O&M Manual” means the operation and maintenance manual prepared and maintained by the Owner under condition 3.2 in Schedule E of this Approval.

“Partially Separated Sewer(s)” means Combined Sewers that have been retrofitted to transmit sanitary Sewage but in which roof leaders or foundation drains still contribute Stormwater inflow to the Partially Separated Sewer.

“Peak Hourly Flow” means the largest volume of flow to be received during a one-hour period expressed as a volume per unit time. This is also referred to as maximum hourly flow or maximum hour flow.

“Point of Entry” has same meaning as in the Wastewater Systems Effluent Regulations (SOR/2012-139) under the *Fisheries Act*, R.S.C 1985, c. F-14.

“Pollution Prevention and Control Plan” or “PPCP” means a plan developed for Combined Sewers in the Authorized System to meet the goals of Procedure F-5-5.

“Prescribed Person” means a person prescribed in O. Reg. 208/19 (Environmental Compliance Approval in Respect of Sewage Works) for the purpose of ss. 20.6 (1) of the EPA, and where the alteration, extension, enlargement, or replacement is carried out under an agreement with the Owner.

“Procedure F-5-1” means the Ministry document titled “F-5-1 Determination of Treatment Requirements for Municipal and Private Sewage Treatment Works” (as amended from time to time).

“Procedure F-5-5” means the Ministry document titled “F-5-5 Determination of Treatment Requirements for Municipal and Private Combined and Partially Separated Sewer System” (as amended from time to time).

“Publication NPC-207” means the Ministry draft technical publication “Impulse Vibration in Residential Buildings”, November 1983,

supplementing the Model Municipal Noise Control By-Law, Final Report, August 1978, (as amended from time to time).

“Publication NPC-300” means the Ministry publication NPC-300, “Environmental Noise Guideline: Stationary and Transportation Sources – Approval and Planning” August 2013, (as amended from time to time).

“Pumping Station Capacity” means the design Peak Hourly Flow of Sewage which the Sewage pumping station is designed to handle.

“Real-time Control System” means the dynamic operation of the collection system, including Real-Time Physical Control Structures, by responding to continuous field monitoring to maintain and achieve performance and operational objectives, during dry and wet weather conditions.

“Real-time Physical Control Structure” means a structure (e.g., pumps, gates, and weirs) that reacts in real-time based on direction from the Real-Time Control System.

“Regulator Capacity” means the flowrate (m^3/s) at which Collection System Overflow begins.

“SAC” means the Ministry’s Spills Action Centre.

“SCADA” means a supervisory control and data acquisition system used for process monitoring, control, automation, recording, and/or reporting within the Sewage system.

“Schedule C Notice(s)” means a notice(s) of amendment to this Approval issued pursuant to clause 20.3(1) of the EPA that imposes terms and conditions in respect of the Authorized System after consideration of an application by the Director.

“Separate Sewer(s)” means pipes that collect and transmit sanitary Sewage and other Sewage from residential, commercial, institutional, and industrial buildings.

“Sewage” has the same meaning as defined in section 1 of the OWRA.

“Sewage Works” has the same meaning as defined in section 1 of the OWRA.

“Sewer” has the same meaning as defined in section 1 of O. Reg. 525/98 under the OWRA.

“Significant Drinking Water Threat” has the same meaning as defined in section 2 of the CWA.

“Significant Snowmelt Event(s)” means the melting of snow at a rate which adversely affects the performance and function of the Authorized System and/or the STP(s) identified in Schedule A of this Approval.

“Significant Storm Event(s)” means a minimum of 25 mm of rain in any 24 hours period.

“Source Protection Authority” has the same meaning as defined in section 2 of the CWA.

“Source Protection Plan” means a drinking water source protection plan prepared under the CWA.

“Spill(s)” has the same meaning as defined in subsection 91(1) of the EPA.

“SSO” means a sanitary sewer overflow which is a discharge of Sewage from a Separate Sewer or Nominally Separate Sewer to the environment from designated location(s) in the Authorized System as per Table B5.

“Standard Operating Policy for Sewage Works” means the standard operating policy developed by the Ministry to assist in the implementation of Source Protection Plan policies related to Sewage Works and providing minimum design and operational standards and considerations to mitigate risks to sources of drinking water, as amended from time to time.

“Storm Sewer” means Sewers that collect and transmit, but not exfiltrate or lose by design, Stormwater resulting from precipitation and snowmelt.

“Stormwater” means rainwater runoff, water runoff from roofs, snowmelt, and surface runoff.

“Stormwater Management Facility(ies)” means a Facility for the treatment, retention, infiltration, or control of Stormwater.

“STP” means sewage treatment plant.

“STP Bypass(es)” means diversion of Sewage around one or more treatment processes, excluding preliminary treatment system, within the STP with the diverted Sewage flows being returned to the STP treatment train upstream of the final effluent sampling point(s) and discharged via the approved effluent disposal facilities.

“STP Overflow(s)” means a discharge to the environment from the STP at designed location(s) other than the approved effluent disposal facilities or via the effluent disposal facilities downstream of the final effluent sampling point.

“Uncommitted Reserve Hydraulic Capacity” means uncommitted reserve capacity as described in the Ministry document titled “D-5-1 Calculating and Reporting Uncommitted Reserve Capacity at Sewage and Water Treatment Plants” (as amended from time to time).

“Undertaking” has the same meaning as in the EAA.

“Vulnerable Area(s)” has the same meaning as in the CWA.

“Wet Weather Flow(s)” means the flow resulting from the combination of sanitary Sewage and extraneous flows resulting from the inflow and infiltration of groundwater, rainfall or snowmelt, and snow or ice melt that enters the Authorized System.

2.0 General Conditions

- 2.1 The works comprising the Authorized System shall be constructed, installed, used, operated, maintained, replaced, or retired in accordance with the conditions of this Approval, which includes the following Schedules:

Schedule A – System Information

Schedule B – Municipal Sewage Collection System Description

Schedule C – List of Notices of Amendment to this ECA

Schedule D – General

Schedule E – Operating Conditions

Schedule F – Residue Management

- 2.2 The issuance of this Approval does not negate the requirements of other regulatory bodies, which includes but is not limited to, the Ministry of Northern Development, Mines, Natural Resources and Forestry and the local Conservation Authority.
- 2.3 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. Where there is a conflict between the information in a Schedule C Notice and another section of this Approval, the document bearing the most recent date shall prevail.
- 2.4 The Owner shall ensure that any person authorized to carry out work on or operate any aspect of the Authorized System is provided with a print or electronic copy of this Approval and the conditions herein and shall take all reasonable measures to ensure any such person complies with the same.
- 2.5 The conditions of this Approval are severable. If any condition of this Approval, or the application of any requirement of this Approval to any circumstance, is held invalid or unenforceable, the application of such

condition to other circumstances and the remainder of this Approval shall not be affected thereby.

3.0 Alterations to the Municipal Sewage Collection System

- 3.1 Any Schedule C Notice shall provide authority to alter the Authorized System in accordance with the conditions of this Approval.
- 3.2 All Schedule C Notices issued by the Director for the Municipal Sewage Collection System shall form part of this Approval.
- 3.3 The Owner and a Prescribed Person shall ensure that the documentation required through conditions in this Approval and the documentation required in the Design Criteria are prepared for any Alteration of the Authorized System.
- 3.4 The Owner shall notify the Director within thirty (30) calendar days of the placing into service or Completion of any Alteration of the Authorized System which had been authorized:
 - 3.4.1 Under Schedule D to this Approval where the Alteration results in a change to Sewage Works or Equipment specifically described in Schedule B of this Approval;
 - 3.4.2 Through a Schedule C Notice respecting Sewage Works other than Sewers or forcemains; or
 - 3.4.3 Through another approval that was issued under the EPA prior to the issue date of this Approval.
- 3.5 The notification requirements set out in condition 3.4 do not apply to any Alteration in respect of the Authorized System which:
 - 3.5.1 Is exempt under section 53(6) of the OWRA or by O. Reg. 525/98;
 - 3.5.2 Constitutes maintenance or repair of the Authorized System; or
 - 3.5.3 Is a Sewer or forcemain authorized by condition 4.1 of Schedule D of this Approval.
- 3.6 The Owner shall notify the Director within ninety (90) calendar days of:
 - 3.6.1 The discovery of existing Sewage Works not described or depicted in Schedule B, or
 - 3.6.2 Additional or revised information becoming available for any Sewage Works or Equipment described in Schedule B of this Approval.

- 3.7 The notifications required in condition 3.4 and 3.6 shall be submitted to the Director using the Director Notification Form.
- 3.8 The Owner shall ensure that an ESC plan is prepared, and temporary ESC measures are installed in advance of and maintained during any construction activity on the Authorized System, subject to the following conditions:
- 3.8.1 Inspections of ESC measures are to be conducted at a frequency specified per the ESC plan, for dry weather periods (active and inactive construction phases), after Significant Storm Events and Significant Snowmelt Events, and after any extreme weather events.
 - 3.8.2 Any deficiencies shall be addressed, and any required maintenance actions(s) shall be undertaken as soon as practicable once they have been identified.
 - 3.8.3 Inspections and maintenance of the temporary ESC measures shall continue until they are no longer required.
 - 3.8.4 The ESC plan, ESC measures and its installation, inspections and maintenance shall have regard to at least one of the following:
 - a) CSA W202 Erosion and Sediment Control Inspection and Monitoring Standard, as amended from time to time;
 - b) Erosion and Sediment Control Guideline for Urban Construction (2019), as amended from time to time, prepared by the Toronto Region Conservation Authority; or
 - c) CSA W208 Erosion and Sediment Control Installation and Maintenance, as amended from time to time.
- 3.9 The Owner shall ensure that records of inspections required by this Approval during any construction activity, including those required under condition 3.8:
- 3.9.1 Include the name of the inspector, date of inspection, visual observations, and the remedial measures, if any, undertaken to maintain the temporary ESC measures.
 - 3.9.2 Be retained with records relating to the Alteration that the construction relates to, such as the form required in conditions 4.3.1, 5.4.1, 6.9.1, or 7.6.1 of Schedule D, or the Schedule C Notice.

3.9.3 Be retrievable and made available to the Ministry upon request.

3.10 The document(s) or file(s) referenced in Table B1 of Schedule B of this Approval shall:

3.10.1 Be retained by the Owner;

3.10.2 Include at a minimum:

- a) Identification of the type of Sewers in the Municipal Sewage Collection System (e.g., Separate Sewer; Combined Sewer; Partially Separated Sewer; Nominally Separate Sewer) including:
 - i Location of Sewers relative to street names or easements;
 - ii Sewer and/or forcemain diameters;
 - iii Identification of pumping stations and storage structures, including asset IDs;
 - iv Identification of SSO and/or CSO locations, including asset IDs;
 - v Identification of small-bore systems, if any; and
 - vi Identification of any source protection Vulnerable Areas.

3.10.3 Be updated to include:

- a) Alterations authorized under Schedule D of this Approval or through a Schedule C Notice within twelve (12) months of the Alteration being placed into service.
- b) Updates to information contained in the document(s) or files(s) not associated with an Alteration within twelve (12) months of becoming aware of the updated information.

3.11 An Alteration is not authorized under Schedule D of this ECA for projects that impact Indigenous treaty rights or asserted rights where:

3.11.1 The project is on Crown land or would alter access to Crown land;

3.11.2 The project is in an open or forested area where hunting, trapping or plant gathering occur;

- 3.11.3 The project involves the clearing of forested land unless the clearing has been authorized by relevant municipal, provincial, or federal authorities, where applicable;
- 3.11.4 The project alters access to a water body;
- 3.11.5 The proponent is aware of any concerns from Indigenous communities about the proposed project and these concerns have not been resolved; or
- 3.11.6 Conditions respecting Indigenous consultation in relation to the project were placed in another permit or approval and have not been met.
- 3.12 No less than 60 days prior to construction associated with an Alteration the Director may notify the Owner in writing that a project is not authorized through Schedule D of this ECA where:
 - 3.12.1 Concerns regarding treaty rights or asserted rights have been raised by one or more Indigenous communities that may be impacted by the Alteration; or
 - 3.12.2 The Director believes that it is in the public interest due to site specific, system specific, or project specific considerations.
- 3.13 Where an Alteration is not authorized under condition 3.11 or 3.12 above:
 - 3.13.1 An application respecting the Alteration shall be submitted to the Ministry; and,
 - 3.13.2 The Alteration shall not proceed unless:
 - a) Approval for the Alteration is granted by the Ministry (i.e., a Schedule C Notice); or,
 - b) The Director provides written notice that the Alteration may proceed in accordance with conditions in Schedule D of this ECA.

4.0 Authorizations of Future Alterations for Separate Sewers, Nominally Separate Sewers and Forcemains - Additions, Modifications, Replacements and Extensions

- 4.1 The Owner or a Prescribed Person may alter the Authorized System by adding, modifying, replacing, or extending a Separate Sewer, Nominally Separate Sewer or forcemain within the Authorized System subject to the following conditions and condition 4.2 below:

- 4.1.1 The design of the addition, modification, replacement, or extension:
- a) Has been prepared by a Licensed Engineering Practitioner;
 - b) Has been designed only to collect and transmit Sewage and has not been designed to treat Sewage;
 - c) Satisfies the Design Criteria or any municipal criteria that have been established that exceed the minimum requirements set out in the Design Criteria;
 - d) Is consistent with or otherwise addresses the design objectives contained within the Design Guidelines for Sewage Works; and
 - e) Includes design considerations to protect sources of drinking water, including those set out in the Standard Operating Policy for Sewage Works, and any applicable local Source Protection Plan policies.
- 4.1.2 The addition, modification, replacement, or extension shall be designed so that it will:
- a) Not cause overflows or backups nor increase surcharging at any maintenance holes or privately owned infrastructure (e.g., service connections to basements) connected to the Authorized System or any Municipal Sewage Collection System connected to it;
 - b) Provide smooth flow transition to existing gravity Sewers; and
 - c) Not increase the generation of sulfides and other odorous compounds in the Municipal Sewage Collection System.
- 4.1.3 The maximum discharge/generation of Sewage by users who will be served by the addition, modification, replacement, or extension will not result in:
- a) An exceedance of the Authorized System hydraulic capacity, STP Uncommitted Reserve Hydraulic Capacity, or the downstream Pumping Station Capacity as specified in this Approval;
 - b) Adverse Effects;
 - c) Any increase in Collection System Overflows that is not offset by measures; or

- d) Any increase in the frequency or volume of STP Bypasses or STP Overflows that is not offset by measures.
- 4.1.4 The addition, modification, replacement, or extension is wholly located within the municipal boundary over which the Owner has jurisdiction or there is a written agreement in place with the adjacent municipality respecting the Alteration and resulting Sewage Works.
- 4.1.5 The Owner consents in writing to the addition, modification, replacement, or extension.
- 4.1.6 A Licensed Engineering Practitioner has verified in writing that the addition, modification, replacement, or extension meets the requirements of conditions 4.1.1 a) to d).
- 4.1.7 The Owner has verified in writing that the addition, modification, replacement, or extension has complied with inspection and testing requirements in the Design Criteria.
- 4.1.8 The Owner has verified in writing that the addition, modification, replacement, or extension meets the requirements of conditions 4.1.1 e) and 4.1.2 to 4.1.6.
- 4.2 The Owner or a Prescribed Person is not authorized to undertake an Alteration described above in condition 4.1 where the Alteration relates to the addition, modification, replacement or extension of a Separate Sewer, Nominally Separate Sewer, or forcemain that:
 - 4.2.1 Passes under or through a body of surface water unless trenchless construction methods are used, or the local Conservation Authority has authorized an alternative construction method.
 - 4.2.2 Has a nominal diameter greater than 750 mm for a Separate Sewer or Nominally Separate Sewer.
 - 4.2.3 Has a nominal diameter greater than 350 mm for a forcemain.
 - 4.2.4 Is a Combined Sewer or Partially Separated Sewer.
 - 4.2.5 Connects to another Municipal Sewage Collection System, unless:
 - a) Prior to construction, the Owner of the Authorized System obtains written consent from the Owner or Owner's delegate of the Municipal Sewage Collection System being connected to; and
 - b) The Owner of the Authorized System retains a copy of the written consent from the Owner or Owner's delegate of the

Municipal Sewage Collection System being connected to as part of the record that is recorded and retained under condition 4.3.

- 4.2.6 Creates a new discharge point to the Natural Environment.
- 4.2.7 Is part of an Undertaking in respect of which:
 - a) A request under s.16(6) of the EAA has been made, namely a request that the Minister make an order under s.16;
 - b) The Minister has made an order under s.16; or
 - c) The Director under that EAA has given notice under s.16.1 (2) that the Minister is considering making an order under s.16.
- 4.3 The consents and verifications required in conditions 4.1 and 4.2, if applicable, shall be:
 - 4.3.1 Recorded on Form SS1 prior to the Separate Sewer, Nominally Separate Sewer or forcemain addition, modification, replacement, or extension being placed into service; and
 - 4.3.2 Retained for a period of at least ten (10) years by the Owner.
- 4.4 For greater certainty, the verification requirements set out in condition 4.3 do not apply to any Alteration in respect of the Authorized System which:
 - 4.4.1 Is exempt under section 53(6) of the OWRA or by O. Reg. 525/98; or
 - 4.4.2 Constitutes maintenance or repair of the Authorized System.

5.0 Authorizations of Future Alterations for Combined Sewers, Partially Separated Sewers and Combined Sewage Storage Tanks and Storage Structures

- 5.1 Subject to conditions 5.2 and 5.3, the Owner or a Prescribed Person may alter the Combined Sewers, Partially Separated Sewers and combined Sewage storage tanks and storage structures in the Authorized System by:
 - 5.1.1 Modifying or replacing Combined Sewers, Partially Separated Sewers, overflow Regulators and/or outfalls if the purpose of the project is to restore the Sewage Works to good condition.
 - 5.1.2 Replacing Combined Sewers with Separate Sewers for Stormwater and sanitary Sewage.

5.1.3 Modifying or replacing Combined Sewers, Partially Separated Sewers, overflow regulators, outfalls, or combined Sewage storage tanks, provided that:

- a) The Alteration is designed in such a manner that will contribute to the ultimate attainment of the capture and treatment for an Average Year of all the Dry Weather Flow plus a minimum of 90% of the volume resulting from Wet Weather Flow that is above Dry Weather Flow;
- b) The volume control criterion described in 5.1.3 a) is applied:
 - i For a consecutive seven (7) month period commencing within fifteen (15) calendar days of April 1; and
 - ii To the flows collected by the Authorized System immediately above each Collection System Overflow location unless it can be shown through modelling that the criterion is being achieved on a system-wide basis.
- c) The Alteration is designed in a manner that will not increase CSO volumes above existing levels at each outfall except where the increase is due to the elimination of upstream CSO outfalls as part of the Alteration; and
- d) During the remainder of the year following the seven (7) month period described in condition 5.1.3 b) above, at least the same storage and treatment capacity are maintained for treating Wet Weather Flow.

5.1.4 Adding oversized pipes provided they are designed to alleviate local / neighbourhood basement flooding and the Alteration satisfies condition 5.1.3 a), b), c), and d).

5.2 Any Alteration to the Authorized System authorized under condition 5.1 is subject to the following conditions:

5.2.1 The design of the Alteration shall:

- a) Be prepared by a Licensed Engineering Practitioner;
- b) Be designed only to collect and transmit Sewage and shall not be designed to treat Sewage;
- c) Satisfy the Design Criteria or any municipal criteria that have been established that exceed the minimum requirements set out in the Design Criteria;

- d) Be consistent with or otherwise address the design objectives contained within the Design Guidelines for Sewage Works; and
- e) Include design considerations to protect sources of drinking water, including those set out in the Standard Operating Policy for Sewage Works and any applicable local Source Protection Plan policies.

5.2.2 The design of the Alteration shall be:

- a) Undertaken in accordance with a Pollution Prevention and Control Plan; or
- b) If no Pollution Prevention and Control Plan is available, undertaken in accordance with an interim detailed plan for the local sewershed that:
 - i Describes the location, frequency, and volume of the CSOs, as well as the concentrations and mass pollutant loadings resulting from CSOs from the study area.
 - ii Includes the following minimum information:
 - 1. Location and physical description of CSO outfalls in the Authorized System, Collection System Overflows at pumping stations in Emergency Situations, STP Bypass and STP overflows locations;
 - 2. Location and identification of receiving water bodies, including sensitive receivers, for all Combined Sewer outfalls;
 - 3. Authorized System flow and STP treatment component capacities, present and future expected peak flow rates during dry weather and wet weather;
 - 4. Capacity of all regulators; and
 - 5. Location of cross connections between Sewage and Stormwater infrastructure.
 - iii Is intended to reduce the overall CSO volume, frequency, duration, or by-pass of treatment in the Authorized and/or municipal STP; and

- iv If there is a temporary Storm Sewer connection to a combined system as part of a Combined Sewer separation project, the construction plan includes a timeline to disconnect the Storm Sewer to a separated storm outlet.

5.2.3 The Alteration shall not result in:

- a) An exceedance of hydraulic capacity of the Authorized System, STP Uncommitted Reserve Hydraulic Capacity, or the Pumping Station Capacity as specified in this Approval;
- b) Adverse Effects;
- c) Any increase in Collection System Overflows that is not offset by measures elsewhere in the Authorized System; or
- d) Any increase in the frequency and/or volume of STP Bypasses or STP Overflows that is not offset by measures.

5.2.4 Where replacement of pipes to achieve Combined Sewer separation has been authorized under conditions 5.1.2 or 5.1.3, the following conditions apply:

- a) Stormwater quantity, quality and water balance control shall be provided such that Combined Sewer separation shall not result in an overall increase in pollutants discharged to the Natural Environment;
- b) Any new Storm Sewers that result from the Combined Sewer separation can be constructed but not operated until the proposed Stormwater Management Facilities designed to satisfy condition 5.2.4 a) are in operation; and
- c) Where any temporary structures have been installed to facilitate Combined Sewer separation, the Owner shall ensure that immediately upon Completion of the Combined Sewer separation, the temporary structure connection shall be disconnected and decommissioned.

5.2.5 The Alteration shall:

- a) Not cause overflows or backups nor increase surcharging at any maintenance holes or privately owned infrastructure (e.g., service connections to basements) connected to the Authorized System or any Municipal Sewage Collection System connected to it;

- b) Provide smooth flow transition to existing gravity sewers; and
 - c) Not increase the generation of sulfides and other odorous compounds in the Authorized System.
- 5.2.6 The Alteration is wholly located within the municipal boundary over which the Owner has jurisdiction or there is a written agreement in place with the adjacent municipality respecting the Alteration and resulting Sewage Works.
- 5.2.7 The Owner consents in writing to the Alteration authorized under condition 5.1.
- 5.2.8 A Licensed Engineering Practitioner has verified in writing that the Alteration authorized under condition 5.1 meets the design requirements of conditions 5.2.1 a) to d) and to 5.2.2.
- 5.2.9 The Owner has verified in writing that the Alteration authorized under condition 5.1 has complied with inspection and testing requirements in the Design Criteria.
- 5.2.10 The Owner has verified in writing that the Alteration authorized under condition 5.1 meets the requirements of conditions 5.2.1 e) and 5.2.3 to 5.2.8.
- 5.3 The authorization in condition 5.1 does not apply:
 - 5.3.1 To the modification or replacement of a Combined Sewer or Partially Separated Sewer that has a nominal diameter greater than 750 mm.
 - 5.3.2 To the modification or replacement of a Combined Sewer or Partially Separated Sewer that connects to another Municipal Sewage Collection System, unless:
 - a) Prior to construction, the Owner of the Authorized System seeking the connection obtains written consent from the Owner or Owner's delegate of the Municipal Sewage Collection System being connected to; and
 - b) The Owner of the Authorized System retains a copy of the written consent from the Owner or Owner's delegate of the Municipal Sewage Collection System being connected to as part of the record that is recorded and retained under condition 5.4.
 - 5.3.3 Where the Alteration would create a new discharge point to the Natural Environment.

- 5.3.4 Where the Alteration would result in the addition of a new combined Sewage storage tank in the Authorized System.
- 5.4 The consents and verifications required in conditions 5.2.7 to 5.2.10, and 5.3.2 if applicable, shall be:
 - 5.4.1 Recorded on Form CS1, prior to the Combined Sewer or Partially Separated Sewer modification or replacement being placed into service; and
 - 5.4.2 Retained for a period of at least ten (10) years by the Owner.
- 5.5 For greater certainty, the verification requirements set out in condition 5.4 do not apply to any Alteration in respect of the Authorized System which:
 - 5.5.1 Is exempt under section 53(6) of the OWRA or by O. Reg. 525/98; or,
 - 5.5.2 Constitutes maintenance or repair of the Authorized System.

6.0 Authorizations of Future Alterations to Components of the Municipal Sewage Collection System

- 6.1 The Owner or a Prescribed Person may make the following Alterations to the Authorized System subject to conditions 6.4 through 6.7:
 - 6.1.1 Adding, modifying, or replacing the following components of Sewage pumping stations, Separate Sewers, or Nominally Separate Sewers:
 - a) In-line and/or off-line storage to manage peak flow / inflow and infiltration that does not require pumping;
 - b) Off-line storage to manage peak flow / inflow and infiltration that only requires electricity to empty the structure;
 - c) Any associated Equipment for cleaning; and
 - d) All Appurtenances associated with in-line or off-line storage facilities, including odour, and corrosion control.
 - 6.1.2 Modifying existing Sewage pumping stations and odour control units / Facilities, including adding, replacing, or modifying the following components:
 - a) Pumps, including replacement parts, in an existing pumping system;
 - b) Grinders and screens;

- c) Aeration and/or mixing Equipment;
- d) Chemicals and associated Equipment and tanks (including secondary containment);
- e) Odour and corrosion control structures;
- f) Instrumentation and controls;
- g) Discharge and process piping;
- h) Valves;
- i) Wet-wells; and
- j) Fat, oil, and grease separators (FOGs).

6.1.3 Adding new Sewage pumping stations, where they:

- a) Are designed to transmit a Peak Hourly Flow of no greater than 30 L/s;
- b) Include emergency stand-by power, Spill containment, and emergency alarms (SCADA, if applicable);
- c) Include emergency storage designed to provide at minimum two (2) hours of response time at peak design flow;
- d) Include odour and corrosion control, as applicable;
- e) Would serve a new residential development (or new phased residential development), which may include existing residential development that has no Combined or Partially Separated Sewers;
- f) Are designed to only collect sanitary Sewage and not Stormwater; and
- g) Do not include an emergency sanitary overflow or piping to a municipal Stormwater management system or a natural receiver to prevent the discharge to the Natural Environment.

6.1.4 Adding, modifying, or replacing Equipment associated with Real-time Control Systems, where:

- a) The Equipment is designed and implemented as part of the Owner's CSO reduction strategy or to optimize use of Sewage Works comprising the Authorized System;

- b) The Real-Time Control System is designed and integrated with fail-safe procedures such that they are automatically activated when the requirements of the current mode of operation cannot be met;
 - c) Risk management procedures are in place or will be in place prior to use of the Real-time Control System; and
 - d) Station alarms to control center are in place or will be in place prior to use of the Real-time Control System.
- 6.1.5 Adding, modifying, replacing, or removing chemical storage tanks (including fuel storage tanks) with Spill containment and associated Equipment.
- 6.1.6 Adding, modifying, replacing, or removing Motor Control Centre (MCC) and/or associated electrical.
- 6.2 The Owner or a Prescribed Person may alter the Authorized System by adding, modifying, replacing, or removing the following components subject to conditions 6.4 through 6.7:
 - 6.2.1 Valves and their associated controls installed for maintenance purposes;
 - 6.2.2 Instrumentation for monitoring and controls, including SCADA systems, and hardware associated with these monitoring devices;
 - 6.2.3 Spill containment works for chemicals used within the Authorized System;
 - 6.2.4 Chemical metering pumps and chemical handling pumps;
 - 6.2.5 Measuring and monitoring devices that are not required by regulation, by a condition in this Approval, or by a condition otherwise imposed by the Ministry;
 - 6.2.6 Process piping within a Sewage pumping station, storage tank, or other structures; and
 - 6.2.7 Valve chambers or maintenance holes.
- 6.3 The Owner or a Prescribed Person may alter the Authorized System by adding, modifying, or replacing the following components subject to conditions 6.4 through 6.7:

- 6.3.1 Measuring and monitoring devices that are required by regulation, by a condition in this Approval, or by a condition otherwise imposed by the Ministry.
- 6.4 The design of the Alteration shall:
 - 6.4.1 Be prepared by a Licensed Engineering Practitioner, where the Alteration falls within the practice of professional engineering as defined in the *Professional Engineers Act*, R.S.O. 1990;
 - 6.4.2 Be consistent with or otherwise address the design objectives contained within the Design Guidelines for Sewage Works; and
 - 6.4.3 Include design considerations to protect sources of drinking water, such as those included in the Standard Operating Policy for Sewage Works, and any applicable local Source Protection Plan policies.
- 6.5 The Alteration shall:
 - 6.5.1 Not cause overflows or backups nor increase surcharging at any maintenance holes or privately owned infrastructure (e.g., service connections to basements) connected to the Authorized System or any Municipal Sewage Collection System connected to it;
 - 6.5.2 Provide smooth flow transition to existing gravity Sewers;
 - 6.5.3 Not increase the generation of sulfides and other odourous compounds in the Authorized System; and
 - 6.5.4 Be wholly located within the municipal boundary over which the Owner has jurisdiction or there is a written agreement in place with the adjacent municipality respecting the Alteration and resulting Sewage Works.
- 6.6 Any Alteration of the Authorized System made under conditions 6.1, 6.2, or 6.3 shall not result in:
 - 6.6.1 Exceedance of hydraulic capacity (including Uncommitted Reserve Hydraulic Capacity, as applicable) of the downstream:
 - a) Municipal Sewage Collection System; or
 - b) Receiving STPs.
 - 6.6.2 Exceedance of any downstream Pumping Station Capacity as specified in Schedule B of this Approval.

- 6.6.3 An increase in the capacity of an existing Pumping Station Capacity of greater than 30%.
- 6.6.4 Any increase in Collection System Overflows that is not offset by measures taken elsewhere in the Authorized System.
- 6.6.5 Any increase in the frequency and/or volume of STP Bypasses or STP Overflows that is not offset by measures.
- 6.6.6 Deterioration of the normal operation of municipal STPs and/or the Authorized System.
- 6.6.7 A negative impact on the ability to undertake monitoring necessary for the operation of the Authorized System.
- 6.6.8 Adverse Effects.
- 6.7 The Alteration is subject to the following conditions:
 - 6.7.1 The Owner consents in writing to the Alteration.
 - 6.7.2 The person responsible for the design has verified in writing that the Alteration meets the requirements of conditions 6.4.1 and 6.4.2, as applicable.
 - 6.7.3 The Owner has verified in writing that the Alteration meets the requirements of conditions 6.4.3, 6.7.1, and 6.7.2.
- 6.8 The Owner shall verify in writing that any Alteration of the Authorized System in accordance with conditions 6.1 or 6.2 has met the requirements of the conditions listed in conditions 6.5 and 6.6.
- 6.9 The consents, verifications and documentation required in conditions 6.7 and 6.8 shall be:
 - 6.9.1 Recorded on Form SS2 prior to undertaking the Alteration; and
 - 6.9.2 Retained for a period of at least ten (10) years by the Owner.
- 6.10 For greater certainty, the verification requirements set out in condition 6.9 do not apply to any Alteration in respect of the Authorized System which:
 - 6.10.1 Is exempt under section 53(6) of the OWRA or by O. Reg. 525/98; or
 - 6.10.2 Constitutes maintenance or repair of the Authorized System, including changes to software for an existing SCADA system resulting from Alterations authorized in condition 6.2.

- 6.11 The Owner shall update, within twelve (12) months of the Alteration of the Sewage Works being placed into service, any drawings maintained for the Municipal Sewage Collection System to reflect the Alterations of the Sewage Works, where applicable.

7.0 Authorizations of Future Alterations to Equipment with Emissions to the Air

- 7.1 The Owner and a Prescribed Person may alter the Authorized System by adding, modifying, or replacing the following Equipment in the Municipal Sewage Collection System:
- 7.1.1 Venting for odour control using solid scavenging or carbon adsorption units;
 - 7.1.2 Venting for odour control by replacing existing biofiltration or wet air scrubbing systems, including any components, with Equipment of the same or better performance characteristics; and
 - 7.1.3 Emergency generators that fire No. 2 fuel oil (diesel fuel) with a sulphur content of 0.5 per cent or less measured by weight, natural gas, propane, gasoline, or biofuel, and that are used for emergency duty only with periodic testing.
- 7.2 Any Alteration of the Municipal Sewage Collection System made under condition 7.1 that may discharge or alter the rate or manner of a discharge of a Compound of Concern to the atmosphere is subject to the following conditions:
- 7.2.1 The Owner shall, at all times, take all reasonable measures to minimize odorous emissions and odour impacts from all potential sources at the Facility.
 - 7.2.2 The Owner shall ensure that the noise emissions from the Facility comply with the limits set out in Publication NPC-300.
 - 7.2.3 The Owner shall ensure that the vibration emissions from the Facility comply with the limits set out in Publication NPC-207.
- 7.3 The Owner shall not add, modify, or replace Equipment in the Municipal Sewage Collection System as set out in condition 7.1 unless the Equipment performs an activity that is directly related to municipal Sewage collection and transmission.
- 7.4 The emergency generators identified in condition 7.1.3 shall not be used for non-emergency purposes (excluding generator testing) including the generation of electricity for sale or for peak shaving purposes.

- 7.5 The Owner shall verify in writing that any addition, modification, or replacement of Equipment in accordance with condition 7.1 has met the requirements of the conditions listed in conditions 7.2, 7.3, and 7.4.
- 7.6 The verifications and documentation required in condition 7.5 shall be:
- 7.6.1 Recorded on Form A1 prior to the additional, modified or replacement Equipment being placed into service; and
- 7.6.2 Retained for a period of at least ten (10) years by the Owner.
- 7.7 For greater certainty, the verification and documentation requirements set out in condition 7.5 and 7.6 do not apply to any addition, modification, or replacement in respect of the Authorized System which:
- 7.7.1 Is exempt from the requirements of the EPA, or for Equipment that is exempt from s.9 of the EPA under O. Reg. 524/98; or
- 7.7.2 Constitutes maintenance or repair of the Authorized System.

8.0 Previously Approved Sewage Works

- 8.1 If approval for an Alteration to the Authorized System was issued under the EPA and is revoked by this Approval, the Owner may make the Alteration in accordance with:
- 8.1.1 The terms of this Approval; or
- 8.1.2 The terms and conditions of the revoked approval that were applicable as of the date this approval was issued, provided that the Alteration is commenced within five (5) years of the date that the revoked approval was issued.

9.0 Transition

- 9.1 An Alteration of the Authorized System is exempt from the requirements in clause (c) of condition 4.1.1 and clause (c) of condition 5.2.1 where:
- 9.1.1 Effort to undertake the Alteration, such as tendering or commencement of construction of the Sewage Works associated with the Alteration, begins on or before May 20, 2023.
- 9.1.2 The design of the Alteration conforms to the Design Guidelines for Sewage Works;
- 9.1.3 The design of the Alteration was completed on or before the issue date of this Approval or a Class Environmental Assessment was

completed for the Alteration and changes to the design result in significant cost increase or significant project delays; and

- 9.1.4 The Alteration would be otherwise authorized under this Approval.

Schedule E: Operating Conditions

System Owner	Kawartha Lakes, The Corporation of the City of
ECA Number	141-W601
System Name	City of Kawartha Lakes Wastewater System
ECA Issue Date	October 12th, 2022

1.0 General Operations

- 1.1 The Owner shall ensure that, at all times, the Sewage Works comprising the Authorized System and the related Equipment and Appurtenances used to achieve compliance with this Approval are properly operated and maintained.
- 1.2 Prescribed Persons and Operating Authorities shall ensure that, at all times, the Sewage Works under their care and control and the related Equipment and Appurtenances used to achieve compliance with this Approval are properly operated and maintained.
- 1.3 In conditions 1.1 and 1.2 “properly operated and maintained” includes effective performance, adequate funding, adequate operator staffing and training, including training in applicable procedures and other requirements of this Approval and the EPA, OWRA, CWA, and regulations, adequate laboratory services, process controls and alarms and the use of process chemicals and other substances used in the Authorized System.

2.0 Duties of Owners and Operating Authorities

- 2.1 The Owner, Prescribed Persons and any Operating Authority shall ensure the following:
 - 2.1.1 At all times that the Sewage Works within the Authorized System are in service the Sewage Works are:
 - a) Operated in accordance with the requirements under the EPA and OWRA, and
 - b) Maintained in a state of good repair.
 - 2.1.2 The Authorized System is operated by persons having the training or expertise for their operating functions that is required by O. Reg. 129/04 (Licensing of Sewage Works Operators) under the OWRA and this Approval.

- 2.1.3 All sampling, testing, monitoring, and reporting requirements under the EPA and this Approval that relate to the Authorized System are complied with.
- 2.1.4 Any person who is operating the Sewage Works within the Authorized System is supervised by an operator-in-charge as described in O. Reg. 129/04 under the OWRA.
- 2.2 For clarity, the requirements outlined in the above conditions 2.1.1 through 2.1.4 for Prescribed Persons and any Operating Authority only apply to Sewage Works within the Authorized System where they are responsible for the operation.
- 2.3 The Owner, Prescribed Persons and Operating Authority shall take all reasonable steps to minimize and ameliorate any Adverse Effect on the Natural Environment or impairment of the quality of water of any waters resulting from the operation of the Authorized System, including such accelerated or additional monitoring as may be necessary to determine the nature and extent of the effect or impairment.

3.0 Operations and Maintenance

3.1 Inspection

- 3.1.1 The Owner shall ensure that all Sewage Works within the Authorized System are inspected at the frequency and in accordance with procedures set out in their O&M Manual.
- 3.1.2 The Owner shall ensure that:
 - a) Any pumping stations, combined Sewage storage tanks, and any Collection System Overflow within the Authorized System as of the date of issuance of this Approval are inspected at least once per calendar year starting the year after the O&M Manual is required to be prepared and implemented as per condition 3.2.1 in Schedule E of this Approval, and more frequently if required by the O&M Manual; and
 - b) Any pumping stations, combined Sewage storage tanks, and any Collection System Overflow established or replaced within the Authorized System after the date of issuance of this Approval are inspected within one year of being placed into service and thereafter once per calendar year and more frequently if required by the O&M Manual.
- 3.1.3 The inspection of the combined Sewage storage tanks required in condition 3.1.2 shall include physical inspection at the Point of

Entry, including looking for signs of unplanned discharges from Wet Weather Flow and Dry Weather Flow.

3.1.4 The Owner shall clean and maintain Sewage Works within the Authorized System to ensure the Sewage Works perform as designed.

3.1.5 The Owner shall maintain records of the results of the inspections required in condition 3.1.1, 3.1.2, and 3.1.3, monitoring (if applicable) and any cleaning and maintenance operations undertaken, and shall make available the records for inspection by the Ministry upon request. The records shall include the following:

- a) Asset ID and name of the Sewage Works;
- b) Date and results of each inspection, maintenance, or cleaning; and
- c) Name of person who conducted the inspection, maintenance, or the name of the inspecting official, where applicable.

3.2 Operations & Maintenance (O&M) Manual

3.2.1 The Owner shall prepare and implement an operations and maintenance manual for Sewage Works within the Authorized System on or before December 31, 2023, that includes or references, but is not necessarily limited to, the following information:

- a) Procedures for the routine operation of the Sewage Works;
- b) Inspection programs, including the frequency of inspection, and the methods or tests employed to detect when maintenance is necessary;
- c) Maintenance and repair programs, including:
 - i The frequency of maintenance and repair for the Sewage Works.
 - ii Clean out requirements for any storage or overflow tanks, if applicable.
- d) Operational and maintenance requirements to protect sources of drinking water, such as those included in the Standard Operating Policy for Sewage Works, and any applicable local Source Protection Plan policies;

- e) Procedures for routine physical inspection and checks of controlling systems (e.g., SCADA) to ensure the mechanical integrity of Equipment and its accuracy on the controlling system.
- f) Procedures for preventing odours and odour impacts;
- g) Procedures for calibration of monitoring Equipment (e.g., flow, level, pressure);
- h) Emergency Response, Spill Reporting and Contingency Plans and Procedures for dealing with Equipment breakdowns, potential Spills and any other abnormal situations, including notification to the SAC, the Medical Officer of Health, and the District Manager, as applicable;
- i) Procedures for receiving, responding and recording public complaints, including recording any follow-up actions taken; and
- j) As-built drawings or record drawings of the Sewage Works.

3.2.2 The Owner shall review and update the O&M Manual and ensure that operating staff have access, as per O. Reg 129/04 (Licensing of Sewage Works Operators) under the OWRA. Upon request, the Owner shall make the O&M Manual available to Ministry staff.

3.2.3 The Owner shall revise the O&M Manual to include procedures necessary for the operation and maintenance of any Sewage Works within the Authorized System that are established, altered, extended, replaced, or enlarged after the date of issuance of this approval prior to placing into service those Sewage Works.

3.2.4 For greater certainty, the O&M Manual may be a single document or a collection of documents that, when considered together, apply to all parts of the Authorized System.

3.3 Collection System Overflows

3.3.1 Any CSO at a point listed in Table B4 of Schedule B is considered a Class 1 approved discharge type Spill under O.Reg.675/98:

- a) Where the CSO is as a result of wet weather events when the designed capacity of the Authorized System is exceeded;
- b) Where the CSO is a direct and unavoidable result of a planned repair and/or maintenance procedure, the Owner has notified the Local Ministry Office fifteen at least (15) calendar days

prior to the CSO and the Local Ministry Office has provided written consent of the CSO; or

- c) Where the CSO is planned for research or training purposes, the Owner has notified the Local Ministry Office fifteen at least (15) calendar days prior to the CSO and the Local Ministry Office has provided written consent of the CSO.

3.3.2 Any SSO at a point listed in Table B5 of Schedule B is considered a Class 1 approved discharge type Spill under O.Reg. 675/98:

- a) Where the SSO is a direct and unavoidable result of a planned repair or maintenance procedure and the Owner has notified the Local Ministry Office at least fifteen (15) calendar days prior to the SSO and the Director for the purposes of s.4 of O. Reg. 675/98 under the EPA has provided written consent of the SSO; or
- b) Where the SSO is planned for research or training purposes, the Owner has notified the Local Ministry Office at least fifteen (15) calendar days prior to the SSO and the Director for the purposes of s.4 of O. Reg. 675/98 under the EPA has provided written consent of the SSO.

3.3.3 On or before May 20, 2025, the Owner shall establish signage to notify the public, at the nearest publicly accessible point(s) downstream of any CSO outfall location identified in Schedule B, Table B4, and any SSO when the overflow is piped to a specified outlet point. If the nearest publicly accessible point is more than 100m away, then signage shall be established at the CSO or SSO outfall location. The signage shall include the following minimum information:

- a) Type of Collection System Overflow;
- b) Identification of potential hazards and limitations of water use, as applicable;
- c) ECA number and/or asset ID; and
- d) The Owner's contact information.

3.4 Monitoring

3.4.1 For a Collection System Overflow that occurs at a designated location, the following conditions apply:

- a) For CSO storage tanks/facilities listed in Table B3, the Owner shall:
 - i On or before November 20, 2022 or within six (6) months of the date of the publication of the Ministry's monitoring guidance, whichever is later, collect a composite sample of the combined Sewage from the CSO tank whenever the tank(s) is(are) in operation. If there is more than one tank, the tank nearest to the discharge point shall be sampled. The composite sample shall consist, at a minimum, of one sample at the beginning of the Event, and one sample at approximately every 8-hours until the end of the Event. The composite sample shall be analyzed, at a minimum, for Biochemical Oxygen Demand (BOD) (or Chemical Oxygen Demand (COD) if agreed upon by the District Manager), total suspended solids, total phosphorus and total Kjeldahl nitrogen. If the CSO continues for more than one day, multiple composite samples are allowed.
 - ii If 3.4.1 a) ii) cannot be achieved, then surrogate sampling may be used to determine the contamination concentrations of the discharge CSO tank overflow, at a minimum, for BOD (or COD), total suspended solids, total phosphorus and total Kjeldahl nitrogen. The methodology in determining, applying, and analyzing surrogate sampling shall be proposed by the Owner and subject to the written approval of the District Manager.
- b) For CSO regulator structures listed in Table B2, and for any CSO or SSO locations listed under Table B4 or Table B5, the Owner shall:
 - i On or before November 20, 2022, take at least one (1) grab sample, for BOD (or COD, if agreed upon by the District Manager), total suspended solids, total phosphorus, total Kjeldahl nitrogen, and E. Coli, or
 - ii On or before November 20, 2022 or within six (6) months of the date of publication of the Ministry's monitoring guidance, whichever is later, use surrogate sampling to determine the Contaminant concentrations of the discharged Collection System Overflow, at a minimum, for BOD (or COD), total suspended solids, total phosphorus, total Kjeldahl nitrogen, and E. Coli. The methodology in determining, applying, and analyzing

surrogate sampling shall be proposed by the Owner and subject to the written approval of the District Manager.

- c) The Owner shall use the Event discharged volume and the concentrations as determined in condition 3.4.1 to calculate the loading to the Natural Environment for each parameter.

3.4.2 For any Spill of Sewage that does not meet 3.4.1 a) or b):

- a) Where practicable, take at least one (1) grab sample, and analyzed for BOD (or COD, if agreed upon by the District Manager), total suspended solids, total phosphorus, total Kjeldahl nitrogen, and E. Coli
- b) The Owner shall use the discharged volume, where possible, and the concentrations as determined in condition 3.4.2 a) to calculate the loading to the Natural Environment for each parameter.

3.4.3 If COD sampling was completed, the equivalent BOD values are required to be included with the data reported to the Ministry.

3.4.4 The methods and protocols for sampling, analysis and recording shall conform, in order of precedence, to the methods and protocols specified in the following 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) 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.
- b) The Ministry's publication "Protocol for the Sampling and Analysis of Industrial/Municipal Wastewater Version 2.0" (January 2016), as amended from time to time.
- c) The publication "Standard Methods for the Examination of Water and Wastewater", as amended from time to time.

4.0 Reporting

4.1 The Owner shall, upon request, make all manuals, plans, records, data, procedures and supporting documentation available to Ministry staff.

4.2 Collection System Overflows

- 4.2.1 If the Collection System Overflow meets the criteria listed in condition 3.3.1 or 3.3.2:
- a) The Owner shall report the Event as a Class 1 approved discharge type Spill as soon as practicable to the Ministry either by a verbal to SAC or in an electronic format if the Ministry makes a system available;
 - b) The Owner shall report the Event to the local Medical Officer of Health in a manner agreed upon with the local Medical Officer of Health;
 - c) The manner of notification to the Ministry shall be in two (2) stages and include, at a minimum, the following information:
 - i The Asset ID, infrastructure description as detailed in Table B5 in Schedule B, the outfall location, and the Point of Entry (as applicable), and the reason(s) for the Event.
 - ii First stage of reporting:
 - a. The date and time (start) of the Event.
 - iii Second stage of reporting (as soon as practicable and may be reported at same time as first stage):
 - a. The date, duration, and time (start and end) of the Event;
 - b. The estimated or measured volume of the Event, accurate to at least +/- 20% of the volume;
 - i. If the volume of the Event is not readily available at the time of the second stage of reporting, the estimated volume can be provided to the Ministry within seven (7) calendar days of the second stage of reporting;
 - c. If any, summary of complaints, observed adverse impacts, any additional sampling obtained, disinfection, and any corrective measures taken;
 - d) Upon request of the local office, the Owner shall within fifteen (15) calendar days of the occurrence of any Collection System Overflow, the Owner shall submit a full written report of the occurrence to the District Manager describing the

cause and discovery of the Collection System Overflow, clean-up and recovery measures taken, preventative measures to be taken and schedule of implementation, or an alternate report as agreed to in writing by the District Manager.

4.3 Spills

4.3.1 If the Collection System Overflow does not meet the criteria listed in condition 3.3.1 or 3.3.2, or is otherwise considered a Spill of Sewage:

- a) The Owner shall report the Spill to SAC pursuant to O.Reg.675/98 and Part X of the EPA;
- b) The Owner shall report the Event to the local Medical Officer of Health in a manner agreed upon with the local Medical Officer of Health;
- c) In addition to the obligations under Part X of the Environmental Protection Act, the Owner shall, within fifteen (15) calendar days of the occurrence of any reportable Spill, submit a full written report of the occurrence to the District Manager describing the cause and discovery of the spill or loss, actual/estimated volume of the Spill, clean-up and recovery measures taken, preventative measures to be taken and schedule of implementation.

4.4 If the Owner is unable to determine the volume of a Collection System Overflow for the purpose of reporting, the Owner shall develop procedures that enable estimated or measured volumes to be included in the required reporting for any Collection System Overflow occurring on or after Oct 20, 2023.

4.5 The Owner shall follow the direction of the Ministry and the local Medical Officer of Health regarding any Collection System Overflows.

4.6 The Owner shall prepare an annual performance report for the Authorized System that:

- 4.6.1 Is submitted to the Director on or before March 31st of each year and covers the period from January 1st to December 31st of the preceding calendar year.
- a) For clarity, the first report shall cover the period of January 1st, 2023 to December 31st, 2023 and be submitted to the Director on or before March 31st, 2024.

- b) For the transitional period of January 1, 2022 to December 31, 2022, annual reporting requirements from previous ECAs pertaining to Spills only, where these occurred in the reporting period, and that have been revoked through issuance of this ECA shall apply.
 - i For the transitional period, condition 4.7.2 does not apply.
- 4.6.2 Is also submitted to the District Manager where a Collection System Overflow or Spill of Sewage has occurred in the reporting period.
- 4.6.3 If applicable, includes a summary of all required monitoring data along with an interpretation of the data and any conclusion drawn from the data evaluation about the need for future modifications to the Authorized System or system operations.
- 4.6.4 Includes a summary of any operating problems encountered and corrective actions taken.
- 4.6.5 Includes a summary of all calibration, maintenance, and repairs carried out on any major structure, Equipment, apparatus, mechanism, or thing forming part of the Municipal Sewage Collection System.
- 4.6.6 Includes a summary of any complaints related to the Sewage Works received during the reporting period and any steps taken to address the complaints.
- 4.6.7 Includes a summary of all Alterations to the Authorized System within the reporting period that are authorized by this Approval including a list of Alterations that pose a Significant Drinking Water Threat.
- 4.6.8 Includes a summary of all Collection System Overflow(s) and Spill(s) of Sewage, including:
 - a) Dates;
 - b) Volumes and durations;
 - c) If applicable, loadings for total suspended solids, BOD, total phosphorus, and total Kjeldahl nitrogen, and sampling results for E.coli;
 - d) Disinfection, if any; and

- e) Any adverse impact(s) and any corrective actions, if applicable.
- 4.6.9 Includes a summary of efforts made to reduce Collection System Overflows, Spills, STP Overflows, and/or STP Bypasses, including the following items, as applicable:
- a) A description of projects undertaken and completed in the Authorized System that result in overall overflow reduction or elimination including expenditures and proposed projects to eliminate overflows with estimated budget forecast for the year following that for which the report is submitted.
 - b) Details of the establishment and maintenance of a PPCP, including a summary of project progresses compared to the PPCP's timelines.
 - c) An assessment of the effectiveness of each action taken.
 - d) An assessment of the ability to meet Procedure F-5-1 or Procedure F-5-5 objectives (as applicable) and if able to meet the objectives, an overview of next steps and estimated timelines to meet the objectives.
 - e) Public reporting approach including proactive efforts.
- 4.7 The report described in condition 4.6 shall be:
- 4.7.1 Made available, on request and without charge, to members of the public who are served by the Authorized System; and
 - 4.7.2 Made available, by June 1st of the same reporting year, to members of the public without charge by publishing the report on the Internet, if the Owner maintains a website on the Internet.

5.0 Record Keeping

- 5.1 The Owner shall retain for a minimum of ten (10) years from the date of their creation:
 - 5.1.1 All records, reports and information required by this Approval and related to or resulting Alterations to the Authorized System, and
 - 5.1.2 All records, report and information related to the operation, maintenance and monitoring activities required by this Approval.
- 5.2 The Owner shall update, within twelve (12) months of any Alteration to the Authorized System being placed into service, any drawings maintained for

the Municipal Sewage Collection System to reflect the Alteration of the Sewage Works, where applicable.

6.0 Review of this Approval

- 6.1 No later than the date specified in Condition 1 of Schedule A of this Approval, the Owner shall submit to the Director an application to have the Approval reviewed. The application shall, at minimum:
 - 6.1.1 Include an updated description of the Sewage Works within the Authorized System, including any Alterations to the Sewage Works that were made since the Approval was last issued; and
 - 6.1.2 Be submitted in the manner specified by Director and include any other information requested by the Director.

7.0 Source Water Protection

- 7.1 The Owner shall ensure that any Alteration in the Authorized System is designed, constructed, and operated in such a way as to be protective of sources of drinking water in Vulnerable Areas as identified in the Source Protection Plan, if available.
- 7.2 The Owner shall prepare a "Significant Drinking Water Threat Assessment Report for Proposed Alterations" for the Authorized System on or before May 20, 2023 that includes, but is not necessarily limited to:
 - 7.2.1 An outline of the circumstances under which the proposed Alterations could pose a Significant Drinking Water Threat based on the Director's Technical Rules established under the CWA.
 - 7.2.2 An outline of how the Owner assesses the proposed Alterations to identify drinking water threats under the CWA.
 - 7.2.3 For any proposed Alteration a list of components, Equipment, or Sewage Works that are being altered and have been identified as a Significant Drinking Water Threat.
 - 7.2.4 A summary of design considerations and other measures that have been put into place to mitigate risks resulting from construction or operation of the components, Equipment or Sewage Works identified in condition 7.2.3, such as those included in the Standard Operating Policy for Sewage Works.
- 7.3 The Owner shall make any necessary updates to the report required in condition 7.2 at least once every twelve (12) months.

- 7.4 Any components, Equipment or Sewage Works added to the report required in condition 7.2 shall be included in the report for the operational life of the Sewage Works.
- 7.5 Upon request, the Owner shall make a copy of the report required in condition 7.2 available to the Ministry or Source Protection Authority staff.

8.0 Additional Studies

Assessment of Wet Weather Flows Compared to Dry Weather Flows

8.1 This condition and the following requirements apply where:

- a) The Authorized System has no Combined Sewers or Partially Separated Sewers; and
- b) There has been one or more of: an STP Overflow, STP Bypass, or Collection System Overflow within the ten (10) year period starting January 1, 2012 and ending December 31, 2021.

The following requirements do not apply if:

- a) The Collection System Overflow is a result of emergency overflows at pumping stations during power outage or Equipment failure; and
- b) There has been no STP Overflow or STP Bypass.

8.1.1 The Owner shall conduct an assessment of Wet Weather Flows compared to the Dry Weather Flows in the Authorized System and/or to the STP(s) described in Schedule A, as per the following conditions:

- a) The assessment shall evaluate available data from the ten (10) year period starting January 1, 2012 and ending December 31, 2021.
- b) The assessment shall be completed and submitted to the Director by April 30, 2024.
- c) In the event that Wet Weather Flows in the ten (10) year period described above have created STP Bypasses or STP Overflows at the STP(s) specified in Schedule A or Collection System Overflows in an Average Year, then the study shall include:
 - i Actions and timelines to meeting the Procedure F-5-1 objectives;

- ii Review of causes of STP Overflow, STP Bypass and/or Collection System Overflow Events, including inflow and infiltration, sewer use, and characteristics of rainfall events, as applicable;
- iii Inspection of the Sewers and bypass structures; and
- iv Identification of any near and/or long-term corrective actions with anticipated timelines.

Assessment of Conformance to Procedure F-5-1 and F-5-5

8.2 This condition and the following requirements apply where:

- a) The Authorized System includes Combined Sewers or Partially Separated Sewers, and
 - b) The Authorized System experienced a Collection System Overflow, an STP Bypass, or STP Overflow within the ten (10) year period starting January 1, 2012 and ending December 31, 2021.
- 8.2.1 The Owner shall conduct an assessment to demonstrate conformance of the Authorized System to Procedure F-5-1 or Procedure F-5-5, as applicable, in accordance with the following conditions:
- a) The assessment shall:
 - i Be prepared by a Licensed Engineering Practitioner and be submitted to the Director by November 20, 2023;
 - ii Be performed for each of the years 2012 through to 2021;
 - iii Include the number of Collection System Overflows as a result of storms that are not Significant Storm Events for each year;
 - iv Include the estimated length of Combined Sewers and Separate Sewers within the collection system;
 - v Include the date of the most recent PPCP;
 - vi Include the status of each action items specified in the PPCP, as applicable;
 - vii Include a summary of additional action items not specified in a PPCP which have been taken to prevent

Collection System Overflows in the ten (10) year period starting January 1, 2012 and ending December 31, 2021; and

- viii Identify timelines for achieving conformance to Procedure F-5-1 or Procedure F-5-5 objectives, as applicable.

8.2.2 The Owner shall submit a new or updated PPCP to the Director, no later than May 20, 2027, if:

- a) No PPCP exists for the Authorized System, or
- b) The PPCP for the Authorized System is older than ten (10) years as of October 12th, 2022.

8.2.3 The PPCP shall include, at minimum:

- a) Characterization of the Combined Sewer System (CSS) – Monitoring, modeling and other appropriate means shall be used to characterize the CSS and the response of the CSS to precipitation events. The characterization shall be based on the ten (10) year period starting January 1, 2012 and ending December 31, 2021 and include the determination of the location, frequency and volume of the CSOs, concentrations and mass pollutants resulting from CSOs, and identification and severity of suspected CSS deficiencies. Records shall be kept for CCS including the following:
 - i Location and physical description of CSO and SSO outfalls in the collection systems, emergency overflows at pumping stations, and bypass locations at STPs;
 - ii Location and identification of receiving water bodies, including sensitive receivers, for all Combined Sewer outfalls;
 - iii Combined Sewer system flow and STP treatment capacities, present and future (20-year timeframe) expected peak flow rates during dry weather and wet weather;
 - iv Capacity of all regulators;
 - v Location of cross connections between sanitary Sewage and Stormwater infrastructure; and

- vi Location and identification of infrastructure in the CSS where monitoring Equipment is installed.
- b) Operational procedures shall be developed including the following:
 - i Combined Sewer maintenance program; and
 - ii Regulator inspection and maintenance programs.
- c) An examination of non-structural and structural CSO control alternatives that may include:
 - i Source control;
 - ii Inflow/Infiltration reduction;
 - iii Operation and maintenance improvements;
 - iv Control structure improvements;
 - v Collection system improvements;
 - vi Storage technologies;
 - vii Treatment technologies; and
 - viii Sewer separation.
- d) An implementation plan with a schedule of all practical measures to eliminate dry weather overflows and minimize wet weather overflows, as well as an overflow percent reduction target.
 - i The implementation plan shall show how the minimum CSO prevention and control requirements and other criteria in Procedure F-5-5 are being achieved.

8.2.4 The Owner shall ensure that an updated PPCP for the Authorized System is prepared within ten (10) years of the date that the previous PPCP was finalized.

Sewer Model

8.3 The Owner shall prepare a new/updated Sewer model, within three (3) years of October 12th, 2022, if any of the following pertain to the Authorized System:

8.3.1 It includes Combined Sewers;

- 8.3.2 It services a population greater than 10,000; or
- 8.3.3 The Sewer model for the Authorized System was last updated prior to 2012 and 8.3.1 or 8.3.2 apply.

Schedule F: Residue Management

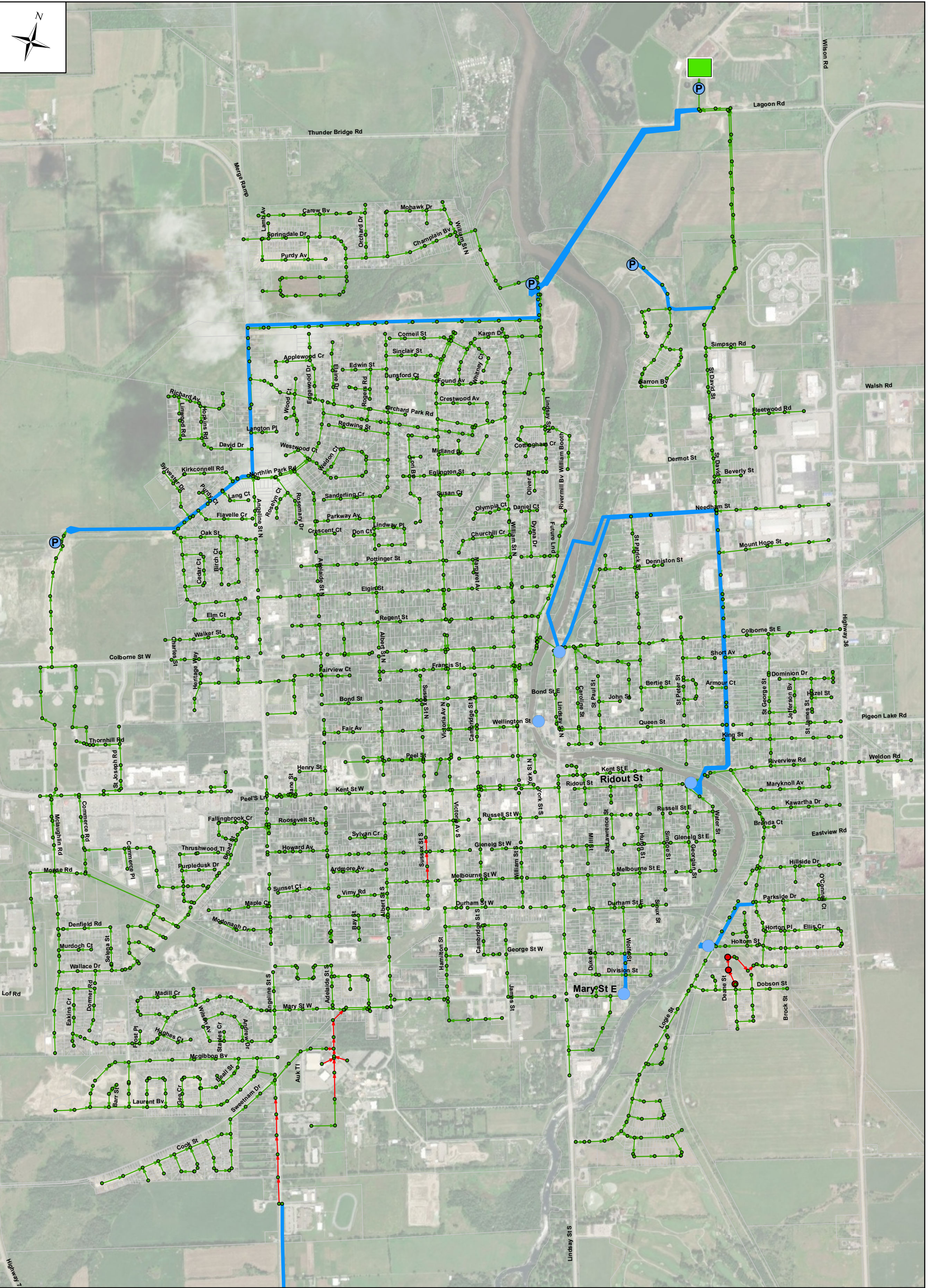
System Owner	Kawartha Lakes, The Corporation of the City of
ECA Number	141-W601
System Name	City of Kawartha Lakes Wastewater System
ECA Issue Date	October 12th, 2022

1.0 Residue Management System


1.1 Not Applicable:





Appendix B: Existing Wastewater Infrastructure Map




Legend


 Existing Pumping Stations

 Wastewater Treatment Plant


 Forcemain


Manhole results

 Below Basement (> 1.8 m) (1,722)

 Above Basement (< 1.8 m) (3)

Pipe Capacity

 < 80% Capacity (1,701)

 > 80% Capacity (27)



Appendix C: Environmental Site Assessment

Environmental Impact Study Report

Logie Street and Ridout Street Sanitary Pumping Stations Upgrades

The City of Kawartha Lakes

Prepared for:

The Corporation of the City of
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1. Introduction

The Corporation of the City of Kawartha Lakes has identified the need for upgrades or expansion of the Logie Street Sanitary Pumping Station (SPS) and Ridout Street Sanitary Pumping Station located in the Town of Lindsay to cover the increasing demand for wastewater services within the South-East area of Lindsay. The Town of Lindsay is a rapidly growing Community located within the City of Kawartha Lakes approximately 140 km northeast of Toronto and 40 km northwest of Peterborough. The area is serviced by a municipal wastewater collection system with several sanitary pumping stations (SPS) that ultimately discharge to the Lindsay Water Pollution Control Plant (WPCP).

The existing settlement within the South-east area of Lindsay is serviced by the Logie St. SPS (also known as George St. SPS). The Logie St. SPS is a tributary SPS to the Ridout St. SPS. The Logie St. SPS is located on the east side of the Scugog River. The flow discharged from Logie St. SPS joins with other gravity fed tributaries of the Ridout St. SPS on the east side of the Scugog River before crossing the river through a 400mm Asbestos Cement siphon. The Ridout St. SPS collects flows from both the east and the west side of the Scugog River through various gravity mains from its own sewershed in addition to the flows from the Logie St. SPS sewershed and the Mary St. SPS (located on the west side of the Scugog River).

The Logie St. SPS is located on the western section of the unopened road allowance of George St. East along Logie St. The Station has a 3m diameter x 9.3m deep concrete wet well and is equipped with 2 submersible pumps (one duty and one standby) each with a rated capacity of 69.1 L/s at a total dynamic head (TDH) of 14.07m. The station discharges through a 250mm diameter, about 316m long PVC forcemain to a downstream manhole at approximately Parkside Drive.

The Ridout St. SPS is located at 74 Ridout Street. The station has a control building and is equipped with three submersible pumps (two duty and one standby) each with a rated capacity of 180 L/s at a TDH of 29m. The station discharges through a 500 mm diameter, about 1,420m long PVC forcemain that crosses under the Scugog River and terminates at a manhole at the intersection of St. David Street and Needham Street before discharging via gravity to the Lindsay WPCP. There is also an abandoned 400mm PE forcemain from the Ridout St. SPS that terminates at a different manhole (upstream of the above manhole where the 500mm forcemain terminates) at the same intersection of St. David Street and Needham Street (discharge point). See Figure 1. Site Location Map for Location of the pumping stations.

The purpose of this report is to characterize the existing conditions of the study area and adjacent lands, by assessing background information and evaluating the potential environmental impacts that the proposed project may cause on the natural features.

2. Background

The City of Kawartha Lakes owns and operates the wastewater pollution control plant and sanitary pumping stations in the Town of Lindsay. In order to accommodate the increased growth demand for sanitary services within the South-east area of the Town of Lindsay, one or two of the sewage pumping stations (Logie St. and Ridout St.) will have to be upgraded or expanded.

The City of Kawartha Lakes is requesting engineering services to undertake a Schedule B Municipal Environmental Assessment (EA) study, detailed design and other engineering services to support the EA.

Based on the predicted growing demand for sanitary services, the existing conditions of the pumping stations and the assessment of the available information, the following alternative solutions to address the proposed upgrades and/or expansion of the Logie St. SPS and the Ridout St. SPS have been proposed:

- 1) Do nothing
- 2) Staged Upgrade of Logie St. SPS
- 3) Full Upgrade of Logie St. SPS
- 4) Full Upgrades of Logie St. SPS and Ridout ST. SPS

Alternative 1 – Do Nothing

This alternative would have the lowest capital cost and would involve continuing to use the existing wastewater collection system without any changes. This alternative is not feasible as the current system will not be able to support future development.

Alternative 2 – Staged Upgrade of Logie St. SPS

Alternative 2 will provide a staged upgrade to the Logie St. SPS by utilizing the abandoned forcemain and deferring the full build out upgrades. This option includes the replacement of the Logie St. SPS wet well with a new wet well, allowing for the necessary storage volume and sufficient space to install three new sewage pumps. As a partial upgrade, two new sewage pumps will be installed within the wet well, each capable of providing 180 L/s of flow for a firm capacity of 180 L/s for the station.

A new 500 mm diameter forcemain is proposed to be constructed from the Logie St. SPS to connect to the existing abandoned 400 mm forcemain from the Ridout St. SPS to the existing discharge point (intersection of St. David St. and Needham St.). The connection point from the new forcemain to the abandoned forcemain will be at the intersection of Riverview Rd. and Logie St. This results in a new 500 mm forcemain length of approximately 1,000m to connect to the abandoned 400mm forcemain.

Alternative 3 – Full Upgrade of Logie St. SPS

Alternative 3 will provide the full build out upgrade to the Logie St. SPS immediately. This option includes the replacement of the Logie St. SPS wet well with a new wet well allowing for the necessary storage volume. The wet well will be equipped with two new large pumps providing 250 L/s of flow each. This will provide the station with a firm capacity of 250 L/s to meet the full buildout flow requirements.

A new 500 mm diameter forcemain will be constructed from the Logie St. SPS to the existing discharge point at the intersection of St. David St. and Needham St. This results in a new 500 mm forcemain length of approximately 2,200 m to connect to the discharge point. These upgrades to Logie St. divert existing flows away from Ridout St. SPS and therefore, Ridout St. SPS will only require minor upgrades to pumps and any aging equipment.

For this option, Logie St. SPS will be fully upgraded to be capable of handling growths in the future. Diverting flows from Logie St. SPS to be pumped directly to the discharge point at St. David St. and Needham St. will limit much of the required works for Ridout St. SPS upgrades. This option will result in significantly higher costs

in the short term as compared to Alternative 2 for the construction of the new 500 mm forcemain for the full distance of 2,200 m.

Alternative 4 – Full Upgrades of Logie St. SPS and Ridout St. SPS

Alternative 4 will provide a full build out upgrade to both Logie St. SPS and Ridout St. SPS. This option will not divert any existing Logie St. SPS flows to Ridout St. SPS. This option will continue pumping sewage from Logie St. SPS to Ridout St. SPS through the gravity sewer and siphon across the river and all sewage will then be pumped from Ridout St. SPS to the existing discharge point.

This option requires major upgrades to both Logie St. SPS and Ridout St. SPS including new wet wells with sufficient storage volume at both stations. Logie St. SPS will be equipped with two new large pumps providing 250 L/s of flow to meet the full build out requirement. Ridout St. SPS will be equipped with three new pumps each providing 335 L/s of flow. Ridout St. SPS will continue to operate with two duty pumps and the third pump being a backup. The two duty pumps together will provide a firm capacity flow of approximately 465 L/s to meet the full build-out requirement.

A new 500 mm forcemain will be constructed from Logie St. SPS to the existing gravity sewer connecting across the river to Rideout St. SPS. The gravity sewer and siphon will also require additional upgrades to accommodate the increased flows. The Ridout St. SPS will also require a forcemain upgrade. The existing 500mm forcemain cannot handle the increased flows from the new pumps. A new single 750mm forcemain is required or alternatively, the existing 500mm forcemain and the existing 400mm abandoned forcemain can be twinned to split the flows to the existing discharge point.

The preferred alternative for the upgrades is Alternative 2 due to having less overall reduced environmental impacts and economic impacts from avoiding upgrades to the gravity sewer and siphon at the river crossing, with Alternative 2 also having less capital and operational costs due to the length of the forcemain required to be installed. Alternative 2 will allow for substantial cost savings for the short term. The completed CCTV inspection and air pressure tests of the abandoned 400mm forcemain indicate the forcemain is in adequate condition to be used as part of the SPS upgrades. Ridout St. SPS with its current equipment and infrastructure can handle the current projected future flows and will not require any upgrades (Greer Galloway, 2025).

3. Environmental Policy Context

This report has been prepared according to the legislation and policies described in the following subsections:

Provincial Planning Statement

The Ontario Planning Act (1990) requires that planning decisions be consistent with the Provincial Planning Statement, 2024 (PPS). Section 4.1 of the PPS specifies policy related to the protection of natural heritage features and functions.

Subsection 4.1.4 Development and Site Alteration shall not be permitted in:

- a. Significant wetlands in Ecoregions 5E, 6E and 7E; and*
- b. Significant coastal wetlands.*

Subsection 4.1.5 Development and Site Alteration shall not be permitted in:

- c. Significant woodlands in Ecoregions 6E and 7E (excluding islands in Lake Huron and the St. Mary's River);*
- d. Significant valleylands in Ecoregions 6E and 7E (excluding island in Lake Huron and the St. Mary's River);*
- e. Significant wildlife habitat;*
- f. Significant areas of natural and scientific interest; and*
- g. Coastal wetlands in Ecoregions 5E, 6E and 7E that are not subject to policy 2.1.4(b) unless it has been demonstrated that there will be no negative impacts on the natural features or their ecological functions.*

Subsection 4.1.6 development and site alteration shall not be permitted in fish habitat except in accordance with provincial and federal requirements.

Subsection 4.1.7 states that development and site alteration shall not be permitted in habitat of endangered species and threatened species, except in accordance with provincial and federal requirements.

Subsection 4.1.8 states that development and site alteration shall not be permitted on adjacent lands to the natural heritage features and areas identified in policies 4.1.4, 4.1.5, and 4.1.6 unless the ecological function of the adjacent lands has been evaluated and it has been demonstrated that there will be no negative impacts on the natural features or on their ecological functions.

Subsection 3.6.2 states that Municipal sewage services and municipal water services are the preferred form of servicing for settlement areas to support protection of the environment and minimize potential risks to human health and safety.

Species at Risk Act

The purposes of the Species at Risk Act (SARA) are to prevent wildlife species in Canada from disappearing; to provide for the recovery of wildlife species that are extirpated (no longer exist in the wild in Canada), endangered, or threatened as a result of human activity; and to manage species of special concern to prevent them from becoming endangered or threatened. A series of measures applicable across Canada provides the framework to accomplish these goals. Some of these measures establish how governments, organizations, and individuals in Canada work together, while others implement a species assessment process to ensure the protection and recovery of species.

Endangered Species Act

Species listed on the Species at Risk in Ontario (SARO) list as endangered or threatened are protected under the *Endangered Species Act*, 2007 (ESA). Section 9(1) of the ESA prohibits a person from killing, harming, harassing, capturing or taking a member of a species listed as endangered, threatened or extirpated on the SARO list. Section 10(1) of the ESA prohibits the damage or destruction of habitat of a species listed as endangered or threatened on the SARO list.

Kawartha Conservation Authority

The Kawartha Conservation Authority regulates watercourses, wetlands, and hazardous lands (valleylands, shorelines, floodplains) under Ontario Regulation 41/24. The purpose of the regulation is to prevent and

restrict development and site alterations near water and wetlands to protect the public from flooding, erosion and other natural hazards. The regulation establishes guidelines for development, interference with wetlands and alterations to shorelines and watercourses.

The area where the Logie St. SPS is within 120 m from the Scugog River. The Logie St. SPS is approximately 32 m from the Scugog River. According to the Kawartha Conservation Authority Online Mapping Tool, the study area is outside the area regulated by the Conservation Authority but it is within the surface water intake protection zone. The Conservation Authority needs to be contacted to confirm that the study area is outside the regulated area and the need for a permit.

The Corporation of the City of Kawartha Lakes

The City of Kawartha Lakes has initiated a Schedule B Environmental Assessment (EA) for upgrades and/or expansion of the Logie St. SPS and Ridout St. SPS.

In Ontario, municipal water and wastewater projects are subject to the provisions of the Municipal Class Environmental Assessment (2000, amended in 2007, 2011 and 2015). The Class Environmental Assessment (Class EA) is an approved planning document which describes the process that proponents must follow in order to meet the requirements of the Environmental Assessment Act (EAA) of Ontario. The Class EA approach allows for the evaluation of the environmental effects of carrying out a project and alternative methods of carrying out a project, includes mandatory requirements for public input, and expedites the environmental assessment of smaller recurring projects.

The Class EA planning process was developed to ensure that the potential social, economic, and natural environmental effects are considered in planning water, storm water and sewage projects. Class EAs are a method of dealing with projects which display the following important common characteristics: recurring, usually small in nature, usually limited in scale, predictable range of environmental effects, and responsive to mitigation measures.

Projects which do not display these characteristics must undergo an individual environmental assessment. The Class EA planning process represents an alternative for Ontario municipalities to carry out individual environmental assessments for most municipal sewage, storm water management, and water projects. Since sewage, storm water management and water projects undertaken by municipalities under the Class EA planning process vary in their environmental impact such projects are classified in terms of schedules.

4. Study Approach

4.1 Study Area

The study area for this assignment includes the area currently occupied by the Logie St. SPS and the area to be affected by the upgrades (wet well, electrical equipment concrete pad and new forcemain), as alternative 2 is the prefer option, the environmental impacts will be restricted to the upgrades proposed for Logie St. SPS and the installation of the forcemain under Logie St. Additional area around the upgrades potentially will be impacted due to the construction work required.

The study area includes vegetated and non-vegetated areas. According to the MNR NHIC online mapping there are no wooded areas in close proximity to the study area. Two wooded areas are mapped along the edge of the Scugog River between King Street and Dobson Street with the closest to be approximately 200m north of the study area. An evaluated wetland is mapped south of the study area. Figure 2 shows the natural heritage features identified in the study area and adjacent lands. The comprehensive desktop review included the following sources:

- Ontario Ministry of Natural Resources (MNR) Natural Heritage Information Centre (NHIC) geographic, species and natural areas information queries.
- Ontario Ministry of Natural Resources Wetlands information query.
- Species at Risk in Ontario List – Online Tool (MECP 2025)
- Government of Canada – Online List of Wildlife Species at Risk (2025)
- Aquatic Species at Risk online Maps (Fisheries and Oceans Canada, 2025).
- Critical Habitat for Species at Risk Canada – Online Tool (February 2016)
- Fish ON-Line from the Ministry of Natural Resources
- Ontario Breeding Bird Atlas Website (Bird Studies Canada, *et al.* 2006)
- Reptiles and Amphibians of Ontario Range Maps – Online Tool (Ontario Nature 2025)
- Atlas of the Mammals of Ontario (Dobbyn, 1994)
- iNaturalist Canada
- Ontario Nature (2025)
- Geology, topography, hydrogeology, hydrology maps and reports.
- Existing aerial photography.
- The City of Kawartha Lakes Official Plan (June 8, 2012).
- Lindsay Zoning By-law No. 2002-75.
- Provincial Planning Statement, 2024

4.2 Field Investigation

A site investigation was carried out on June 6th, 2025, to assess the existing conditions of the natural features, document migratory birds, and other wildlife, and determine the general characteristics of the study area.

Vegetation communities were defined using a combination of aerial photography and information obtained from the site investigation. Aerial imagery allowed the delineation of distinct community boundaries.

Specific Wildlife surveys were not conducted as part of this study. All the observed species were documented, including birds, reptiles, amphibians and mammals. Any sightings, or signs (i.e., scat, tracks, vocalizations) indicating the potential use of the area by wildlife were documented.

Species at Risk (SAR) included those species listed in the SARO and Schedule 1 of the SARA. An assessment was conducted to determine the presence of SAR and SAR habitat in the study area. An initial desktop review for potential Species at Risk (SAR) was conducted. The MNR online NHIC map was consulted to identify the SAR likely present in the property and adjacent land as well as available information. Additional records were obtained from the sources previously mentioned.

5. Biophysical Description of the Site

5.1 Geology and Soils

The landscape of the area has been shaped by glacial processes over the past 2 million years of the Pleistocene Epoch. Most of the topographic features and overburden materials date from the latter part of the most recent glacial period known as the Wisconsinan glaciation although older structural features exist in the underlying limestone bedrock. The maximum ice extent occurred approximately 23,000 years ago when glacial ice covered all of Ontario and extended as far as Ohio in what is now the United States. The melting of the ice sheet in the area laid down a locally thick layer of stony, sandy silt to silty sand-textured till on the ice-scoured bedrock. Post-glacial soils consist of recent alluvial deposits and organic soils within low-lying or poorly drained areas.

The bedrock geology in the vicinity of the site consists of shales and limestones of the middle Ordovician age. This sedimentary sequence was laid down over older Precambrian-age rock of the Grenville Province beginning in the middle Ordovician (approximately 460 million years ago) as part of a continent-wide marine transgression that deposited, in order, the Shadow Lake, Gull River, Bobcaygeon, Verulam and Lindsay Formations (Armstrong and Carter, 2010).

The Lindsay Formation is the uppermost bedrock unit beneath the subject site. It consists mainly of grey to greenish grey, fine-grained, argillaceous limestone in beds from 2.54 cm to 60 cm thick (Carson, 1980).

The overburden geology is composed of unconsolidated deposits resulting primarily from glacial activity. The glacial drift thickness in the area including the property is limestone clay loam materials which are underlain by stony calcareous till. The general soil profile across the site consists of good drained calcareous clay loam of lacustrine origin (Gillespie and Richards, 1957). Most of the native soils have been lost due to development.

5.2 Topography and Drainage

The area where the Logie St. SPS is located is within the Town of Lindsay. The topography in the area is gentle to moderately sloping ridges. According to the Ontario Base Mapping (MNRF), the elevation at the Logie St. SPS is 255 metres Above Sea Level (mASL) with an elevation of 250 mASL in the Scugog River and sloping up to the west toward the urban area. The topography in the area where the Logie St. SPS and land surrounded it have changed due to excavations and grading for the existing infrastructure and residential development.

Drainage in the area is determined by the slope. Based on topography, drainage in the study area is to the west toward the Scugog River. A drainage culvert is present a few metres from the project area. It appears to receive drainage from the road and discharging into the ditch that runs parallel to the Victoria Rail Trail. A second culvert is present north of the project area. This culvert receives surface water from the ditch and discharges it into the Scugog River.

5.3 Existing Conditions

The City of Kawartha Lakes is proposing to upgrade and/or expand the sanitary pumping stations to cover the increasing demand of sanitary services on the east side of the Town of Lindsay. The preferred option is to upgrade the existing Logie St. SPS (Alternative 2). Logie St. SPS is located south of Holtom Street, between

Victoria Rail Trail and Logie Street. The SPS include sanitary infrastructure (wet well, generator and electrical controls), access driveway and maintained grass occupies an approximate area of 650m².

Based on information obtained from the site investigation, the Logie St. SPS is surrounded by meadow vegetation to the north, south and west and Logie Street to the east.

A ditch is present between the station and the Victoria Rail Trail. Trees, shrubs and herbaceous species are growing between the ditch slopes riprap. A wetland is present north of the ditch.

The Victoria Rail Trail runs parallel to Scugog River between the Logie St. SPS and Scugog River. The vegetation in the property north of the station has been cleared and herbaceous species are present with soil exposed in some areas. Also, piles of the remaining vegetation cut are still present. A photolog showing the existing conditions in the study area is included in Appendix B.

Scugog River is west of the Victoria Rail Trail and approximately 32m from the Logie St. SPS. The banks of the river are well vegetated. The area where the station is located is in Lindsay urban area, constantly subject to environmental impacts (noise, vegetation composition and abundance, littering, air pollution, etc.) due to the vehicular traffic on Logie Street, other roads/streets, people using the trail, and regular maintenance of the SPS area.

If The City of Kawartha Lakes selects Alternative 2, the Logie St. SPS will be upgraded which will include a new wet well with a higher capacity and an electrical equipment concrete pad to be installed within the existing driveway area, as well as a new forcemain connecting the new wet well to the abandoned forcemain, resulting in less impacts as work in the siphon and forcemain under the Scugog River will not be required. No other development will be required on the Logie St. SPS area. Figure 3 shows the proposed location of the new wet well, electrical equipment concrete pad and new forcemain.

5.4 Vegetation Communities

The preferred alternative 2 include upgrades to the Logie St. SPS which include a new wet well of sufficient storage volume, and an electrical equipment concrete pad.

During the site investigation, the vegetation community identified adjacent to the SPS was a cultural meadow (CUM1) with woodland vegetation observed on the slopes of the ditch and bank of the Scugog River. A cattail marsh is present north of the ditch (see Figure 4). Impacts on the wetland are not expected.

Meadow vegetation in close proximity to the infrastructure is regularly cut. The meadow vegetation is composed of opportunistic species. Herbaceous species present include common dandelion (*Taraxacum officinale*), common milkweed (*Asclepias syriaca*), Canada goldenrod (*Solidago canadensis*), crown vetch (*Securigera varia*), curly dock (*Rumex crispus*), oxeye daisy (*Leucanthemum vulgare*), bird's-foot trefoil (*Lotus corniculatus*), sulphur cinquefoil (*Potentilla recta*), common burdock (*Arctium minus*), creeping thistle (*Cirsium arvense*), dam's rocket (*Hesperis matronalis*), bladder campion (*Silene vulgaris*), wild carrot (*Daucus carota*), great mullein (*Verbascum thapsus*), smooth brome grass (*Bromus inermis*), Kentucky bluegrass (*Poa pratensis*), red canary grass (*Phalaris arundinacea*), and riverbank grape (*Vitis riparia*).

5.5 Aquatic Habitat

The Scugog River is approximately 32m from the area where the existing Logie St. SPS is located. The flow direction is from south to north connecting Lake Scugog to Sturgeon Lake. The Scugog River at the Logie St. SPS is approximately 48 m in width. Vegetation is determined to be present between the riverbanks and the Victoria Rail Trail. Impacts to the Scugog River are not expected as long as alternative 2 or 3 are selected. The upgrades proposed in alternatives 2 and 3 do not require upgrades to the existing 400mm cement siphon that crosses the river to connect Logie St. SPS with Ridout St. SPS or the Ridout St. forcemain that crosses the river and terminates at a manhole at the intersection of St. David St. and Needham St.

5.6 Terrestrial Wildlife

Minimal wildlife is expected to be present within the Logie St. SPS and adjacent land. During the site investigation, a song sparrow (*Melospiza melodia*) was observed close to the SPS, perching in the meadow vegetation and the trees. An eastern gartersnake (*Thamnophis sirtalis sirtalis*) and a northern leopard frog (*Lithobates pipiens*) were observed in the meadow vegetation close to the SPS. Other bird species heard and observed in the surrounding area include mourning dove (*Zenaida macroura*), American robin (*Turdus migratorius*), warbling vireo (*Vireo gilvus*), red-winged black bird (*Agelaius phoeniceus*), European starling (*Sturnus vulgaris*), northern cardinal (*Cardinalis cardinalis*), yellow warbler (*Setophaga petechia*), eastern kingbird (*Tyrannus tyrannus*), brown-headed cowbird (*Molothrus ater*), black-capped chickadee (*Parus atricapillus*), common grackle (*Quiscalus quiscula*), common yellowthroat (*Geothlypis trichas*), and killdeer (*Charadrius vociferus*). No other wildlife was observed in and adjacent to the SPS.

5.7 Species at Risk

General reports were obtained from the MNRF online NHIC database regarding records of SAR within the Study Area. Additional records of SAR were obtained from other sources of information. A list of SAR records is included in the following Table 1.

Table 1: Potential Endangered and Threatened Species within the Study Area.

Common Name	Scientific Name	Federal Status	Provincial Status	Probability of Occurrence	Rationale
Birds					
Bobolink	<i>Dolichonyx oryzivorus</i>	Threatened	Threatened	Low	Habitat includes hayfields, pastures, fallow or abandoned fields, meadows, tall grass prairie remnants, savannahs and alvar grasslands (COSEWIC, 2010). Suitable habitat for Bobolink is not identified in the study area or adjacent land.
Eastern Meadowlark	<i>Sturnella magna</i>	Threatened	Threatened	Low	Habitat includes hayfields, pastures, fallow or abandoned fields, meadows, tall grass prairie remnants, savannahs and alvar grasslands (COSEWIC, 2011).

Common Name	Scientific Name	Federal Status	Provincial Status	Probability of Occurrence	Rationale
					Suitable habitat for Eastern Meadowlark is not identified in the study area or adjacent land.
Wood Thrush	<i>Hylocichla mustelina</i>	Threatened	Special Concern	Low	Wood Thrush nests mainly in second-growth and mature deciduous and mixed forests, with saplings and well-developed understorey layers. The species prefers large forest mosaics and small forest fragments (COSEWIC, 2012a). Suitable habitat for Wood thrush is not identified in the study area or adjacent land.
Eastern Wood-pewee	<i>Contopus virens</i>	Special Concern	Special Concern	Low	The Eastern Wood-Pewee prefers mature and intermediate-age deciduous and mixed forest having an open understory. The Pewee is usually more abundant in larger forest patches near a clearing or the forest edge. They nest in a variety of deciduous tree species (COSEWIC, 2012b). Suitable habitat for Eastern Wood-pewee is not identified in the study area or adjacent land.
Chimney Swift	<i>Chaetura pelagica</i>	Threatened	Threatened	Low	Nesting habitat includes cave walls and hollow trees or tree cavities in old growth forests, man-made structures such as chimneys, barns, silos, and abandoned buildings. Chimney swift requires a vertical cavity for nesting and roosting, with interior surface that is porous but stable, and to which swifts can cling and attach their nest (COSEWIC, 2007). Suitable habitat for Chimney swift is not identified in the study area.
Evening Grosbeak	<i>Coccothraustes vespertinus</i>	Special Concern	Special Concern	Low	Prefer breeding habitat for Evening Grosbeak include open and mature mixedwood forests, where fir species and/or white spruce and trembling aspen are dominant, and spruce budworm is abundant. In urban and suburban areas, Evening Grosbeak are attracted to trees that produce large, winged seeds, especially Manitoba Maple and berry-producing ornamental plants (COSEWIC, 2016a). Suitable habitat for Evening Grosbeak is not identified in the study area or adjacent land.



Common Name	Scientific Name	Federal Status	Provincial Status	Probability of Occurrence	Rationale
Reptiles					
Snapping Turtle	<i>Chelydra serpentina</i>	Special Concern	Special Concern	Low-Medium	The Snapping Turtle prefers slow-moving water with soft mud bottom and dense aquatic vegetation. Snapping turtles can be found in almost every kind of freshwater habitat. Nesting occurs on sand and gravel banks along waterways, including artificial dams and railway embankments. Hibernation takes place beneath logs, sticks/overhangs, banks, stumps, submerged logs, deep anoxic mud in marshy areas, and floating mats of vegetation. The nesting season occurs through June into July with hatchlings emerging in late September–early October (COSEWIC, 2008). Suitable habitat for Snapping Turtles is not identified in the study area but they can nest in the gravel driveway.
Blanding's Turtle	<i>Emydoidea blandingii</i>	Endangered	Threatened	Low-Medium	Preferred habitat is found in shallow water in large clear water eutrophic wetlands and shallow lakes with lots of submergent and emergent vegetation. Females nest in a variety of substrates including sands, organic soil, gravel, cobblestone, and soil-filled crevices of rock outcrops. Adults and juveniles overwinter in a variety of water bodies that maintain pools averaging about 1 m in depth; however, hatching turtles hibernate on land during their first winter (COSEWIC, 2016b). Suitable habitat for Blanding's Turtles is not identified in the study area but turtles can nest in the gravel driveway.
Midland Painted Turtle	<i>Chrysemys picta marginata</i>	Special Concern	No Listed	Low-Medium	Habitats include ponds, marshes, lakes and slow-moving creeks. Midland Painted Turtles prefer waterbodies with soft bottoms and areas to bask like logs and rocks protruding from the water (COSEWIC, 2018a). Suitable habitat is not identified in the study area but the species can nest in the gravel driveway.
Eastern Milksnake	<i>Lampropeltis triangulum</i>	Special Concern	Not Listed	Low-Medium	The milksnake is known to occur in rural areas, in and around buildings, especially old structures. However, it is found in a wide variety of habitats, from prairies, pastures, and hayfields to rocky hillsides



Common Name	Scientific Name	Federal Status	Provincial Status	Probability of Occurrence	Rationale
					and a wide variety of forest types. Important features of good milksnake habitat are proximity to water, and suitable locations for basking and egg-laying. Suitable hibernation sites include mammal burrows, old buildings foundations, crawl spaces, old wells and cisterns, stone walls, gravel and dirt banks hollow logs, rotting stumps or rock crevices (COSEWIC, 2014). Suitable habitat for this species is not identified in the study area but it can be present within the meadow and Scugog River banks.

Mammals

Northern Myotis	<i>Myotis septentrionalis</i>	Endangered	Endangered	Low	Hibernation roosts for the three species are found in caves, hollow trees, abandoned buildings, and abandoned mines. Most species choose maternity roosts in woodlands with appropriate tree cavities, caves, crevices, under loose bark, and cracks in cliffs. Little Brown Myotis is found in buildings and rocky habitats (COSEWIC, 2013). Suitable habitat for bats is not identified in the study area or adjacent vegetation.
Little Brown Myotis	<i>Myotis lucifugus</i>	Endangered	Endangered	Low	
Tri-coloured Bat	<i>Perimyotis subflavus</i>	Endangered	Endangered	Low	

Insects

Monarch	<i>Danaus plexippus</i>	Endangered	Special Concern	High	Caterpillars feed on milkweed plants found in meadows and open areas. Adult butterflies are found in diverse habitats where they feed on nectar from a variety of wildflowers (COSEWIC, 2016c). The meadow vegetation, contains milkweeds and other wildflowers that are a source of food for Adult Monarch butterflies and caterpillars.
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Plants

Butternut	<i>Juglans cinerea</i>	Endangered	Endangered	Low	Butternut occurs in neutral to calcareous soils of pH 5.5 to 8, often in regions with underlying limestone. It reaches its greatest abundance in rich, neutral or calcareous, mesic loams and sandy loams in floodplains, streambanks, terraces, hardwood coves and ravine slopes. Butternut is a shade-intolerant tree conditioning its grow in stand openings, riparian zones and forest edges, and old field habitats (COSEWIC, 2017).
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Common Name	Scientific Name	Federal Status	Provincial Status	Probability of Occurrence	Rationale
					Butternut trees are not present in the study area and adjacent land.
Black Ash	<i>Fraxinus nigra</i>	Not Listed	Endangered	Low	Black Ash is predominantly a wetland species of swamps, floodplains and fens. It has an intermediate light requirement and a tendency toward greater abundance in more alkaline sites. Most sites in which it is dominant are flood prone, where its high tolerance of seasonal flooding appears to offer a competitive advantage. Black Ash also is present in upland forests, but it is less abundant. The Black Ash is threatened by the introduced emerald ash borer (EAB), an Asian wood-boring beetle that reached southwestern Ontario in 1992 and has spread to Canadian sites up to 1,100 km northwest and 1,300 km northeast (COSEWIC, 2018b). Trees are not present in the study area and adjacent land.

The Logie St. SPS is located within the Town of Lindsay. The area to be impacted by the proposed upgrades does not have vegetation except for maintained grass around the edges of the station. Adjacent to the station, meadow vegetation is present. The meadow vegetation is subject to anthropogenic disturbance which is considered not suitable for grassland species such as Bobolink or Eastern Meadowlark.

Structures that can be used for chimney swift are not identified in the station area and adjacent vegetation. Also, it seems that Manitoba maples are present which are a source of food for Evening Grosbeak but the species prefers coniferous stands which are not identified to be present close to the SPS.

The vegetation in the land north of the SPS has been removed. Therefore, habitat for Wood Thrush and Eastern Wood-pewee is not present.

The study area does not provide the conditions appropriate for Turtle species. However, suitable habitat is found adjacent to the study area in the SWM pond and wetlands. Also, turtles can be present in the Scugog River including the small bay on the west side of the river. Signs of turtle nests were not found during the site investigation. It is possible that the species can be seen crossing around the study area during migration between habitats and use the gravel driveway in the SPS as nesting habitat. Measures should be applied to avoid harm to the species.

There is the potential for eastern milksnake to be present within the study area as the species can be present in the surrounding vegetation or along the river and move between habitats. Also, the species can be basking over the gravel driveway. Measures should be applied to avoid harm to milksnake if it is found during construction.

Roosting habitat for Bats is not present in the area proposed for the new wet well and electrical equipment concrete pad. There are no buildings in this area that can be used by bats for roosting; therefore, impacts to bats are not expected.

Meadow vegetation is present around the station with milkweeds and other wildflowers that provide food to adult Monarch butterflies and caterpillars. Vegetation is not identified in the area proposed for the construction of the new wet well and the electrical equipment concrete pad; however, some of the vegetation will be impacted during the construction of the infrastructure. Impacts to Monarch are not expected as long as measures are applied to prevent harm to the butterflies/caterpillars.

Butternut and Black Ash were not observed in and adjacent to the SPS. Impacts to these species are not expected.

If an impact on a Species at Risk or its habitat cannot be avoided, a person(s) should contact MECP and/or MNR to discuss options, including applying for an authorization under the ESA. In situations where an activity is not registered with or authorized by the MECP, a person(s) must comply with the ESA by modifying proposed activities to avoid impacts to Species at Risk and habitat protected under the ESA.

6. Significant Natural Heritage Features and Functions

The Logie St. SPS is located within the Town of Lindsay. The station is surrounded by residential development and natural features. The sanitary pumping station and surrounding natural features are not between significant natural heritage features such as woodlands, wetlands, areas of Natural and Scientific Interest (ANSI), wildlife habitat and habitat for endangered and threatened species. The Scugog River is a significant feature but is located more than 30 m from the area proposed for the upgrades and area to be impacted during the construction work. A wetland is located north part of the ditch. Impacts to the river and wetland are not anticipated as Alternative 2 is the preferred option which it does not require upgrades to the siphon or forcemain located under the river.

7. Impact Assessment and Recommendations

An evaluation of the impacts is provided in the following table.

Mitigation measures should be applied to avoid any harm to wildlife during the planned work. It is important that contractors and any personnel on-site be aware of the presence of wildlife and the measures to be applied to avoid harm to animals.

The intent to applied mitigation measures is to ensure protection of wildlife by reducing construction-related impacts and remain compliant with federal and provincial legislation.

Table 2: Potential Impacts and Prevention, Mitigation and Restoration Measures

Potential Impacts	Prevention, Mitigation and Restoration Measures
Significant Wetlands	
<ul style="list-style-type: none"> There are no PS wetlands in or adjacent to the area proposed for the upgrades. 	<ul style="list-style-type: none"> A wetland is present north of the ditch approximately 25m from the SPS. Impacts to this wetland are not anticipated as the area required for the upgrades as per Alternative 2 are minimal. The second closest identified wetland is present approximately 260m south of the Logie St. SPS. Impacts to wetlands are not expected. Use of fence to establish the working area prior to the initiation of construction work to avoid unnecessary damage to vegetation. Apply erosion and sedimentation control measures.
Habitat for Threatened and Endangered Species	
Direct Impacts during Construction: <ul style="list-style-type: none"> Harm to Monarch butterfly and caterpillar during removal of vegetation. Removal of butterfly habitat. Removal of SAR habitat. Harm to snakes. Disruption of bird nesting activities. Harm to Turtles. 	<ul style="list-style-type: none"> During the site investigation, species at risk were not observed; however, SAR can be present on the study area. It is recommended that construction workers be briefed on the potential species to be found in the study area and made them familiar with the regulations of the ESA. Best practices should be implemented during construction to ensure species are not harmed by equipment or workers activities. Prior to beginning activities each day, checks for wildlife should be conducted thorough a visual inspection of the work area and immediate surroundings. Areas with wildflowers including milkweeds should be inspected for the presence of Monarch caterpillars. Restrict all activities, vehicles and structures to the designated areas. Minimize any disturbance to the surrounding areas. The designated areas should be clearly marked by posting signs or fencing. The areas not to be disturbed should be clearly marked on-site with signs or by installing a protective fence. Keep secure stockpile materials, vehicles and structures against wildlife entry. Litter and other waste material must be appropriately contained and promptly disposed of. Avoid harm to any SAR. Many species are protected under provincial and/or federal legislation. Legal protection of egg-laying species applies to their eggs as well. Penalties for contravening these Acts are severe. Stand back and allow the animal to leave the site. Wildlife may be encouraged to move away from the work area by shouting, waving of arms, clapping of hands or gentle redirection using a broom. Contact a project biologist/wildlife service provider for assistance if needed (e.g., if young animals are found). Do not unnecessarily harass any wildlife.

Potential Impacts	Prevention, Mitigation and Restoration Measures
	<ul style="list-style-type: none"> The general recommendation to avoid harm to turtles is to work between October 15th to May 20th. For the authorities the best mitigation measure is the installation of an exclusion fence. As many projects are performed during the summer early fall, an option to perform the work during the active season is the installation of an exclusion fence around the working area before the nesting season to prevent turtles nesting. If the fence is used, constant inspection of the fence is required. Turtles may be present in the study area and will need to be relocated. Most of the turtle species in Ontario are protected under provincial and/or federal legislation. If a turtle is found in the work area, it can be gently removed to a safe location nearby. Wear gloves or use a broom to steer the turtle into a bucket or other container. Handle with care to avoid injury to the turtles or yourself, since turtles may bite or scratch. Turtles may also wet themselves when handled. Many species of snake are also protected under provincial and/or federal legislation. If a snake is found in the work area, it should be gently herded out to a safe location. Work should stop immediately if any species protected under the Endangered Species Act, 2007 are seen in or near the work site. A picture should be taken, if possible, to confirm the sighting, and contact the Ministry of the Environment, Conservation and Parks-Species at Risk Branch at NHICrequest@ontario.ca. Additional measures may be required by the Ministry before work can resume. Restore the impacted vegetation with native species which should include wildflowers.
Indirect Impact during Construction <ul style="list-style-type: none"> Potential contravention of the Endangered Species Act., 2007 if SAR species are harmed or active nests are removed during the breeding season. Removal of unnecessary vegetation. Damage to SAR habitat due to storage or dumping of construction material. Noise of machinery early in spring. Removal of Monarch food resources (wildflowers). Disposal of waste outside of the designated areas, in the natural areas. 	<ul style="list-style-type: none"> Restrict noise related to work to day hours and avoid unnecessary running of machinery causing noise. Inspection of the area prior to removal of vegetation to ensure Monarchs, snakes and/or turtles are not harmed. Restrict all activities, vehicles and structures to the designated areas. The designated area should be clearly marked by posting signs or fencing. The areas not to be disturbed should be clearly marked on-site with signs or by installing a protective fence. Keep secure stockpile materials, vehicles and structures against wildlife entry. Litter and other waste material must be appropriately contained and promptly disposed of. Restore the impacted vegetation with native species which should include wildflowers.
Wildlife	

Potential Impacts	Prevention, Mitigation and Restoration Measures
Direct Impacts during Construction: <ul style="list-style-type: none"> Disturbance of wildlife movement. Potential contravention of the <i>Migratory Bird Convention Act</i>, 1994 if removal of habitat takes place during the breeding season. 	<ul style="list-style-type: none"> Use of fence to establish the working area prior to the initiation of construction work to avoid unnecessary damage to vegetation. Apply erosion and sedimentation control measures. Remove vegetation prior to birds nesting season (April 1st – August 31st) or after the nesting season. Perform searches prior to removal of the vegetation to ensure fauna will not be affected by machinery. The use of ‘Clean Equipment Protocol’ during construction activities is strongly recommended to reduce the spread of exotic species of plants. Workers must be vigilant and check work areas for the presence of breeding birds and nests containing eggs and/or young. If breeding birds and/or nests are encountered, work should not continue in the location of the nest until after August 31st (or as soon as it has been determined that the young have left the nest). Workers must be vigilant and check work areas for the presence of wildlife. If animals are encountered, work should be temporarily suspended until the animal is out of harm’s way. Activities which may cause adverse impacts to a species or habitat (e.g. use of heavy equipment) should commence after Aug 31st.
Indirect Impacts during Construction <ul style="list-style-type: none"> Harm to wildlife by machinery during movement of wildlife to other areas. Harm to wildlife trap between machinery. 	<ul style="list-style-type: none"> Inspect machinery prior to commencing operation to ensure wildlife is not using it. Workers should be aware of the presence of wildlife and the potential for them to cross through or enter the construction areas. Workers must be vigilant and check work areas for the presence of snakes and turtles. If snakes and/or turtles are encountered, work should be temporarily suspended until the animal is out of harm’s way.
Terrestrial Habitat	
Direct Impacts during Construction: <ul style="list-style-type: none"> Removal of native plant species in the areas adjacent to the SPS. Removal of native substrate for grading. 	<ul style="list-style-type: none"> Vegetation in the Logie St. SPS currently is not present with the native soil removed when the current infrastructure was installed. The proposed upgrades are planned in the driveway area currently covered with gravel. Therefore, removal of vegetation will be limited to the area required for the construction activities. Use of fencing to establish the working area and to avoid unnecessary damage to the vegetation. If vegetation clearing is required, it is recommended to take place before April 1st or after August 31st to avoid contravention of the <i>Migratory Bird Convention Act</i>, 1994 unless it can be confirmed that there are no nesting birds in the area to be cleared. Erosion and sediment control measures will be implemented prior to and maintained during the replacement work to prevent entry of sediment into the natural features.

Potential Impacts	Prevention, Mitigation and Restoration Measures
	<ul style="list-style-type: none"> All damaged erosion and sediment control measures should be repaired and/or replaced within 48 hours of the inspection. Storage, handling and disposal of material used or generated (e.g. organics, soil, grass, woody debris, temporary stockpiles, etc.) during the site preparation should be carried out in a manner that prevents these materials from entering into naturalized areas in the vicinity of the excavation site. Proper disposal of cut vegetation to avoid the spreading of invasive species. Proper disposal of excess soil. The City should be aware of the presence of invasive species and the need to eliminate and prevent the spread of these species. Re-vegetate the areas affected by the construction work to prevent erosion. Native species should be specified for the post-construction seeding and planting. Plant species to be used for restoration of the affected areas should be selected according to the habitat to be restored.
Indirect Impacts during Construction: <ul style="list-style-type: none"> Damage to vegetation out of the construction area by machinery. 	<ul style="list-style-type: none"> Minimize the area to be impacted. Silt fencing should be established and regularly inspected to ensure that adjacent areas are not affected by construction activities. Proper disposal of construction waste. Re-vegetate the areas affected by the construction work to prevent erosion. Native species should be specified for the post-construction seeding and planting.
Aquatic Habitat	
Direct Impact during Construction <ul style="list-style-type: none"> Spills. Sedimentation. Contamination of Water. Stormwater runoff. Changes in drainage patterns. 	<ul style="list-style-type: none"> Alternatives 2 will not require upgrades of the siphon and forcemain under the Scugog River. Therefore, impacts to the river are not expected. The Scugog River is located west of the Logie St. SPS more than 30 m from the area proposed for the new wet well, electrical equipment concrete pad and new forcemain. Application of Erosion and sediment control measures. Operation of machinery restricted to the area proposed for the infrastructure. Application of a Spill Plan.
Indirect Impacts during Construction: <ul style="list-style-type: none"> Spills. Sedimentation. Contamination of Water. 	<ul style="list-style-type: none"> Minimize the area to be impacted. Use of fencing to establish the working area and to avoid damage to vegetation and river. Application of Erosion and sediment control measures. Avoid dumping refuse/vegetation in or close to the river and ditch.

Potential Impacts	Prevention, Mitigation and Restoration Measures
<ul style="list-style-type: none"> • Stormwater runoff. • Changes in drainage patterns. 	
Hydrology/Hydrogeology	
Direct Impacts during Construction: <ul style="list-style-type: none"> • Changes in hydrology/hydrogeology (Runoff / Infiltration) as a result of encounter groundwater during excavations. • Contamination of groundwater during installation of the wet well and forcemain. • Failing of dewatering control measures. • Discharged contaminated water into the river and ditch. 	<ul style="list-style-type: none"> • Minimize changes to existing land contours and drainage patterns due to grading to reduce/eliminate potential for changes to the existing drainage and hydrology. • Store or stockpile material in designated areas within the proposed area to be affected and cover to avoid runoff or deposition in the ditch and vegetated areas. • To the extent practical, carry out refueling of generators and construction equipment offsite. All onsite refueling is to be carried out over an area provided with spill containment. • The construction contractor should have a spills kit and an emergency plan in case of spills. • Application of erosion and sediment control measures. • Erosion and sediment control measures will be inspected regularly (weekly or bi-weekly depending on structures) and after every major rain event; necessary repairs will be made immediately after damage has been discovered. • Monitoring procedures will be in place for early identification of dewatering system failure, so that the volume of water released is minimized and corrective actions can be taken to avoid migration of water with high sediments to aquatic and sensitive resources. • If dewatering is required, a PTTW and a dewatering plan may be required.
Indirect Impacts during Construction: <ul style="list-style-type: none"> • Failing of dewatering control measures. • Poor dewatering executed. • High turbidity directed to adjacent vegetation. • Spills. • Sedimentation. • Contamination of water. • Runoff. • Groundwater recharge. 	<ul style="list-style-type: none"> • Application and erosion control measures. • Operation of Machinery restricted to the currently impacted area. • Preparation and application of a Spill Plan. • Erosion and sediment control measures will be inspected regularly (weekly or bi-weekly depending on structures) and after every major rain event; necessary repairs will be made immediately after damage has been discovered. • Monitoring procedures will be in place for early identification of dewatering system failure, so that the volume of water released is minimized and corrective actions can be taken to avoid migration of water with high sediments to aquatic and sensitive resources. • If dewatering is required, a PTTW and a dewatering plan may be required.

8. Conclusions

The Corporation of the City of Kawartha Lakes is proposing upgrades or expansion of the Logie St. Sanitary Pump Station and potentially the Ridout Street Sanitary Pumping Station both located in the Town of Lindsay. The upgrades/expansion are proposed due to an increasing demand for municipal sanitary services on the east side of the Town of Lindsay.

The proposed upgrades comply with the Provincial Planning Statement (2024) as municipal sewage services are the preferred form of servicing for settlement areas to support protection of the environment and minimize potential risk to human health and safety.

Four alternatives have been proposed based on the extent of upgrades required, capital cost and environmental impacts. Alternative 2 is the preferred option as it will cause less environmental impacts with the lower capital cost. Alternative 3 also will cause less environmental impacts but the capital cost is higher than option 2 due to a longer forcemain proposed.

The proposed upgrades in the station will consist of a new wet well, an electrical equipment concrete pad to be located on the current driveway area which is covered with gravel, and a new forcemain from the new wet well, running under Logie St. Impacts as a result of the upgrades proposed in Alternative 2 will be restricted to the area to carry out the construction work at Logie St. SPS and underground under Logie St.

Significant natural heritage features are not identified in and adjacent to the area proposed for the upgrades. Natural features (meadow, wetland and Scugog River) are identified close to the SPS. Based on the information obtained from the site investigation, meadow vegetation will be impacted due to the construction work required for the upgrades. Wetland and the Scugog River will not be impacted by the proposed upgrades.

SAR and SAR habitat were not identified in the study area; however, the driveway potentially provides nesting habitat to turtles. SAR can be present in the meadow vegetation adjacent to the SPS. Measures have been provided to avoid harm to SAR.

Impacts on the terrestrial and aquatic features and their ecological functions due to the proposed upgrades are expected to be minimal and temporary providing that the recommended mitigation measures are applied.

I trust that this report is complete and sufficient for your present requirements. Please contact me at your convenience if you have any questions about this report or our recommendations.

GREER GALLOWAY, a division of Jp2g Consultants Inc.



Yazmin Ramirez, M.Sc.
Senior Biologist

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Figures





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1620 WALLBRIDGE LOYALIST ROAD
BELLEVILLE, ONTARIO, K8N 4Z5
PHONE: 613-966-3068
FAX: 613-966-3087

NOTES:

1. ALL WORK SHALL BE IN ACCORDANCE WITH RELEVANT CODES AND GUIDELINES.
2. ALL DRAWINGS AND ADDENDA ARE TO BE READ AS, AND IN CONJUNCTION WITH THE SPECIFICATIONS.
3. ALL EQUIPMENT SHALL BE INSTALLED AS SPECIFIED OR APPROVED EQUIVALENT.
4. CONTRACTOR MUST CHECK AND VERIFY ALL DIMENSIONS BEFORE PROCEEDING WITH WORK AND BE RESPONSIBLE FOR SAME.
5. CONTRACTOR MUST REPORT ANY DISCREPANCIES TO ENGINEER FOR RESOLUTION BEFORE COMMENCING THE WORK.
6. ANY CHANGES MUST BE APPROVED BY THE ENGINEER.

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B

A

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A DETAIL NO.

B DRAWING NO. - WHERE DETAILED

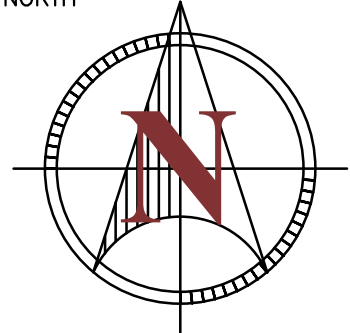
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RIDOUT ST SANITARY PUMPING STATION

LOGIE ST SANITARY PUMPING STATION

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PROJECT

LOGIE ST & RIDOUT ST PUMP STATION UPGRADES

LINDSAY ON, CITY OF KAWARTHA LAKES

DRAWING TITLE

SITE LOCATION MAP

DESIGNED BY

Y. RAMIREZ

DRAWN BY

B. CRUZ-FUENTES

REVIEWED BY

Y. RAMIREZ

APPROVED BY

Y. RAMIREZ

PROJECT DATE

2025/06/24

PROJECT #

24-3-7800

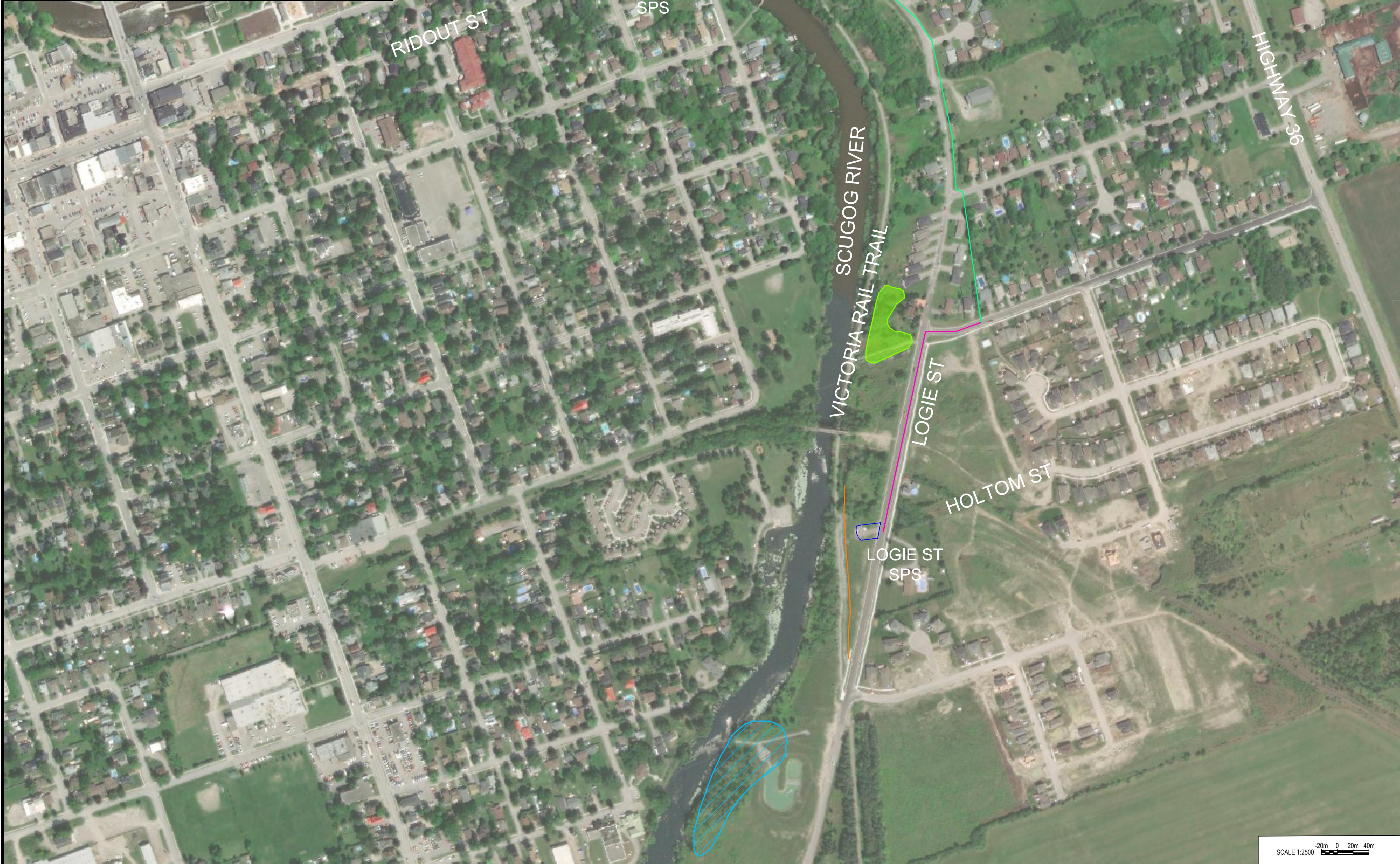
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FIGURE 1

DRAWING SCALE (ISO A1)

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VER: N/A

CAD PLOTTER: Bernardo Cruz Fuentes
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PLOT SCALE: 1:1
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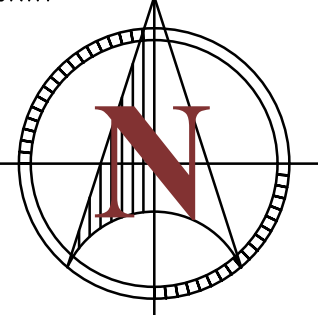
1620 WALLBRIDGE LOYALIST ROAD
BELLEVILLE, ONTARIO, K8N 4Z5
PHONE: 613-966-3068
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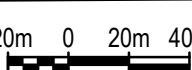
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<div><div></div><div></div><div></div><div></div><div></div><div></div></div>	FORCEMAIN ASBESTOS CEMENT SIPHON DITCH RIDOUT ST SANITARY PUMPING STATION LOGIE ST SANITARY PUMPING STATION WOODLAND UNEVALUATED WETLAND
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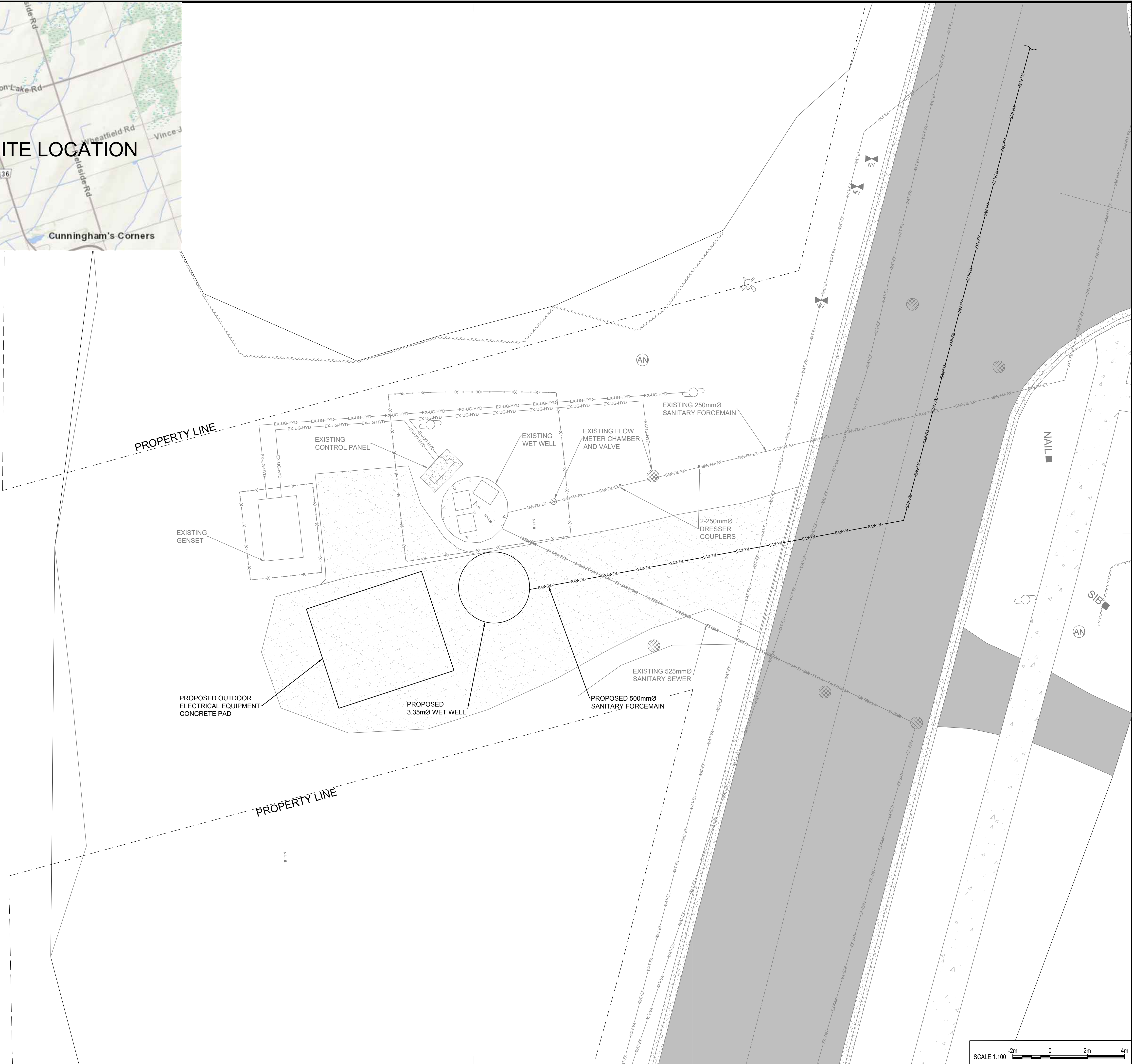
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REVISION	DESCRIPTION	DATE
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DRAWING TITLE NATURAL HERITAGE AREAS		
DESIGNED BY Y. RAMIREZ		
DRAWN BY B. CRUZ-FUENTES		
REVIEWED BY Y. RAMIREZ		
APPROVED BY Y. RAMIREZ		
PROJECT DATE 2025/06/24 (YYYY/MM/DD)		
PROJECT # 24-3-7800		
DRAWING # FIGURE 2	DRAWING SCALE (ISO A1) HOR: 1 : 2500 VER: N/A	


SCALE 1:2500 

(METRIC SCALE - ALL DIMS IN METERS U.N.O.)



SITE LOCATION





GREER GALLOWAY
a division of Jp2g Consultants Inc.

1620 WALLBRIDGE LOYALIST ROAD
BELLEVILLE, ONTARIO, K8N 4Z5
PHONE: 613-966-3068
FAX: 613-966-3087

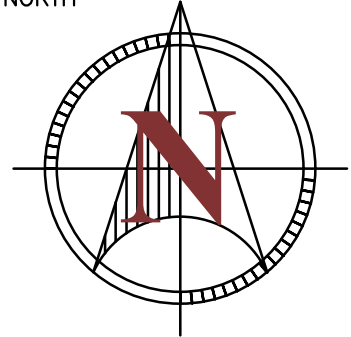
NOTES:

1. ALL WORK SHALL BE IN ACCORDANCE WITH RELEVANT CODES AND GUIDELINES.
2. ALL DRAWINGS AND ADDENDA ARE TO BE READ AS, AND IN CONJUNCTION WITH THE SPECIFICATIONS.
3. ALL EQUIPMENT SHALL BE INSTALLED AS SPECIFIED OR APPROVED EQUIVALENT.
4. CONTRACTOR MUST CHECK AND VERIFY ALL DIMENSIONS BEFORE PROCEEDING WITH WORK AND BE RESPONSIBLE FOR SAME.
5. CONTRACTOR MUST REPORT ANY DISCREPANCIES TO ENGINEER FOR RESOLUTION BEFORE COMMENCING THE WORK.
6. ANY CHANGES MUST BE APPROVED BY THE ENGINEER.

A

B

A DETAIL NO.
B DRAWING NO. - WHERE DETAILED

01	-	YY/MM/DD
REVISION	DESCRIPTION	DATE
NORTH		STAMP
		
PROJECT LOGIE ST & RIDOUT ST PUMP STATION UPGRADES LINDSAY ON, CITY OF KAWARTHA LAKES		
DRAWING TITLE PROPOSED UPGRADES		
DESIGNED BY Y. RAMIREZ		
DRAWN BY B. CRUZ-FUENTES		
REVIEWED BY Y. RAMIREZ		
APPROVED BY Y. RAMIREZ		
PROJECT DATE 2025/06/24 (YY/MM/DD)		
PROJECT # 24-3-7800		
DRAWING # FIGURE 3		DRAWING SCALE (ISO A1) HOR: 1 : 100 VER: N/A

CAD PLOTTER: Bernardo Cruz Fuentes
FILE PATH: J:\Belleville Project\7000\2437800 - CKL Logie Ridout SPS EA & Design\Drawings\Working\24-3-7800-Report Figures.dwg
PLOT SCALE: 1:1
DATE PLOTTED: 2025 / 06 / 24 @ 02:38 PM
BORDER SIZE: ISO A1 (841mm x 594mm)



SITE LOCATION


SCUGOG RIVER

VICTORIA RAIL TRAIL

LOGIE ST

MAS2-1

CUM1



GREER GALLOWAY
a division of Jp2g Consultants Inc.

1620 WALLBRIDGE LOYALIST ROAD
BELLEVILLE, ONTARIO, K8N 4Z5
PHONE: 613-966-3068
FAX: 613-966-3087

NOTES:
1. ALL WORK SHALL BE IN ACCORDANCE WITH RELEVANT CODES AND GUIDELINES.
2. ALL DRAWINGS AND ADDENDA ARE TO BE READ AS, AND IN CONJUNCTION WITH THE SPECIFICATIONS.
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6. ANY CHANGES MUST BE APPROVED BY THE ENGINEER.

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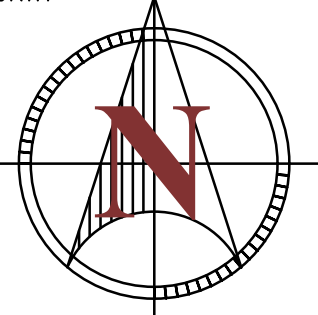
B

A DETAIL NO.
B DRAWING NO. - WHERE DETAILED

LOGIE ST SANITARY PUMPING STATION

MAS2-1-CATTAIL MINERAL SHALLOW MARSH

CUM1-CULTURAL MEADOW

01	-	YY/MM/DD
REVISION	DESCRIPTION	DATE
<div><div><div>NORTH</div></div><div><div>STAMP</div></div></div>		
PROJECT LOGIE ST & RIDOUT ST PUMP STATION UPGRADES LINDSAY ON, CITY OF KAWARTHA LAKES		
DRAWING TITLE VEGETATION COMMUNITIES		
DESIGNED BY Y. RAMIREZ		
DRAWN BY B. CRUZ-FUENTES		
REVIEWED BY Y. RAMIREZ		
APPROVED BY Y. RAMIREZ		
PROJECT DATE 2025/06/24 (YY/MM/DD)		
PROJECT # 24-3-7800		
DRAWING # FIGURE 4	DRAWING SCALE (ISO A1) HOR: 1 : 350 VER: N/A	

SCALE 1:350

8.75m

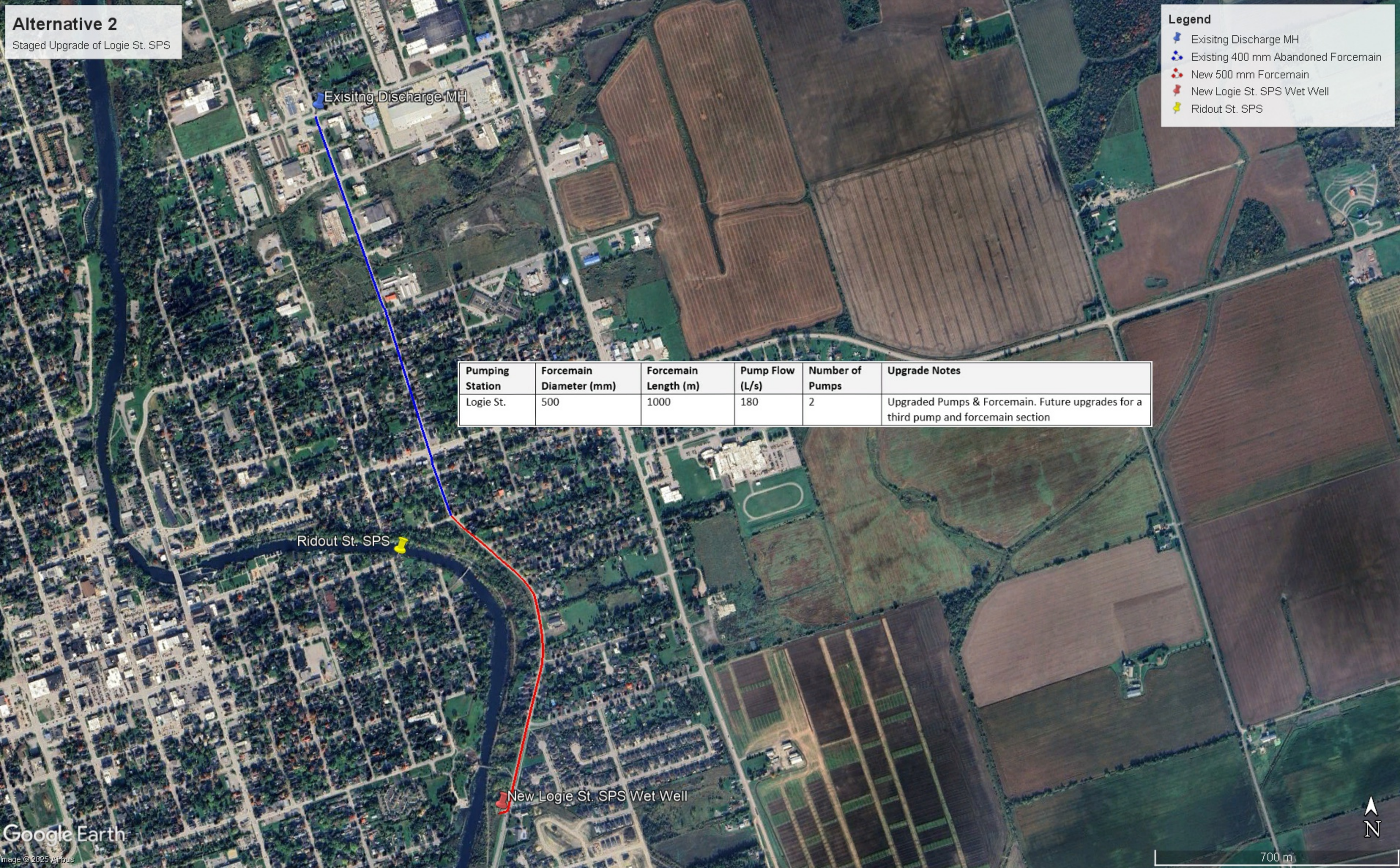
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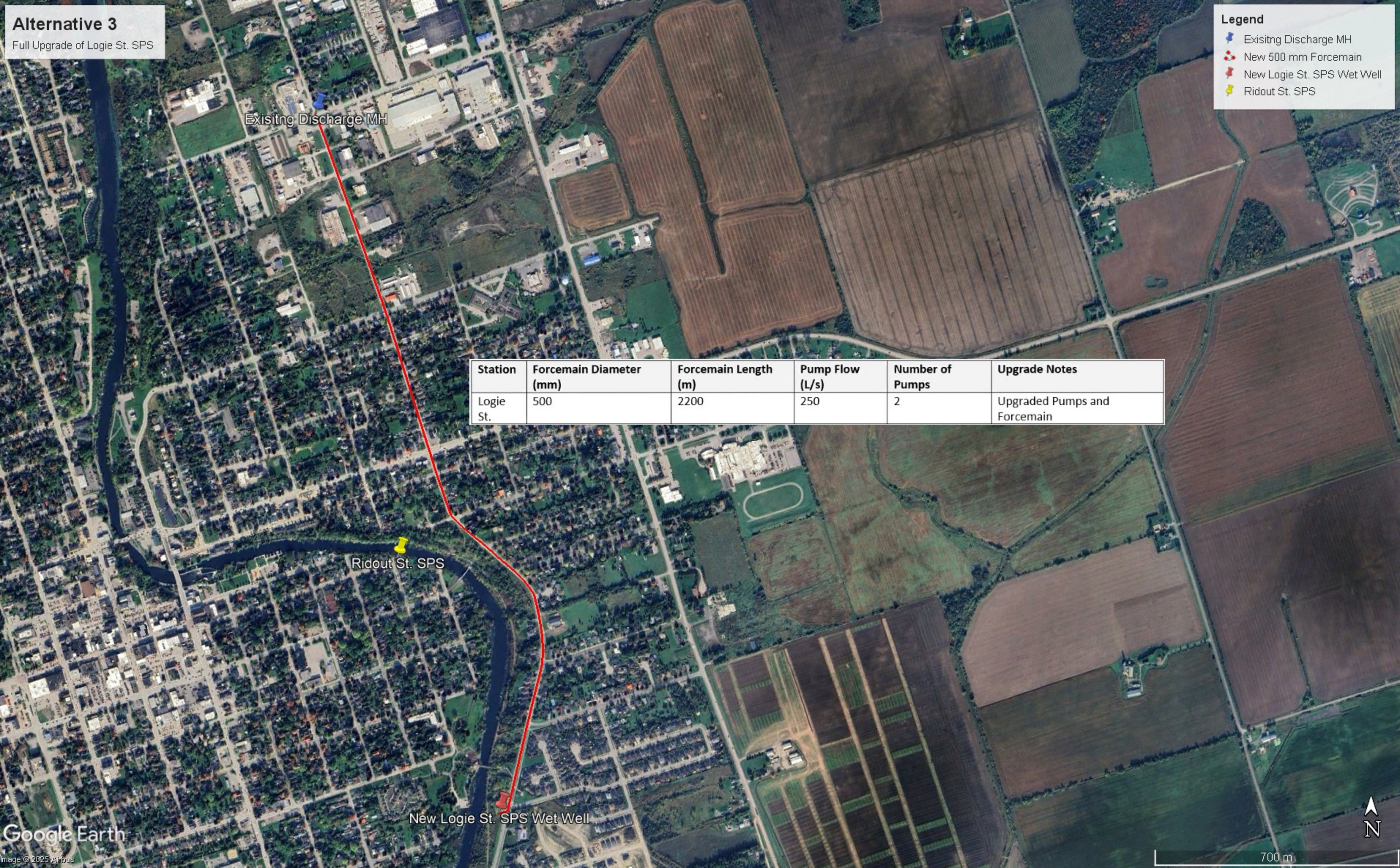
8.75m

17.5m

Appendix A

Proposed Upgrades Alternatives





Alternative 3
Full Upgrade of Logie St. SPS

- Legend**
- Existing Discharge MH
 - New 500 mm Forcemain
 - New Logie St. SPS Wet Well
 - Ridout St. SPS

Station	Forcemain Diameter (mm)	Forcemain Length (m)	Pump Flow (L/s)	Number of Pumps	Upgrade Notes
Logie St.	500	2200	250	2	Upgraded Pumps and Forcemain

Existing Discharge MH

Ridout St. SPS

New Logie St. SPS Wet Well

Alternative 4
Full Upgrades of Logie St. SPS and Ridout St. SPS

Legend

 Existing Discharge MH

 Existing 400 mm Abandoned Forcemain

 New Logie St. SPS Wet Well

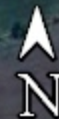
 Upgraded 500 mm Forcemain from Logie SPS

 Upgraded 750mm Forcemain From Ridout SPS

 Upgraded Gravity Sewer and River Crossing Siphon to Ridout SPS

 Upgraded Ridout St. SPS

Station	Forcemain Diameter (mm)	Forcemain Length (m)	Pump Flow (L/s)	Number of Pumps	Upgrade Notes
Logie St.	500	350	250	2	Upgraded Pumps, Forcemain, Gravity Sewer & Siphon Connection to Ridout St. SPS.
Ridout St.	750	1480	335	3	Upgraded Pumps & Forcemain. Existing and abandoned forcemain may also be twinned.



Appendix B

Site Photolog



Photo 1. Looking west the SPS.



Photo 2. A view of the meadow vegetation potentially to be impacted by the proposed upgrades.



Photo 3. A view of the meadow vegetation between the ditch and the SPS.



Photo 4. A view of the wetland located north of the ditch.



Photo 5. Looking north the ditch located west of the Logie St. SPS.

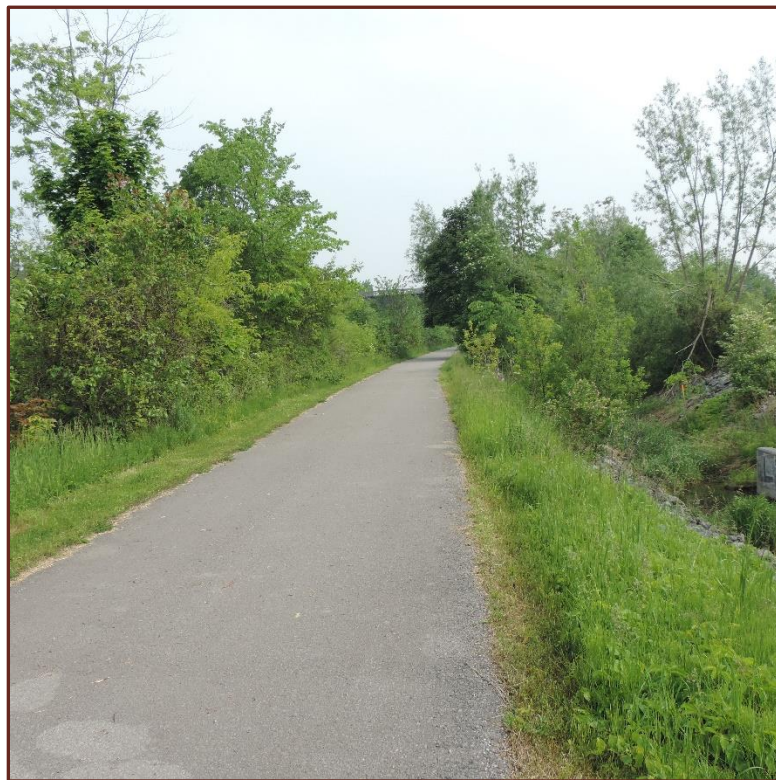


Photo 6. A view of the Victoria Rail Trail.



Appendix D: Cost Estimate of Preferred Alternative

Logie and Ridout SPS Upgrades - Alternative 2 Cost Estimate

Item Number	Item Name	UOM	Quantity	Unit Price	Total	OPSS/OPSD
1	Mobilization and Demobilization	L.S.	1	\$ 200,000	\$ 200,000	-
2	Insurance and Bonding	L.S.	1	\$ 200,000	\$ 200,000	100
3	Maintenance Manuals and Record Drawings	L.S.	1	\$ 10,000	\$ 10,000	-
4	Environmental Protection and Dewatering	L.S.	1	\$ 300,000	\$ 300,000	219.210/219.100
5	Supply and Install 300 mm Granular 'B' Material for Driveway Construction and Road Restoration	Tonne	3800	\$ 50	\$ 190,000	1010
6	Supply and Install 150 mm Granular 'A' Material for Driveway Construction and Road Restoration	Tonne	1900	\$ 50	\$ 95,000	1010
7	Supply and Install 50 mm HL8 Asphalt for Driveway Construction and Road Restoration	Tonne	500	\$ 200	\$ 100,000	510, 311
8	Supply and Install 40 mm HL4 Asphalt for Driveway Construction and Road Restoration	Tonne	400	\$ 200	\$ 80,000	510, 311
9	Rock Excavation	m³	1200	\$ 300	\$ 360,000	206, 403, 510, 802.013
10	Supply and Installation of New 500mm I.D. Forcemain and Fittings	m	1000	\$ 750	\$ 750,000	510
11	Forcemain Connections to Limits	L.S.	1	\$ 100,000	\$ 100,000	-
12	Sidewalk and Curb Restoration	L.S.	1	\$ 100,000	\$ 100,000	-
13	Site Works	L.S.	1	\$ 100,000	\$ 100,000	206, 510
14	New Fence and Gate Extension	L.S.	1	\$ 25,000	\$ 25,000	972.102, 972.130
15	Mechanical General Work	L.S.	1	\$ 400,000	\$ 400,000	-
16	Electrical General Work	L.S.	1	\$ 400,000	\$ 400,000	-
17	Supply and Installation of New Gravity Sewer and Fittings Connect to New Wet Well	m	100	\$ 1,000	\$ 100,000	510
18	Supply and Installation of New Sewage Pumps (Logie St. SPS)	L.S.	1	\$ 200,000	\$ 200,000	-
19	Supply and Installation of New Sewage Pumps (Ridout St. SPS)	L.S.	1	\$ 500,000	\$ 500,000	-
20	Supply and Installation of New HDPE Wet Well and Discharge Piping	L.S.	1	\$ 500,000	\$ 500,000	-
21	Supply New Valves Logie	L.S.	1	\$ 150,000	\$ 150,000	-
22	Supply and Installation of New Valves Ridout	L.S.	1	\$ 200,000	\$ 200,000	-
22	Supply and Installation of Instrumentation and Controls Logie	L.S.	1	\$ 150,000	\$ 150,000	-
23	Supply and Installation of Instrumentation and Controls Ridout	L.S.	1	\$ 150,000	\$ 150,000	-
23	Supply and Installation of Outdoor Generator Set and Automatic Transfer Switch (ATS)	L.S.	1	\$ 200,000	\$ 200,000	-
24	Supply and Installation of Outdoor Concrete Pad for Electrical Equipment	L.S.	1	\$ 25,000	\$ 25,000	-
25	Supply and Installation of Safety Bollards	Ea.	10	\$ 1,000	\$ 10,000	-
26	Excavation, Backfill, and Removal for Installation of New Wet Well	L.S.	1	\$ 150,000	\$ 150,000	-
Sub-Total 1					\$ 5,745,000	
Contract Administration (7%)					\$ 402,150	
Sub-Total 2					\$ 6,147,150	
HST (13%)					\$ 799,130	
TOTAL					\$ 6,946,280	



Appendix E: Stage 1 and 2 Archaeological Assessment

STAGE 1 & 2 ARCHAEOLOGICAL ASSESSMENT OF 75 LOGIE STREET,
LOT 16 CONCESSION 9, GEOGRAPHIC TOWNSHIP OF OPS, HISTORIC
VICTORIA COUNTY, TOWN OF LINDSAY, CITY OF KAWARTHA LAKES,
ONTARIO

Original Report

For:
Greer Galloway Consulting Engineers

From:
Northeastern Archaeological Associates Ltd.
Licenced to: Dr. Lawrence Jackson (P-025)
PIF#: P025-0995-2025

May 07, 2025
Northeastern Archaeological Associates Limited
P.O. Box 493,
Port Hope, Ontario
L1A 3Z4
905-342-3250



EXECUTIVE SUMMARY

Northeastern Archaeological Associates Limited, Port Hope was contacted by a representative of Greer Galloway Engineering Consultants requesting that, in compliance with the requirements outlined by the Ministry of Citizenship and Multiculturalism (MCM), a Stage 1 and 2 Archaeological Assessment be conducted at 75 Logie Street, part of Lot 16, Concession 9, Geographic Township of Ops, Historic County of Victoria, Town of Lindsay, City of Kawartha Lakes, Ontario. The assessment of the study area was triggered by the Ontario Planning and Development Act, 1994, as the study area is a planned infrastructure installation on City Land in an area of high archaeological potential. Permission to work on the property was provided by the proponent and municipality. The entire study area was assessed.

The study area consists of a portion of unopened road allowance on the west side of Logie Street which is already the location of a subterranean sanitary pumping station with an associated backup generator and buried hydro infrastructure. The study area extends from the edge of Logie Street westwards to a steep embankment and ditch marking the edge of the railway trail. The study area is maintained grass and a gravel entrance and turn-around area and is approximately 0.10 hectares in size. The assessment was conducted on April 24, 2025, under clear and mild conditions. The study area is bordered to the east by Logie Street, the west by a railway recreation trail and steep ditch, and vacant land to the north, and south. All study area edges were also confirmed through the use of provided mapping, GPS, and survey markers. Stage 1 research indicated that the property is of high archaeological potential, as outlined by the Standards and Guidelines for Consulting Archaeologists (MTC 2011), because of its proximity to water and registered archaeological sites as per standard 1.3.1.

Stage 2 assessment in the form of high potential shovel testing at high potential 5m intervals did not lead to the recovery of any archaeological material. Given this result, it is the recommendation of Northeastern Archaeological Associates Limited that no further archaeological assessment be required on the subject property.



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1.0 PROJECT PERSONNEL

Project Director:	Dr. Lawrence Jackson (P025) -Report Editing
Field Director(s):	Dan Smith (R1216)
Field Technician(s):	Justin Tighe (R421) Phillip Abbott
Report Preparation:	Justin Tighe (R421)

Table 1: Project Personnel and Breakdown of Relevant Duties

2.0 PROJECT CONTEXT

2.1 Development Context

The Ontario Heritage Act, R.S.O. 1990 c. O.18, requires anyone wishing to carry out archaeological fieldwork in Ontario to have a license from the Ministry of Citizenship and Multiculturalism (MCM). All licensees are to file a report with the MCMS containing details of the fieldwork that has been done for each project. Following standards and guidelines set out by the Ministry of Tourism and Culture (2011) is a condition of a licence to conduct archaeological fieldwork in Ontario. Northeastern Archaeological Associates Ltd. confirms that this report meets Ministry report requirements as set out in the 2011 Standards and Guidelines for Consultant Archaeologists and is filed in fulfillment of the terms and conditions of an archaeological license. The assessment of the study area was triggered by the Ontario Planning and Development Act, 1994, as the study area is planned to undergo the installation of infrastructure involving significant ground disturbance. Permission to work on the property was provided by the proponent and the municipality.

In compliance with the requirements outlined by the MCM, a pre-development Stage 1 and 2 archaeological assessment was carried out at 75 Logie Street, part of Lot 16, Concession 9, Geographic Township of Ops, Historic County of Victoria, Town of Lindsay, City of Kawartha Lakes, Ontario. The contract was awarded to Northeastern Archaeological Associates Limited on April 09, 2025.

The study area is an approximately 0.10-hectare area bordered to the east by Logie Street, the west by a railway recreation trail and steep ditch, and vacant land to the north, and south. All study area edges were also confirmed through the use of provided mapping, GPS, and survey markers. Although the road allowance has no legal western boundary (Map 10.2), the man-made



ditch marking the railway trail was determined to represent a sufficient physical boundary. Additionally no development disturbance is planned within 10m of this ditch. A small 10m portion of the Logie Street road allowance west of the study area and extending 10m to the north and south were also included in Stage 2 testing (Map 10.5). The property is the location of a future sanitary pumping station, backup generator, and buried infrastructure to expand the capacity of the pumping station already located on the property. The assessment was conducted on April 24, 2025, under clear and mild conditions. All property edges were also confirmed through the use of provided mapping and GPS. The entire study area was assessed.

2.2 Historical Context

Indigenous Knowledge

Northeastern Archaeological Associates Ltd. includes the section below because it amplifies on indigenous oral tradition and treaty history for the area. It was provided by Gidigaa Migizi-ban, a respected Knowledge Keeper and Elder for the Michi Saagiig Nation, relaying oral tradition provided to him by his Elders.

“The traditional homelands of the Michi Saagiig (Mississauga Anishinaabeg) encompass a vast area of what is now known as southern Ontario. The Michi Saagiig are known as “the people of the big river mouths” and were also known as the “Salmon People” who occupied and fished the north shore of Lake Ontario where the various tributaries emptied into the lake. Their territories extended north into and beyond the Kawarthas as winter hunting grounds on which they would break off into smaller social groups for the season, hunting and trapping on these lands, then returning to the lakeshore in spring for the summer months. The Michi Saagiig were a highly mobile people, travelling vast distances to procure subsistence for their people. They were also known as the “Peacekeepers” among Indigenous nations. The Michi Saagiig homelands were located directly between two very powerful Confederacies: The Three Fires Confederacy to the north and the Haudenosaunee Confederacy to the south. The Michi Saagiig were the negotiators, the messengers, the diplomats, and they successfully mediated peace throughout this area of Ontario for countless generations. Michi Saagiig oral histories speak to their people being in this area of Ontario for thousands of years. These stories recount the “Old Ones” who spoke an ancient Algonquian dialect. The histories explain that the current Ojibwa phonology is the 5th transformation of this language, demonstrating a linguistic connection that spans back into deep time. The Michi Saagiig of today are the descendants of the ancient peoples who lived in Ontario during the Archaic and Paleo-Indian periods. They are the original inhabitants of southern Ontario, and they are still here today.

The traditional territories of the Michi Saagiig span from Gananoque in the east, all along the north shore of Lake Ontario, west to the north shore of Lake Erie at Long Point. The territory spreads as far north as the tributaries that flow into these lakes, from Bancroft and north of the



Haliburton Highlands. This also includes all the tributaries that flow from the height of land north of Toronto like the Oak Ridges Moraine, and all of the rivers that flow into Lake Ontario (the Rideau, the Salmon, the Ganaraska, the Moira, the Trent, the Don, the Rouge, the Etobicoke, the Humber, and the Credit, as well as Wilmot and 16 Mile Creeks) through Burlington Bay and the Niagara region including the Welland and Niagara Rivers, and beyond. The western side of the Michi Saagiig Nation was located around the Grand River which was used as a portage route as the Niagara portage was too dangerous. The Michi Saagiig would portage from present-day Burlington to the Grand River and travel south to the open water on Lake Erie. Michi Saagiig oral histories also speak to the occurrence of people coming into their territories sometime between 800-1000 A.D. seeking to establish villages and a corn growing economy – these newcomers included peoples that would later be known as the Huron-Wendat, Neutral, Petun, and Tobacco Nations. The Michi Saagiig made Treaties with these newcomers and granted them permission to stay with the understanding that they were visitors in these lands. Wampum was made to record these contracts, ceremonies would have bound each nation to their respective responsibilities within the political relationship, and these contracts would have been renewed annually (see Gidiga Migizi and Kapyrka 2015). These visitors were extremely successful as their corn economy grew as well as their populations. However, it was understood by all nations involved that this area of Ontario were the homeland territories of the Michi Saagiig. The Odawa Nation worked with the Michi Saagiig to meet with the Huron-Wendat, the Petun, Neutral, and Tobacco Nations to continue the amicable political and economic relationship that existed – a symbiotic relationship that was mainly policed and enforced by the Odawa people.

Problems arose for the Michi Saagiig in the 1600s when the European way of life was introduced into southern Ontario. Also, around the same time, the Haudenosaunee were given firearms by the colonial governments in New York and Albany, which ultimately made an expansion possible for them into Michi Saagiig territories. There began skirmishes with the various nations living in Ontario at the time. The Haudenosaunee engaged in fighting with the Huron-Wendat and between that and the onslaught of European diseases, the Iroquoian speaking peoples in Ontario were decimated. The onset of colonial settlement and missionary involvement severely disrupted the original relationships between these Indigenous nations. Disease and warfare had a devastating impact upon the Indigenous peoples of Ontario, especially the large sedentary villages, which mostly included Iroquoian speaking peoples. The Michi Saagiig were largely able to avoid the devastation caused by these processes by retreating to their wintering grounds to the north, essentially waiting for the smoke to clear. Michi Saagiig Elder Gidigaa Migizi (2017) recounts:

'We weren't affected as much as the larger villages because we learned to paddle away for several years until everything settled down. And we came back and tried to bury the bones of the Huron but it was overwhelming, it was all over, there were bones all over – that is our story.'



There is a misnomer here, that this area of Ontario is not our traditional territory and that we came in here after the Huron-Wendat left or were defeated, but that is not true. That is a big misconception of our history that needs to be corrected. We are the traditional people, we are the ones that signed treaties with the Crown. We are recognized as the ones who signed these treaties and we are the ones to be dealt with officially in any matters concerning territory in southern Ontario. We had peacemakers go to the Haudenosaunee and live amongst them in order to change their ways. We had also diplomatically dealt with some of the strong chiefs to the north and tried to make peace as much as possible. So we are very important in terms of keeping the balance of relationships in harmony. Some of the old leaders recognized that it became increasingly difficult to keep the peace after the Europeans introduced guns. But we still continued to meet, and we still continued to have some wampum, which doesn't mean we negated our territory or gave up our territory – we did not do that. We still consider ourselves a sovereign nation despite legal challenges against that. We still view ourselves as a nation and the government must negotiate from that basis.'

Often times, southern Ontario is described as being “vacant” after the dispersal of the Huron-Wendat peoples in 1649 (who fled east to Quebec and south to the United States). This is misleading, as these territories remained the homelands of the Michi Saagiig Nation. The Michi Saagiig participated in eighteen treaties from 1781 to 1923 to allow the growing number of European settlers to establish in Ontario. Pressures from increased settlement forced the Michi Saagiig to slowly move into small family groups around the present day communities: Curve Lake First Nation, Hiawatha First Nation, Alderville First Nation, Scugog Island First Nation, New Credit First Nation, and Mississauga First Nation.

The Michi Saagiig have been in Ontario for thousands of years, and they remain here to this day.”

Pre-contact Period

Archaeological evidence demonstrates that people were in Southern Ontario approximately 12,000 years ago (Karrow & Warner 1990). The era since that time, which follows the last glaciation, is commonly divided into four time periods, as follows:

Palaeo Period (12,000-10,000 BP) - The Palaeo period was characterized by people that lived in small family groups, using a highly distinctive stone tool technology (fluted and lanceolate points) to hunt large Late Pleistocene and other fauna associated with the cooler environments of the period (Ellis and Deller 1990; Jackson 1998, 2019). Small group mobility is believed to have ranged up to 200 km annually.



Archaic Period (10,000-3000 BP) - As the climate in southern Ontario warmed, indigenous populations adapted to these new environments. New technologies and subsistence strategies were introduced and developed. Woodworking implements such as groundstone axes, adzes and gouges began to appear, as did net-sinkers (for fishing), numerous types of spear points and items made from native copper, which was mined from the Lake Superior region. The presence of native copper on archaeological sites in southern Ontario and adjacent areas suggests that Archaic groups were involved in long distance exchange and interaction. The trade networks established at this time were to persist between indigenous groups until European contact. Archaic peoples became seasonal hunters and gatherers to exploit seasonably available resources in differing geographic areas. As the seasons changed, these bands split into smaller groups and moved inland to exploit other resources available during the fall and winter such as deer, rabbit, squirrel and bear, which thrived in the forested margins of these areas (Ellis et al. 1990).

Woodland Period (3000 BP to European contact) – This period saw the gradual establishment of important technological and subsistence changes, initially the appearance of clay pots (Jackson 1982; Spence et al. 1990) in the Early Woodland period among Algonkian speaking populations. Population increases also led to the establishment of larger camps and villages during the Middle Woodland. Elaborate burial rituals and the interment of numerous exotic grave goods with the deceased distinguish the Early and Middle Woodland. Increased trade and interaction between southern Ontario populations and groups as far away as the Atlantic coast and the Ohio Valley was taking place. During the late Middle Woodland, there were two major subsistence innovations, the harvesting of wild rice throughout south-central and northern Ontario and the introduction of maize agriculture which prelude the archaeological Late Woodland period (Jackson et al 2022). Algonkian speaking (Anishinabek) peoples relied heavily on wild rice and Iroquoian speaking peoples on maize (Jackson n.d). Algonquins also had seasonal fishing villages with up to 500 people lived in for six-eight months of the year (Hickerson 1960, Migizi 2018). The Late Woodland is known for large sedentary villages in south-central and southwestern Ontario after about 1000 A.D. and increasing development of trade and warfare just prior to European contact. Both Algonkian and Iroquoian speaking peoples occupied the landscape of southern Ontario during this period. Beginning about 1400 AD Sioui and Labelle (2014) recognize the “AlgonquianWendat Alliance” which persisted to at least 1660 AD. This alliance was recognized by the French in their dealings with the Algonquins and Hurons in the 17th century. Although it is widely assumed that Iroquoian speaking peoples were sedentary in southern Ontario, populations did shift regionally, for unknown and likely socio-political reasons, and locally due to soil depletion from maize horticulture requiring regular relocation of villages. Anishinabek peoples had extensive hunting and gathering territories throughout south-central Ontario and have been described as strategic sedentarists (Thoms 2014). Both and Algonquin and Huron were allies in the late period of the Ontario Woodland Tradition and shared houses and some forms of agriculture (Jackson 2024).



A general timeline of archaeological periods and associated cultural groups in Central Ontario is provided as Table 2 below.

Period	Group(s)	Date Range	Culture/Technology
Palaeo			
	Fluted Point	11800-10500 B.P.	Seasonal Hunters
	Holcombe, Hi-Lo	10500-9800 B.P.	Paleo Point Technology
Archaic			
Early	Side Notched Corner Notched Bifurcate Point	9800-9500 B.P. 9500-8900 B.P. 8900-8000 B.P.	Hunters and Gatherers
Middle	Middle Archaic Laurentian Archaic	8000-5500 B.P. 5500-4000 B.P.	Focused Seasonal Resource Areas
Late	Narrow Point Broad Point Small Point Glacial Kame	4500-3000 B.P. 4000-3500 B.P. 3500-2800 B.P. ca. 3000 B.P.	Polished and Groundstone Tools, River/Lakeshore Settlement, Burial Ceremonialism
Woodland			
Early	Meadowood Middlesex	2800-2300 B.P. 2300-2000 B.P.	Introduction of Pottery Elaborate Burials
Middle	Laurel/Point Peninsula Sandbanks/Princess Point	2000-1250 B.P. 1250-950 B.P.	Long-Distance Trade Burial Mounds, Agriculture
Late	Pickering ¹ , Uren, Middleport (Anishinabek/Iroquois)	950-550 B.P. 550-300 B.P.	Transition to Fortified Villages, Horticulture, Large Village Sites, Alliances, Trade/Warfare

¹ Smith 2021



	Algonquin and Huron Alliance ^{2, 3, 4}		
Historic			
	Mississauga/ Chippewa	350-present	Mission Villages and Reserves
	Euro-Canadian		European Settlement

Table 2: General Archaeological Timeline of Central Ontario

Indigenous Treaty History

The study area is located within Treaty Lands of the Williams Treaties First Nations. Signatories of the Williams Treaties include Beausoleil First Nation, Georgina First Nation, Rama First Nation, Scugog Island First Nation, Curve Lake First Nation, and Hiawatha First Nation. The first three groups are more commonly known as Chippewas while the latter four are more commonly known as Mississaugas.. The study area is in lands which under the Williams Treaties (1923) recognized a prior surrender to the government of Upper Canada known as Rice Lake Treaty #20. This treaty was with various principal men of the tribes of the “Chippewas” who “inhabited the back parts of the Newcastle District”. By the mid to late 19th century some of these same peoples were referred to as Mississaugas. Signatories to Rice Lake Treaty #20 were Hiawatha First Nation, Curve Lake First Nation, and Scugog Island First Nation (Dave Mowat, pers. comm. 2018).

The most recent Williams Treaties Settlement Agreement, which occurred in 2018, was extremely significant for the seven First Nations affected, as their harvesting rights were re-affirmed by both the provincial and federal governments in all of the pre- confederation treaty areas (including Treaty 5, Treaty 16, Treaty 18, Treaty 20, Treaty 27 and 27 ¼, Crawford Purchase, and the Gunshot Treaty). The 1923 Williams Treaties were the only ones in Canada that had extinguished the harvesting, gathering, hunting, and fishing rights of the First Nations and it took over 95 years for the Canadian and Ontario governments to address these injustices (Dr. Julie Kapyrka, Alderville First Nation, pers. comm. 2023).

The three closest first nations to the study area are Scugog Island First Nation, Curve Lake First Nation, Hiawatha First Nation and Alderville First Nation.

Mississaugas of Scugog Island First Nation

² Sioui and Labelle 2014

³ Migizi 2018

⁴ Jackson 2023, 2024



The Mississaugas of Scugog Island First Nation moved into southern Ontario from their former homeland north of Lake Huron around the year 1700. The Mississaugas are a branch of the greater Ojibwa Nation, one of the largest native groups in Canada. From time immemorial, Mississauga people secured all their needs from the surrounding environment (“Mother Earth”); hunting and fishing and harvesting plant materials for food and medicines. Wild rice, an important food staple, grows in shallow water and was gathered in late summer using birch bark canoes.

The move into southern Ontario followed the 17th century dispersal of the Wendat people or, “Hurons” as the French named them. These once numerous people together with their close relatives, the Petun and Neutrals, were first ravaged by European diseases and then around 1650 were attacked in their villages by another native group from south of Lake Ontario.

The first Mississauga people to settle in the basin of Lake Scugog around 1700 appreciated the bountiful resources available in the virgin forests and unspoiled wetlands. Game and fur animals, waterfowl and fish abounded, and wild rice grew in profusion in the shallow waters. The people flourished in this paradise for nearly a century until the British arrived with their insatiable appetite for aboriginal land. Having just lost the American War of Independence, British refugees came flooding north into Upper Canada seeking new land.

Government officials were soon conducting land acquisition treaties with Mississauga and Ojibwa people who neither understood the language of these powerful strangers nor fully grasped the revolutionary concept of permanently selling their Mother Earth. Millions of acres of valuable native lands were given up through these treaties with very little received in return. Unfortunately, fair dealings were not the order of the day. In one instance, a 100 mile (160 kilometer) stretch of land about 20 kilometers wide along Lake Ontario from roughly Trenton to Toronto was ceded, but the treaty was so flawed, government officials later privately agreed that it was invalid. Mississauga people however were not so informed, and that land was quickly taken up by non-native settlers.

In another case, the land on the west side of Lake Scugog, all the way north to Lake Simcoe was not negotiated or treated for with the resident Mississauga people, at all. They were simply ignored and swept aside and the land was given out to non-native settlers who chopped down forests to make their farms.

By 1830, with strangers despoiling their hunting lands and with rising water from a new dam on the Scugog River at Lindsay flooding their rice beds, the Mississauga people moved away at the government's insistence. Some went to Lake Simcoe and onto the new reserve at Coldwater, and some moved to live with their friends at Chemong Lake (also called Mud Lake). Scugog Chief Jacob Crane went with the group to Mud Lake.

In 1836, Chief Crane and his people moved farther west to reserve land at Balsam Lake. But by 1843, with non-native settlement increasing and game populations declining, the government was encouraging native people to take up subsistence farming to supply their food needs. Owing



to the unproductive rocky soil at Balsam Lake, Chief Crane's people sought better land, and they chose to move back to Scugog.

With increasing settlement at Scugog, the only land available was an 800 acre (320 hectare) landlocked parcel on Scugog Island. And despite the thousands of acres west of Lake Scugog earlier taken from them, Mississauga people were required to purchase these 800 acres with their own money.

In 1844 Chief Crane and his people returned home to Scugog, although it was no longer the paradise it had once been. Chief Crane died at Scugog in 1861.

Over the century and a half that followed, the people tried subsistence farming, but this didn't prove viable; fur trapping, hunting and basket-making supplied a meager income. Later, off-reserve jobs in the cities to the south were resorted to, but times were never bountiful. In spite of heavy enlistment for the great wars, and the recent history of Residential Schools, the "60's Scoop," and a dwindling member population, the Mississauga people survived and rebuilt their community. After much forward-thinking and hard work, the Mississaugas opened their community economic development project in 1997, the Great Blue Heron Casino. With the advent of the casino also came the Baagwating Community Association; Baagwating is run by members of the Mississaugas of Scugog Island First Nation and is the charitable-arm of the Great Blue Heron. Through building community networks, the Mississaugas of Scugog Island First Nation have built relationships of trust and respect with the Scugog Township, the Durham Region, and the local townspeople. (<https://www.scugogfirstnation.com/Public/Origin-and-History>, 2025)

Alderville First Nation

The people who currently inhabit Alderville First Nation are Mississaugas historically resettled from the Bay of Quinte area. In 1763, British settlers entered that area, with settlement further increasing with the American Revolutionary war as British Loyalists entered British North America. In 1783 the English purchased land from "Eastern Ontario" to Toronto, in what is now known as the Crawford purchase, from the Mississaugas of the Bay of Quinte to distribute to European settlers (Beaver 2020). With the area being surveyed for settlement by the English, it became difficult to continue traditional hunting and fishing subsistence strategies. In the early 1800s, approximately 15 families were present from in Mississauga bands from Kingston and Gananoque, with most indigenous populations being displaced off their traditional hunting territories by the 1820s (Clarke 1999). With the increase of farming and settlement in the region, traditional food and resources became more scarce forcing many people to adopt a colonial lifestyle to survive (Beaver 2020).

One of the primary ways that indigenous populations within the Bay of Quinte area were persuaded into European lifeways was through their interactions with the Methodist church. In 1744 the Methodist church was founded by John Wesley in England, with the church holding the



belief that the Mississaugas needed to discard their traditional language, religion, customs, and culture to become more “civilized”. Methodists in Canada West first preached in the Credit River in 1824 and later at Grape Island in 1827 (Copway 1847).

Initially, Methodism was introduced through missionaries, or “Black Coats”, known as “circuit riders” who would often have members who spoke Ojibwe languages to communicate better and become more trusted, allowing for more effective conversion (Beaver 2020; Copway 1850). One of the leaders of the Methodist movement, Reverend William Case, travelled as an itinerant minister and was later given the name “Father of Indian missions” (Clarke 1999). Reverend Case was transferred to the Bay of Quinte area as the elder of the Methodist church with the goal of converting all the indigenous peoples of Canada (Beaver 2020).

Grape Island in the Bay of Quinte, Lake Ontario was chosen as the location to “relocate” indigenous people to establish a Methodist mission (Clarke 1999). On Grape Island, they were promised that if their children learned English and abandoned their traditional teachings and culture, they could become educated and “prosperous like white settlers” (Clarke 1999). In his writing, George Copway notes that the Mississaugas converted to Christianity and sought colonial education to prepare a better future for their children. Copway notes that he saw the goals of education among the Mississauga were to become educated to become proficient in the laws that were being enforced on them to hold land on equal footing to white settlers and represent themselves as a nation (Copway 1847). With the goal of a more prosperous future 16 Ojibwe men, including Shawundais or John Sunday, became missionaries to “northern tribes” and afterwards groups within western Canada. John Sunday was a Bay of Quinte Mississauga who later in 1836 was ordained as a reverend and missionary (Beaver 2020).

The conversion of 16 Ojibwe men to the Methodist faith was completed on May 31, 1826, and with it, a Society of Methodist Indians was established on Grape Island (Clarke 1999). Grape Island, with a growing population of displaced Mississauga peoples, was deemed successful by the Methodist church (Beaver 2020; Clarke 1999). However, the increasing population would become problematic as over 200 individuals resided on the island leading to unhealthy and cramped conditions which often served as a vector for disease. Diseases within the indigenous populations of Grape Island drastically reduced the population. John Sunday, who had travelled within the Rice Lake region as a missionary, suggested the south side of Rice Lake as the land surrounding the Bay of Quinte was taken up by settlers (Beaver 2020; Clarke 1999). The people of Curve Lake and Hiawatha sent encouraging letters stating that there was much game and rice in the area to share. George Copways description indicates that the Rice Lake area was heavy in wild rice, game such as waterfowl and muskrat, and fish such as eel, pike, and bass (Copway 1847). On December 15, 1835, “John Sunday, Jacob Payhegezick, Jacob Sunday, James Sahgahnahquotheabe, Jacob Pahbecoun, James Nahwahquashkum, sachems, and chief warriors” surrendered Grape Island for future sale (Beaver 2020).



In 1837, many of the residents of Grape Island along with others from the surrounding area moved to Alnwick Township. The land was originally owned by the New England company and was later transferred to the Province of Canada. Some chose not to accompany them as they found the restrictions of the Methodist church too great. The community was originally called Aldersville named after a secretary of the Methodist church in London, England who had moved to the community. Reverend William Case among other missionaries also moved and remained there until his death in 1855. In 1837 the community's population was 208 individuals (Beaver 2020). At the time of the relocation to Alderville the principal chiefs are listed by Mary Jane Muskrat Simpson: Pashageezhig (later Simpson), John Agewains, Jacob Manjequionchcan, Joseph Skunk (Marsden), James Indian and James Crawford. The first chief of Alderville was John Sunday followed by John Simpson. Upon settling the people of Alderville interacted with other Mississauga groups in the region: Hiawatha, Curve Lake, Scugog, and other first nations including Rama and Georgina Island.

The reservation originally consisted of 3600 acres and is located approximately 1.25km south and southwest of Rice Lake along the Oak Ridges moraine. A strip of land along Rice Lake was purchased in 1914 and named Vimy Ridge after the World War 1 Battle where three soldiers from Alderville fought and were buried. A church and barn funded by the Methodist society were raised in 1837, with the church being replaced in 1870 and is in use today as a United church. Alderville was divided into 50 acre lots with 22 frame houses, 14 log cabins, six-frame barns, and a schoolhouse erected by the government but funded by the residents. Additionally, upon their arrival a sawmill was "erected from the Indian annuities", it was later leased to European settlers and ultimately sold in the late 19th century. The township described the land of Alderville as some of the best in the township for cultivation, though its residents described it as having too much swamp and scrub. The annual Methodist report (1851-1852) reported that 500 acres of land were under cultivation producing spring and fall wheat, corn, peas, oats, potatoes, and hay (Beaver 2020).

The authorizing of elected councilors by the 1876 Indian Act, Alderville elected two council members in 1882, which increased to four in 1993. The Indian Act also specified that the chief and council must be elected positions, though hereditary chiefs were allowed to keep their position until their death (Beaver 2020).

Curve Lake First Nation

Curve Lake First Nation occupies the reserve lands situated on the peninsula between Buckhorn Lake and Upper Chemong/Mud Lake. The initial surrender of lands related to Indigenous peoples in areas north of Rice Lake came in the form of the 1818 treaty signed in



Newcastle of (Rice Lake Treaty 20); the surrender of 1,951,000 acres of land in the “back parts” of the Newcastle District – which included the modern Peterborough, Hastings and Victoria Counties- with the islands of the Trent watershed being reserved (Whetung-Derrick 2015). Many of the pre-confederation treaties did not include reserve lands for indigenous populations, with the Crown expecting the assimilation of indigenous populations to “resolve” this issue (Whetung-Derrick 2015).

As a result, Christian missions were established to both convert indigenous populations to Christianity and to instill an agriculturally based lifestyle. The mission at Curve Lake was established in 1829 as the “Chemong Mission” and was eventually recognized as “the Mud Lake Indian Reserve”. The term Chemong is a corruption of the word “Oshkigmong”, referring to the bow-like shape of the lake or “curve in the Lake” (Whetung-Derrick 2015). From 1830 to 1833 Reverend Peter Jones from the Credit River visited the village and baptised four children, by 1850 the community was predominantly Methodist Christians (Whetung-Derrick 2015). On April 3rd, 1837 the New England Company, a society with the purpose of converting indigenous populations in British North America to Christianity, was granted 1600 acres, the modern Curve Lake First Nation Territory, by the Colonial Government to be held in trust for the Mud Lake Indian Band (Whetung-Derrick 2015). Baptist Minister Reverend Richard Scott of the New England Company was assigned to Mud Lake in 1829 to oversee the mission (Whetung-Derrick 2015).

In 1856 the Mississaugas of Mud Lake [later Curve Lake], Hiawatha, and Scugog surrendered all of the islands in the Trent River watershed with Treaty 78. Preceding this, Indian Agents under the Superintendent of Indian Affairs sold over 1,000 islands for “the benefit of the three Bands”. The 110 islands and shoals that were not sold in this way have since been designated as reserve lands to be held jointly by the three First Nations (Whetung-Derrick 2015).

In 1889 the New England Company transferred 1,548 acres of the Mud Lake Reserve to the Department of Indian Affairs for 1\$. The remaining 115-acres of the “Chemong Mission” at the south end of the peninsula was reserved as it held the Mission House acting as a form of schoolhouse for the instruction of agriculture and as a residential school. In the 1890s the New England Company ended the mission at Mud Lake to focus on sending missions deeper into British North America. The New England Company property was later sold to A.E. Kennedy in 1898 after “expressed concerns” by Curve Lake residents who were leasing the land. Kennedy later sold the land to the Mud Lake Band in 1902. The funds for this purchase came from the previous “sale” of the Islands of the Trent River (Whetung-Derrick 2015).

In 1964 the reserve name was changed to the “Curve Lake Reserve”, which it uses today (Whetung-Derrick 2015). In 1967 the reserve was given local autonomy to “manage and expend Band revenue funds within the limits of amounts approved by the Minister of Indian Affairs”.



Additionally, the same year saw the hiring of William F. Whetung as the first Band Administrator for Curve Lake further allowing Curve Lake First Nation to self-govern (Whetung-Derrick 2015).

Hiawatha First Nation

The first Crown Treaty that the Hiawatha band was officially involved with was the Rice Lake Purchase (Treaty 20) which saw the ‘surrender’ of 1,951,000 acres of land on November 5, 1818. Despite Crown representative reassurance, that the Islands of Rice Lake would not be surrendered in Treaty 20, they were assumed by the Crown. Chief George Paudash wrote consistently in protest. Due to the general confusion of ownership, Paudash was approached by several European settlers asking if the islands could be sold or leased (Shpuniarsky 2015).

Ten years later, on June 14, 1828, Richard Scott, a New England Company Agent, petitioned for a small town to be constructed on the north side of Rice Lake or Pemedashcoutayang (Lake of the Burning Plains) near the Otonabee River to instruct indigenous peoples in farming and the Protestant faith. This proposal was accepted by the Mississauga’s of Chief Paudash and the band members under his leadership. In addition to the instruction of agriculture at Hiawatha, traditional seasonal activities were still observed. This included the gathering of turtle eggs, collection and boiling of maple sap, trapping, and fishing in the spring, collecting birch bark and berries, hunting frogs, and acting as guides in the summer, trapping, hunting, and the collecting of wild rice in autumn, and gathering lumber, hunting and trapping in the winter (Shpuniarsky 2015).

Hiawatha was primarily concerned with hunting rights, rice rights, the sale of islands, Treaty violations, and the Trent Severn caused flooding as Johnson Paudash was seen as the keeper of Treaty documents and knowledge. To deal with the issues affecting all of the local Indigenous bands at Rice Lake, Mud Lake, and Scugog formed a united council which was led by George Paudash (Cheeneebesh) for several years (Shpuniarsky 2015).

In 1856 Hiawatha and neighbouring Mississauga communities sold the disputed Islands to the Crown. Due to flooding caused by the construction of the dam at Hastings at the east end of Rice Lake in 1836, they were not paid for the land. However, a land claim was filed and settled in 2012 involving the communities of Hiawatha, Curve Lake, and Scugog for compensation for the sold flooded land (Shpuniarsky 2015).

Land for the settlement of Hiawatha was initially granted to Captain Charles Anderson and a section of his land was later granted “to Trustees for the benefit of the Indian tribes of the province, and with a view to their conservation and civilization”. Early trustees included Reverend Richard Scott, Reverend Mark Burnham, and Bishop Bethune. An early report by Reverend Scott notes that by July of 1829 approximately 400 acres had been cleared and fenced. In 1850 George



Coppaway noted that the settlement consisted of 1550 acres, the 1,120 acres that were granted for the village's creation, and another 430 acres purchased with the bands' funds. The village is recorded as having 114 people, 30 houses, 3 barns, a schoolhouse, and a chapel with a bell in 1850. On the 7th of April 1850, Chief Paudash recorded all of the residents of the village and noted four Chiefs: George Paudash (Gemoaghpenasse), John Crow (Kaagagi), John Coppaway (Crane Clan), and John Taunchy. Chief George Paudash was recognized as the traditional Head-Chief of Hiawatha, and the community operated with three to four other chiefs. Other chiefs that are recorded in the mid-1800s include "George", Monsang Paudash, Jacob Crane, and Peter Nogie (Shpuniarsky 2015).

Hiawatha has a long history with Methodist Christians, with relationships beginning in 1826. The first mission house was constructed in the 1830s. The first in Peterborough County was used until 1926 (Hiawatha First Nations n.d.). The village was initially visited by Methodist preachers travelling along Rice Lake in 1825 under the instruction of Peter Jones. Jones was instructed by the General Superintendent of Methodist Indian Missions, William Case, to bring the Methodist faith to the indigenous communities of the Bay of Quinte area. Jones began his conversion of the indigenous peoples surrounding the modern city of Bellville, which attracted the attention of George Paudash and others within the Hiawatha community. In 1826 the annual Methodist conference was held in Cobourg and many individuals including Paudash are recorded as attending and being baptized by Dr. Nathaniel Bangs. Jones saw great success in converting indigenous peoples in the Rice Lake area to the Methodist faith by linking aspects of Christianity to traditional Anishinaabe beliefs and learning indigenous languages (Shpuniarsky 2015). Peter Jones himself became a Chief of the Mississauga's of New Credit.

After 1840 residential schools began to be promoted within Hiawatha and two were constructed within the vicinity of Hiawatha, one at Alderville and one at "Muceytown". Initially, the premise was supported by the local indigenous population before the reality of the school's operations was realized. Many children were sent to residential schools in Alderville and Brantford where the focus was on manual labour and the schools were rife with physical, sexual, and emotional abuse (Shpuniarsky 2015).

As a result of the passing of the Gradual Enfranchisement Act in 1869 and the Indian act of 1876 the governmental structure of Hiawatha shifted away from its traditional system. As a result of the legislation, the area was placed under the governance of the Rice Lake and Mud Lake Agency with an Indian Affairs officer sitting in on all Chief and Council meetings with the power to give the final vote or veto discussions. Additionally, despite an election process being imposed on the community, many people continued to vote for their hereditary chief continuing the traditional leadership roles within the community. Although Hiawatha generally had a good working relationship with their Indian Affairs officers, they were not exempt from officers who ignored their requests and engaged in corruption (Shpuniarsky 2015).



The collection of wild rice was an important activity among the people of Hiawatha and was often traded/sold to European settlers in the winter, with Johnson Paudash gifting some wild rice to the then prime minister Sir Wilfred Laurier in 1910. However, due to settlers clearing and harvesting wild rice in the mid-19th century the communities of Hiawatha, Curve Lake, and Scugog passed a motion that only indigenous peoples from their communities may harvest rice, though indigenous peoples from other areas could harvest rice if the local band granted permission. Despite pushback from local settlers, the motion was enforced by the Government (Shpuniarsky 2015).

Post-contact History of Ops Township and Victoria County

The study area is located on part of Lot 16, Concession 9 in the geographic Township of Ops, historic Victoria County. The study area lies within the Town of Lindsay which along with all of Victoria County was amalgamated into the single-tier municipality of the City of Kawartha Lakes in January 2001 (AMCTO 2017).

The first recorded non-indigenous individual within what would become Victoria County was Samuel de Champlain in 1615. Later non-indigenous occupants would consist of Euro-Canadian traders (Belden and Co.1881). Much of the permanent European settlement in the area came after the capital of Upper Canada was moved from Newark (modern Niagara) to York (modern Toronto). This was due to the road that was constructed from the new capital to Lake Simcoe, and the post-1791 surveys of the areas north of modern Toronto (Belden and Co.1881). Much of the larger scale surveying and colonization occurred after the conclusion of the war of 1812 in 1815 (Belden and Co.1881). The area now incorporated as the City of Kawartha Lakes was part of the Mississauga Tract, a land treaty signed by six Mississauga chiefs in 1818. Originally referred to as the Newcastle, the tract was renamed the Colborne District in 1841. The district was reorganized in 1854 and named Peterborough County before being separated into the United Counties of Peterborough and Victoria in 1854. Victoria was officially separated into an independent County in 1863. The area of Victoria county was first surveyed in 1821, and was settled more slowly than the counties to the south. Ops Township historically surrounded the town of Lindsay, the largest population center in the county, as well as the smaller communities of Reaboro and Fleetwood (Belden 1881). The survey of Ops township is of uncertain date, but Belden (1881) notes that it was surveyed before the fall of 1828. The first European settler in Ops was reportedly Patrick O'Connell who was known by the nickname "King Connell", who settled in Lot 7, Concession 2. Ops is recorded as approximately 61,200 acres, this is minus the area of the Town of Lindsay recorded as 1,025 acres.



Study Area History

The study area is located in Lot 19, Concession 6, in the geographic Township of Ops, historic Victoria County (now amalgamated as City of Kawartha Lakes) as shown in 1881 Ops Township Map 10.8 and the Lindsay Town Plan Map 10.7, with the location of the study area shaded red.

As illustrated in Map 10.7 the study area consists of a small portion of road allowance in the south-east portion of the historic town plan of Lindsay. The 1879 Map of Lindsay provides no owners for the surrounding lot, other than letter designations. These represent park lots surveyed along Logie Street in the 1850s. Lots Q and Z border the study area to the north and south respectively. Both of these lots were registered in 1852 by Archibald McDonnell.

Lot Q was sold to William McDonnell in the same year. The area of Lot Q west of Logie Street was sold to George Hudson in 1874. After George Hudson's death his widow Anne Hudson took possession of the land before passing the deed to Dave Hudson in 1893. The lands were then passed to Jessie Hudson in 1898. A portion of the land was sold to the Lindsay Bobcaygeon and Pontypool Railway in 1904.

Lot Z was sold to John Alexander McDonnell in 1853, who sold the lands to Michael Dene in 1861. The lands were then sold to the same Anne Hudson who owned Lot Q in 1861. Similar to Lot Q Anne Hudson passed the land to David Hudson in 1893, who sold the lands west of Logie to Jessie Hudson in 1898. A portion of this lot was also sold to the railway in the early 1900s (Kirkconnell 1921).

No structures are shown in proximity to the study area in the 1879 or 1881 maps, nor in many of the surrounding lots. Some larger structures of commercial and industrial use are illustrated further to the north within the town and along the Scugog River (Map 10.7), but none are in proximity to the study area. There is no indication of any historic use of the study area other than possible farming prior to it being surveyed as a road allowance.

The study area is located approximately 100m west of the historic path of the Midland railway. The Midland Railway of Canada, originally the Port Hope, Lindsay and Beaverton Railway Company, began construction in 1855 and reached Lindsay in 1857. By 1869 had reached as far as Colborne Street. The railway was extended later to Peterborough in 1858 after the Cobourg and Peterborough Railway was proven unreliable due to the destruction of the causeway over Rice Lake, and then to Orillia in 1873. The line in proximity to the study area was originally part of the Victoria Railway Company and was brought into the Midland Railway Company along with the Port Hope, Lindsay and Beaverton Railway Company via a merger in 1881. The iron railway bridge across the Scugog River to the north of the study area was constructed in 1883. By the 20th century the Midland Railway was amalgamated into the Canadian Pacific Railway. The railway trail marking the western edge of the study area represents a later rail line constructed in 1910. This railway was originally known as the Georgian Bay and Seaboard Railway before incorporation in the Canadian Pacific Railway. This line ran from Dranoel to Port McNicoll.



Physiography and Registered Archaeological Sites

The study area is located in the Peterborough Drumlin Field physiographic region of southern Ontario (Chapman and Putnam, 1973). The Peterborough Drumlin Field is a rolling till plain of approximately 1750 square miles (4 532.5 square kilometres) lying between the Oak Ridges Moraine and the shallow overburden on the Black River Limestone Plain. With the City of Peterborough as its geographic centre it includes about 3000 drumlins, as well as numerous drumlinoid hills and surface flutings of glacial drift cover. Trenton limestone underlies most of the area. Dominant area soils are Otonabee Loam and Bondhead Loam. Soils are generally stony due to uplifting of the calcareous lower horizon by ploughing (Chapman and Putnam, 1973). The study area is approximately 340m north-west of the Schomberg Clay Plain which is a large low-lying area extending from the Oak Ridges Moraine northwards into the Peterborough Drumlin Field. The clay plain is characterized by large wetlands surrounding Lake Scugog and the tributaries of the Scugog River.

The study area is bordered to the east by Logie Street, the west by a railway recreation trail and steep ditch, and vacant land to the north, and south. All study area edges were also confirmed through the use of provided mapping, GPS, and survey markers.

A search of the archaeological sites database of the Ministry of Citizenship and Multiculturalism indicated that there are three registered archaeological sites within two kilometers of the study area. There are no registered sites within or adjacent to the study area.

Borden Number	Site Name	Time Period	Affinity	Site Type	Current Development Review Status
BcGq-15	Carew	Post-Contact	Euro-Canadian	midden	No Further CHVI
BcGq-20	Gaol Site	Post-Contact	Euro-Canadian	homestead, jail	Further CHVI
BcGq-21	23-499H1	Post-Contact	Euro-Canadian	scatter	No Further CHVI

A search for nearby archaeological assessments found the “Stage 1 & 2 Archaeological Assessment 61-75 Logie Street, Part of Lots 13, 14 and 15 West of Logie Street, Registered Plan 9P, Part of Park Lots Q and Z, Registered Plan 8P Part of Lot 19, Concession 6 Geographic Township of Ops, City of Kawartha Lakes.” undertaken by Earthworks Archaeological Services under P321-0034-2019. This assessment includes the study area, however due to inconsistencies between the report mapping and municipal lot mapping it is unclear whether the study area was fully assessed.

The closest major water source is the Scugog River, 25m west of the study area. Stage 1 research found the property to have high archaeological potential for First Nations and Euro-Canadian sites based on the following identified features of archaeological potential (Sect. 1.3.1, MTC 2011):



- Proximity to Registered Archaeological Sites
- Proximity to Water Source: (Scugog River)
- Areas of historic settlement and industry (Original Town Plan of Lindsay, Midland Railway)

3.0 FIELD METHODS

This property is considered high potential according to the 2011 Standards set out for consulting Archaeologists by the Ministry of Tourism and Culture due to its proximity to registered archaeological sites, water sources, and areas of historic development. In accordance with these standards, the study area was surveyed at 5-meter intervals. Stage 2 survey methodologies are illustrated in Map 10.5. The location, number, and orientation of fieldwork report photos are illustrated in Map 10.6.

All shovel tests were excavated to a minimum of 30cm in diameter and into the top 5cm of subsoil or to bedrock. All excavations were examined for evidence of cultural features, stratigraphy, or evidence of disturbance. All excavations were backfilled after they were screened through a 6mm mesh rocker screen (Standards 5-9, Section 2.1.2, MTC 2011). Additionally, shovel tests were conducted within 1m of all standing structures within the study area (Standard 4, Section 2.1.2, MTC 2011). The soil profile in the assessed area is characterised by 15-25cm of stoney clay-loam brown soil above an orange-brown rocky sand subsoil.

Approximately 90% of study area was shovel tested as per Standards 1., e. of Section 2.1.2 (MTC 2011). The entire area was assessed visually. The areas suitable for shovel test assessment consisted of the maintained lawns surrounding the existing pumping station extending from Logie Street to the steep-sided ditch marking the railway trail. Areas around the existing pumping station inside the locked fencing was included in testing. The gravel entrance was less than 5m in width and did not represent an obstacle to the transect interval. Testing of the gravel turn-around and parking area confirmed disturbance to a depth below subsoil. This area is visible in Report Images 9.1-9.6, and is shaded in green in Map 10.5.

Approximately 10% of the study area was not suitable for stage 2 assessment due to the presence of steep (>20 degrees) as per Standard 2.a.iii, Section 2.1 (MTC 2011). This included the rock-covered slope descending to the water-filled ditch marking the western edge of the study area. This area is visible in Image 9.4, and is shaded purple in Map 10.5.



Stage 2 testing was conducted under clear and mild conditions on April 24, 2025. The entire study area was assessed.

4.0 RECORD OF FINDS

Stage 2 assessment of the study area did not result in the discovery of any archaeological resources or otherwise.

4.1 FIELD DOCUMENTATION

The Stage 2 assessment produced 20 fieldwork and field condition photos, one modified aerial photograph/study area maps, and one page of field notes. All documents are on file at *Northeastern Archaeological Associates* offices.

5.0 ANALYSIS AND CONCLUSIONS

No archaeological resources were recovered during Stage 2 shovel test assessment at 5-meter intervals within the study area, as described in Section 3.0 of this report. The lack of recovered material during Stage 2 Assessment makes it unlikely that any archaeological resources exist within the study area at 75 Logie Street, part of Lot 16, Concession 9, Geographic Township of Ops, Historic County of Victoria, Town of Lindsay, City of Kawartha Lakes, Ontario.

6.0 RECOMMENDATIONS

Based on the Stage 2 assessment results it is the recommendation of Northeastern Archaeological Associates Ltd. that the study area 75 Logie Street, part of Lot 16, Concession 9, Geographic Township of Ops, Historic County of Victoria, Town of Lindsay, City of Kawartha Lakes, Ontario does not possess any archaeological resources and that no further archaeological work is required within the study area. If any archaeological resources should be discovered during the course of development, all excavation must stop immediately, and an archaeologist must be contacted.

If any future development is proposed on the surrounding road allowances that extends beyond the boundaries of the study area, as depicted in Map 10.2-10.8, an additional archaeological assessment is required prior to development as per (Section 1.3, Standard 1; Section



2.1, Standards 1-2; Section 7.7.4, Standard 1a; Section 7.7.6, Standard 3; Section 7.8.7, Standard 1b).

7.0 ADVICE ON COMPLIANCE WITH LEGISLATION

a. This report is submitted to the Minister of Citizenship and Multiculturalism as a condition of licencing in accordance with Part VI of the Ontario Heritage Act, R.S.O. 1990, c 0.18. The report is reviewed to ensure that it complies with the standards that are issued by the Minister, and that the archaeological fieldwork and report recommendations ensure the conservation, protection and preservation of the cultural heritage of Ontario. When all matters relating to archaeological sites within the project area of a development proposal have been addressed to the satisfaction of the Ministry of Citizenship and Multiculturalism, a letter will be issued by the Ministry stating that there are no further concerns with regard to alterations to archaeological sites by the proposed development.

b. It is an offence under Sections 48 and 69 of the Ontario Heritage Act for any party other than a licenced archaeologist to make any alteration to a known archaeological site or to remove any artifact or other physical evidence of past human use or activity from the site, until such time as a licensed archaeologist has completed archaeological fieldwork on the site, submitted a report to the Minister stating that the site has no further cultural heritage value or interest, and the report has been entered in the Ontario Public Register of Archaeology Reports referred to in Section 65.1 of the Ontario Heritage Act.

c. 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 licenced consultant archaeologist to carry out archaeological fieldwork, in compliance with Section 48 (1) of the Ontario Heritage Act.

d. The Cemeteries Act, R.S.O. 1990 c. C.4 and the Funeral, Burial and Cremation Services Act, 2002, S.O. 2002, c.33 (proclaimed in force July 01, 2012) require that any person discovering



human remains must notify the police or coroner and the Registrar of Cemeteries at the Ministry of Consumer Services. 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.

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Section 9.0: Figures



Image 9.1: Oriented NE- Shovel Testing on West Side of Logie Street South of Pumping Station.



Image 9.2: Oriented S- Shovel Testing on West Side of Logie Street North of Pumping Station.



Image 9.3: Oriented W- Shovel Testing Northern Edge of Study Area



Image 9.4: Oriented S- Shovel Testing Western Edge of Study Area at Edge of Erosion Control Stone Lined Embankment

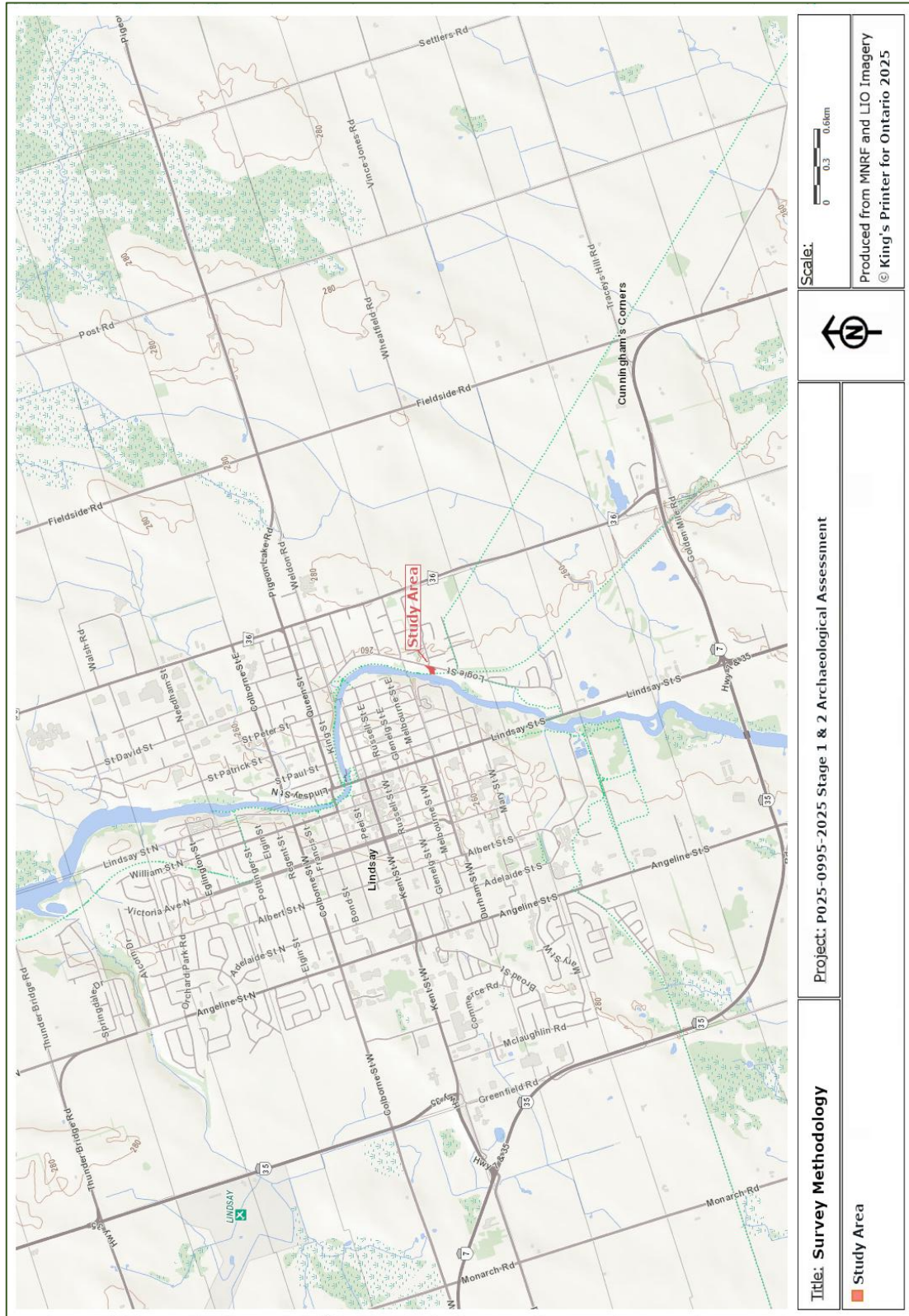


Image 9.5: Oriented NE- Shovel Testing Gravel Parking Area in Central Portion of Study Area.

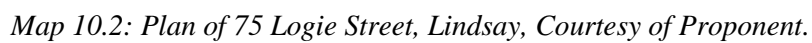


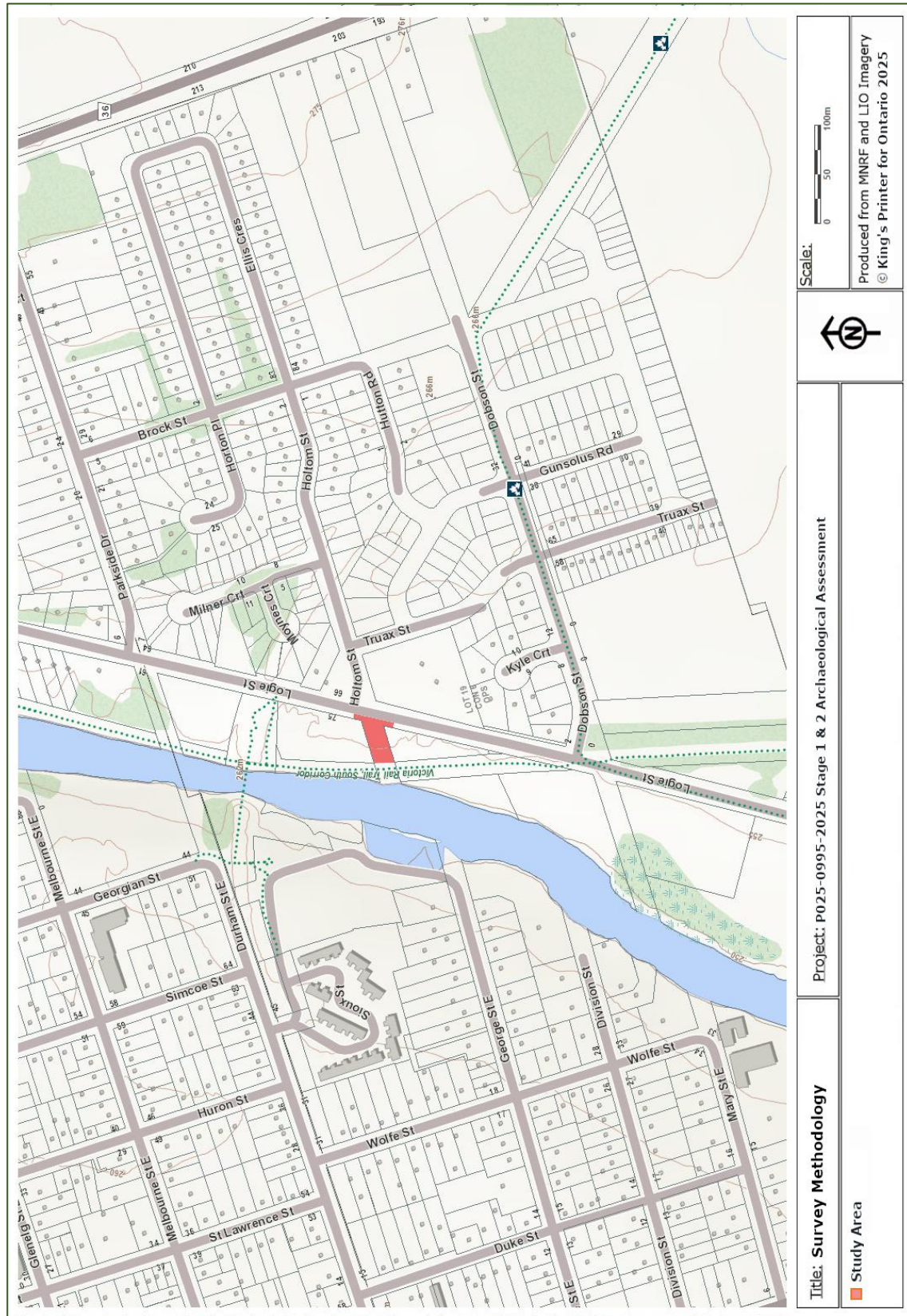
Image 9.6: Oriented W- Shovel Testing in Fenced Enclosure of Existing Pumping Station.

Section 10.0: Mapping and Graphics

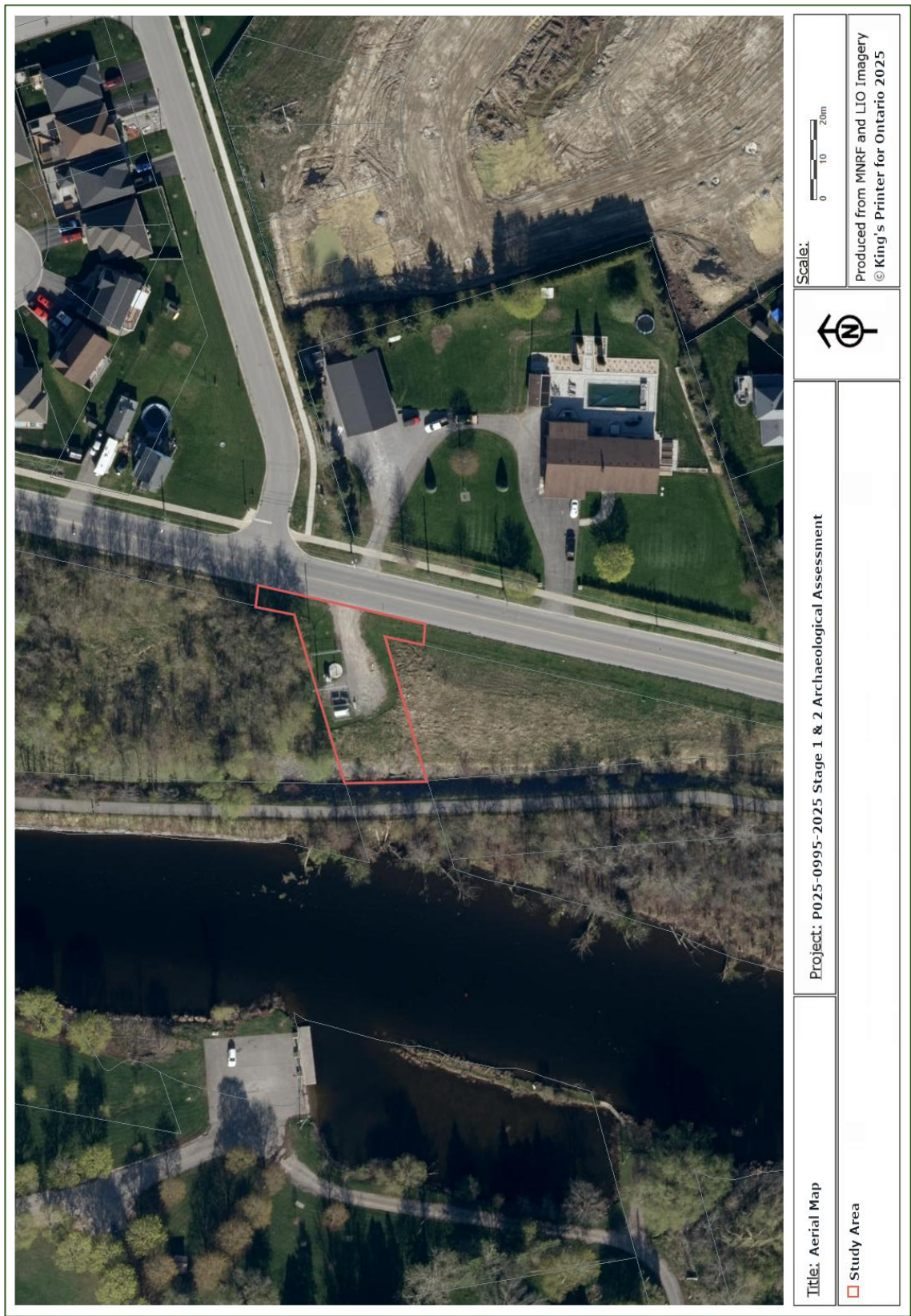


Map 10.1: View of the Study Area within City of Kawartha Lakes.





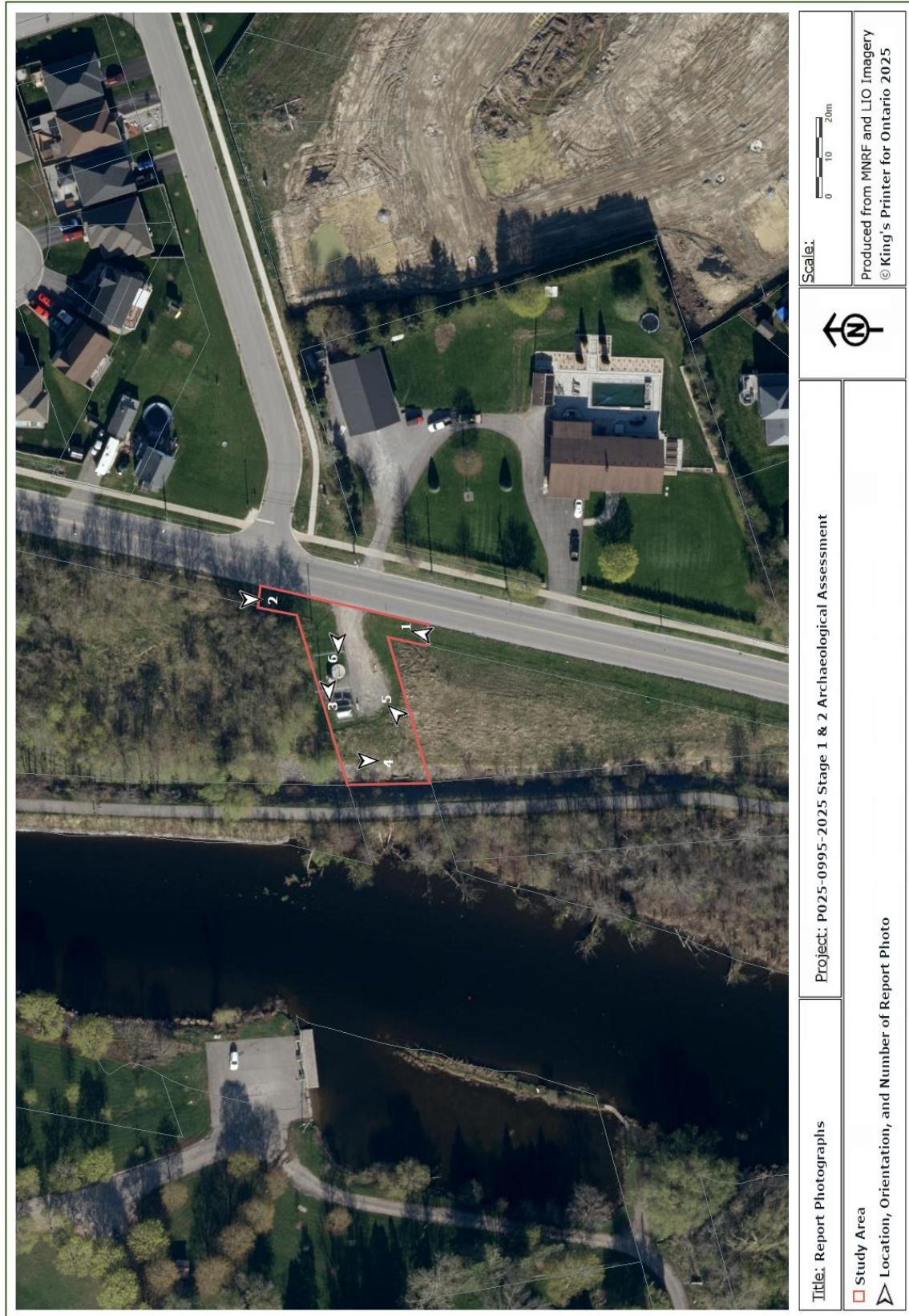
Map 10.3: Topographic Map of the Study Area.



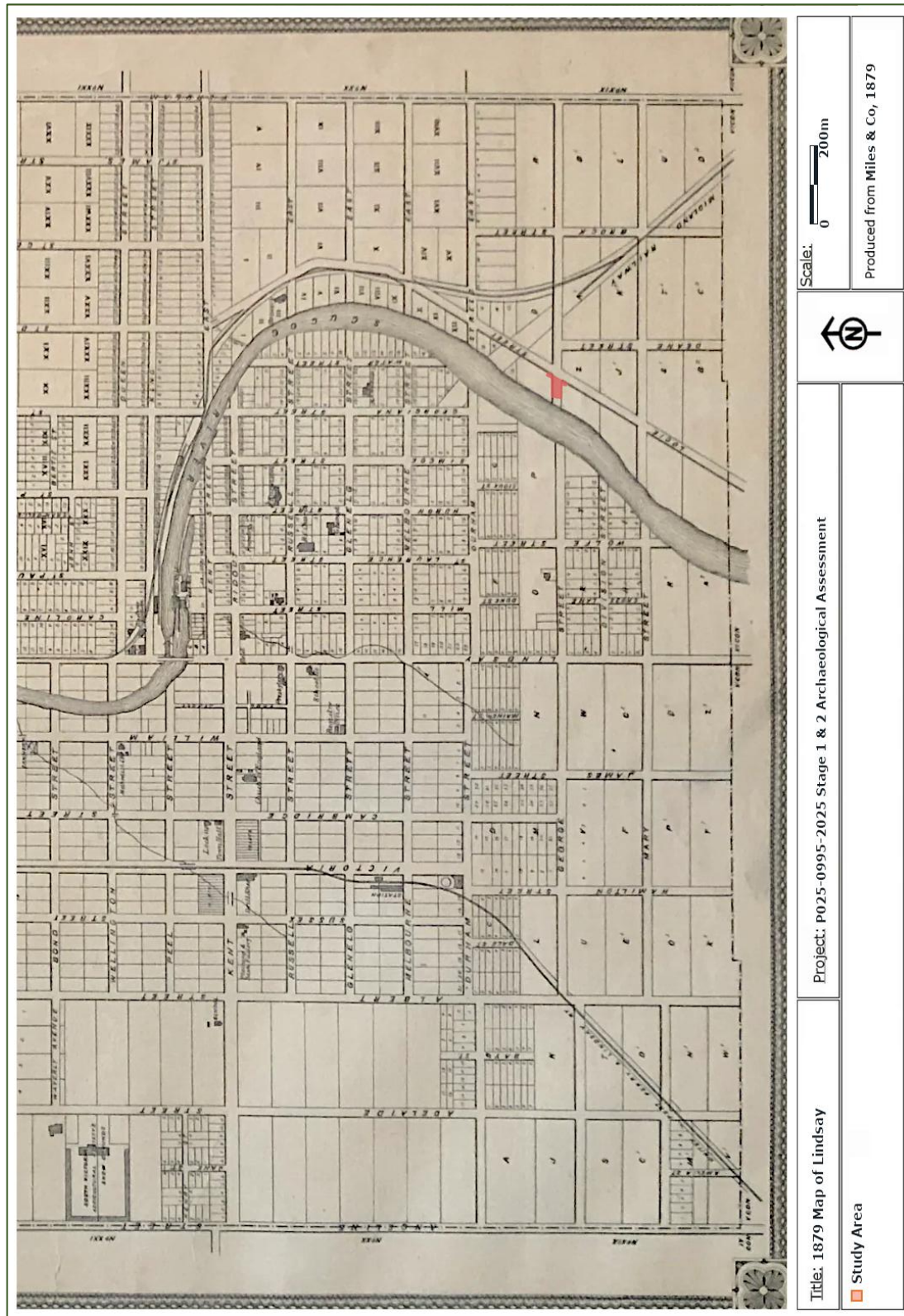
Map 10.4: Aerial View of the Study Area.



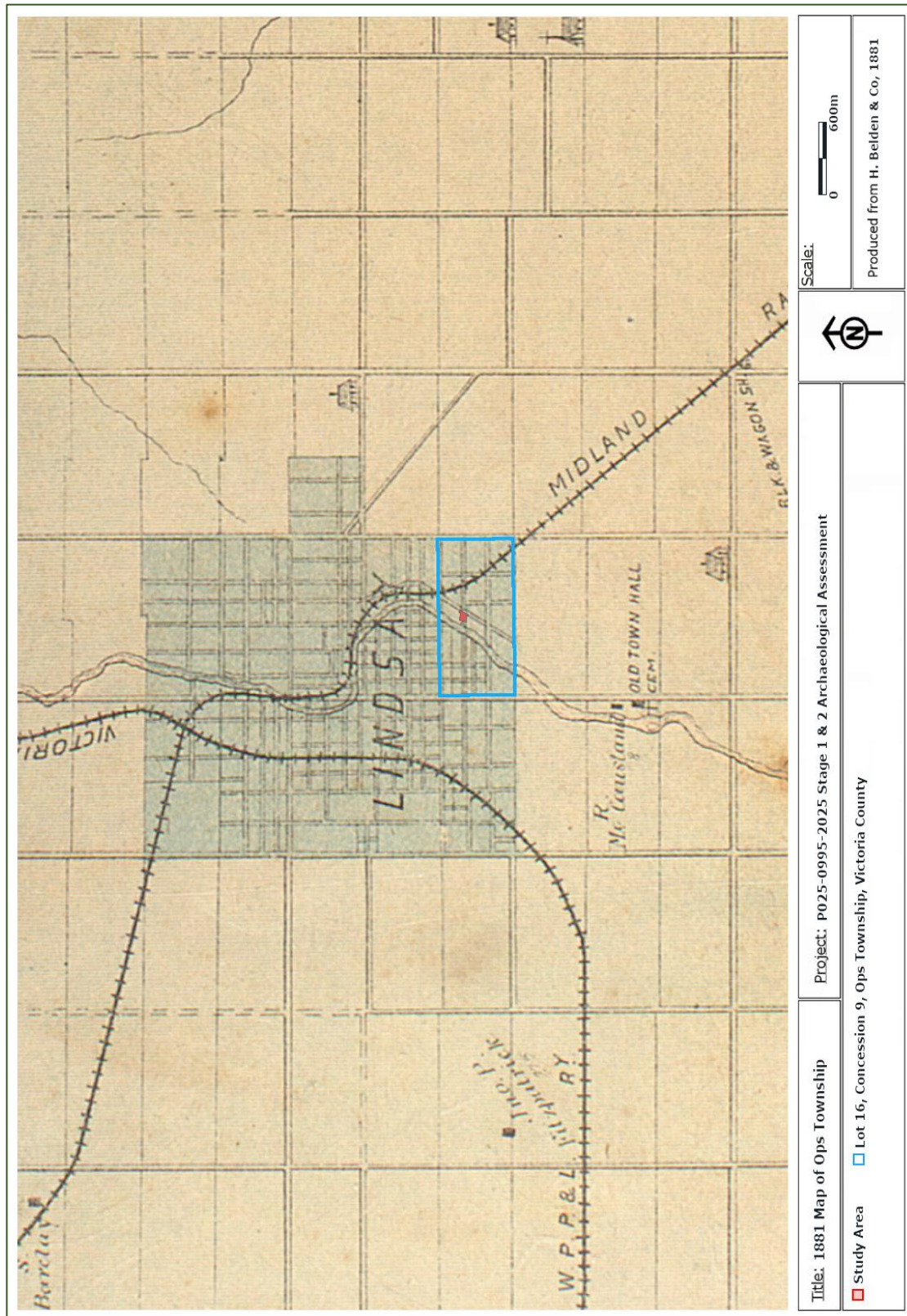
Map 10.5: Zones of Shovel Testing Survey and Slope Within the Study Area.



Map 10.6: Location and Orientation of Images Presented in this Report.



Map 10.7: 1879 Robert Romaine Map of Lindsay Indicating the Approximate Location of the Study Area.



Map 10.8: 1879 Robert Romaine Map of Lindsay Indicating the Approximate Location of the Study Area.



Appendix F: MCM Checklists

Criteria for Evaluating Potential for Built Heritage Resources and Cultural Heritage Landscapes

A Checklist for the Non-Specialist

The **purpose of the checklist** is to determine:

- if a property(ies) or project area:
 - is a recognized heritage property
 - may be of cultural heritage value
- it includes all areas that may be impacted by project activities, including – but not limited to:
 - the main project area
 - temporary storage
 - staging and working areas
 - temporary roads and detours

Processes covered under this checklist, such as:

- *Planning Act*
- *Environmental Assessment Act*
- *Aggregates Resources Act*
- *Ontario Heritage Act* – Standards and Guidelines for Conservation of Provincial Heritage Properties

Cultural Heritage Evaluation Report (CHER)

If you are not sure how to answer one or more of the questions on the checklist, you may want to hire a qualified person(s) (see page 5 for definitions) to undertake a cultural heritage evaluation report (CHER).

The CHER will help you:

- identify, evaluate and protect cultural heritage resources on your property or project area
- reduce potential delays and risks to a project

Other checklists

Please use a separate checklist for your project, if:

- you are seeking a Renewable Energy Approval under Ontario Regulation 359/09 – [separate checklist](#)
- your Parent Class EA document has an approved screening criteria (as referenced in Question 1)

Please refer to the Instructions pages for more detailed information and when completing this form.

Project or Property Name

Logie Street Sewage Pumping Station

Project or Property Location (upper and lower or single tier municipality)

Lindsay - 77 Logie Street

Proponent Name

The City of Kawartha Lakes

Proponent Contact Information

Jeanorth Sinnakandu - jeanorth.sinnakandu@jp2g.com - (613) 966-3068 ext. 392

Screening Questions

	Yes	No
1. Is there a pre-approved screening checklist, methodology or process in place?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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 <i>Ontario Heritage Act</i> as being of cultural heritage value?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. a National Historic Site (or part of)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. designated under the <i>Heritage Railway Stations Protection Act</i> ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. designated under the <i>Heritage Lighthouse Protection Act</i> ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e. identified as a Federal Heritage Building by the Federal Heritage Buildings Review Office (FHBRO)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f. located within a United Nations Educational, Scientific and Cultural Organization (UNESCO) World Heritage Site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. has or is adjacent to a known burial site and/or cemetery?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. is in a Canadian Heritage River watershed?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. contains buildings or structures that are 40 or more years old?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. has a special association with a community, person or historical event?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. contains or is part of a cultural heritage landscape?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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

Instructions

Please have the following available, when requesting information related to the screening questions below:

- a clear map showing the location and boundary of the property or project area
 - large scale and small scale showing nearby township names for context purposes
- the municipal addresses of all properties within the project area
- the lot(s), concession(s), and parcel number(s) of all properties within a project area

For more information, see the Ministry of Tourism, Culture and Sport's [Ontario Heritage Toolkit](#) or [Standards and Guidelines for Conservation of Provincial Heritage Properties](#).

In this context, the following definitions apply:

- **qualified person(s)** means individuals – professional engineers, architects, archaeologists, etc. – having relevant, recent experience in the conservation of cultural heritage resources.
- **proponent** means a person, agency, group or organization that carries out or proposes to carry out an undertaking or is the owner or person having charge, management or control of an undertaking.

1. Is there a pre-approved screening checklist, methodology or process in place?

An existing checklist, methodology or process may already be in place for identifying potential cultural heritage resources, including:

- one endorsed by a municipality
- an environmental assessment process e.g. screening checklist for municipal bridges
- one that is approved by the Ministry of Tourism, Culture and Sport (MTCS) under the Ontario government's [Standards & Guidelines for Conservation of Provincial Heritage Properties](#) [s.B.2.]

Part A: Screening for known (or recognized) Cultural Heritage Value

2. Has the property (or project area) been evaluated before and found not to be of cultural heritage value?

Respond 'yes' to this question, if all of the following are true:

A property can be considered not to be of cultural heritage value if:

- a Cultural Heritage Evaluation Report (CHER) - or equivalent - has been prepared for the property with the advice of a qualified person and it has been determined not to be of cultural heritage value and/or
- the municipal heritage committee has evaluated the property for its cultural heritage value or interest and determined that the property is not of cultural heritage value or interest

A property may need to be re-evaluated, if:

- there is evidence that its heritage attributes may have changed
- new information is available
- the existing Statement of Cultural Heritage Value does not provide the information necessary to manage the property
- the evaluation took place after 2005 and did not use the criteria in Regulations 9/06 and 10/06

Note: Ontario government ministries and public bodies [prescribed under Regulation 157/10] may continue to use their existing evaluation processes, until the evaluation process required under section B.2 of the Standards & Guidelines for Conservation of Provincial Heritage Properties has been developed and approved by MTCS.

To determine if your property or project area has been evaluated, contact:

- the approval authority
- the proponent
- the Ministry of Tourism, Culture and Sport

3a. Is the property (or project area) identified, designated or otherwise protected under the *Ontario Heritage Act* as being of cultural heritage value e.g.:

- i. designated under the *Ontario Heritage Act*
 - individual designation (Part IV)
 - part of a heritage conservation district (Part V)

Individual Designation – Part IV

A property that is designated:

- by a municipal by-law as being of cultural heritage value or interest [s.29 of the *Ontario Heritage Act*]
- by order of the Minister of Tourism, Culture and Sport as being of cultural heritage value or interest of provincial significance [s.34.5]. **Note:** To date, no properties have been designated by the Minister.

Heritage Conservation District – Part V

A property or project area that is located within an area designated by a municipal by-law as a heritage conservation district [s. 41 of the *Ontario Heritage Act*].

For more information on Parts IV and V, contact:

- municipal clerk
 - [Ontario Heritage Trust](#)
 - local land registry office (for a title search)
-

ii. subject of an agreement, covenant or easement entered into under Parts II or IV of the *Ontario Heritage Act*

An agreement, covenant or easement is usually between the owner of a property and a conservation body or level of government. It is usually registered on title.

The primary purpose of the agreement is to:

- preserve, conserve, and maintain a cultural heritage resource
- prevent its destruction, demolition or loss

For more information, contact:

- [Ontario Heritage Trust](#) - for an agreement, covenant or easement [clause 10 (1) (c) of the *Ontario Heritage Act*]
 - municipal clerk – for a property that is the subject of an easement or a covenant [s.37 of the *Ontario Heritage Act*]
 - local land registry office (for a title search)
-

iii. listed on a register of heritage properties maintained by the municipality

Municipal registers are the official lists - or record - of cultural heritage properties identified as being important to the community.

Registers include:

- all properties that are designated under the *Ontario Heritage Act* (Part IV or V)
- properties that have not been formally designated, but have been identified as having cultural heritage value or interest to the community

For more information, contact:

- municipal clerk
 - municipal heritage planning staff
 - municipal heritage committee
-

iv. subject to a notice of:

- intention to designate (under Part IV of the *Ontario Heritage Act*)
- a Heritage Conservation District study area bylaw (under Part V of the *Ontario Heritage Act*)

A property that is subject to a **notice of intention to designate** as a property of cultural heritage value or interest and the notice is in accordance with:

- section 29 of the *Ontario Heritage Act*
- section 34.6 of the *Ontario Heritage Act*. **Note:** To date, the only applicable property is Meldrum Bay Inn, Manitoulin Island. [s.34.6]

An area designated by a municipal by-law made under section 40.1 of the *Ontario Heritage Act* as a **heritage conservation district study area**.

For more information, contact:

- municipal clerk – for a property that is the subject of notice of intention [s. 29 and s. 40.1]
 - [Ontario Heritage Trust](#)
-

- v. included in the Ministry of Tourism, Culture and Sport's list of provincial heritage properties

Provincial heritage properties are properties the Government of Ontario owns or controls that have cultural heritage value or interest.

The Ministry of Tourism, Culture and Sport (MTCS) maintains a list of all provincial heritage properties based on information provided by ministries and prescribed public bodies. As they are identified, MTCS adds properties to the list of provincial heritage properties.

For more information, contact the MTCS Registrar at registrar@ontario.ca.

3b. Is the property (or project area) a National Historic Site (or part of)?

National Historic Sites are properties or districts of national historic significance that are designated by the Federal Minister of the Environment, under the *Canada National Parks Act*, based on the advice of the Historic Sites and Monuments Board of Canada.

For more information, see the [National Historic Sites website](#).

3c. Is the property (or project area) designated under the *Heritage Railway Stations Protection Act*?

The *Heritage Railway Stations Protection Act* protects heritage railway stations that are owned by a railway company under federal jurisdiction. Designated railway stations that pass from federal ownership may continue to have cultural heritage value.

For more information, see the [Directory of Designated Heritage Railway Stations](#).

3d. Is the property (or project area) designated under the *Heritage Lighthouse Protection Act*?

The *Heritage Lighthouse Protection Act* helps preserve historically significant Canadian lighthouses. The Act sets up a public nomination process and includes heritage building conservation standards for lighthouses which are officially designated.

For more information, see the [Heritage Lighthouses of Canada](#) website.

3e. Is the property (or project area) identified as a Federal Heritage Building by the Federal Heritage Buildings Review Office?

The role of the Federal Heritage Buildings Review Office (FHBRO) is to help the federal government protect the heritage buildings it owns. The policy applies to all federal government departments that administer real property, but not to federal Crown Corporations.

For more information, contact the [Federal Heritage Buildings Review Office](#).

See a [directory of all federal heritage designations](#).

3f. Is the property (or project area) located within a United Nations Educational, Scientific and Cultural Organization (UNESCO) World Heritage Site?

A UNESCO World Heritage Site is a place listed by UNESCO as having outstanding universal value to humanity under the Convention Concerning the Protection of the World Cultural and Natural Heritage. In order to retain the status of a World Heritage Site, each site must maintain its character defining features.

Currently, the Rideau Canal is the only World Heritage Site in Ontario.

For more information, see Parks Canada – [World Heritage Site website](#).

Part B: Screening for potential Cultural Heritage Value

4a. Does the property (or project area) contain a parcel of land that has a municipal, provincial or federal commemorative or interpretive plaque?

Heritage resources are often recognized with formal plaques or markers.

Plaques are prepared by:

- municipalities
- provincial ministries or agencies
- federal ministries or agencies
- local non-government or non-profit organizations

For more information, contact:

- [municipal heritage committees](#) or local heritage organizations – for information on the location of plaques in their community
- Ontario Historical Society's [Heritage directory](#) – for a list of historical societies and heritage organizations
- Ontario Heritage Trust – for a [list of plaques](#) commemorating Ontario's history
- Historic Sites and Monuments Board of Canada – for a [list of plaques](#) commemorating Canada's history

4b. Does the property (or project area) contain a parcel of land that has or is adjacent to a known burial site and/or cemetery?

For more information on known cemeteries and/or burial sites, see:

- Cemeteries Regulations, Ontario Ministry of Consumer Services – for a [database of registered cemeteries](#)
- Ontario Genealogical Society (OGS) – to [locate records of Ontario cemeteries](#), both currently and no longer in existence; cairns, family plots and burial registers
- Canadian County Atlas Digital Project – to [locate early cemeteries](#)

In this context, adjacent means contiguous or as otherwise defined in a municipal official plan.

4c. Does the property (or project area) contain a parcel of land that is in a Canadian Heritage River watershed?

The Canadian Heritage River System is a national river conservation program that promotes, protects and enhances the best examples of Canada's river heritage.

Canadian Heritage Rivers must have, and maintain, outstanding natural, cultural and/or recreational values, and a high level of public support.

For more information, contact the [Canadian Heritage River System](#).

If you have questions regarding the boundaries of a watershed, please contact:

- your conservation authority
- municipal staff

4d. Does the property (or project area) contain a parcel of land that contains buildings or structures that are 40 or more years old?

A 40 year 'rule of thumb' is typically used to indicate the potential of a site to be of cultural heritage value. The approximate age of buildings and/or structures may be estimated based on:

- history of the development of the area
- fire insurance maps
- architectural style
- building methods

Property owners may have information on the age of any buildings or structures on their property. The municipality, local land registry office or library may also have background information on the property.

Note: 40+ year old buildings or structure do not necessarily hold cultural heritage value or interest; their age simply indicates a higher potential.

A building or structure can include:

- residential structure
- farm building or outbuilding
- industrial, commercial, or institutional building
- remnant or ruin
- engineering work such as a bridge, canal, dams, etc.

For more information on researching the age of buildings or properties, see the Ontario Heritage Tool Kit Guide [Heritage Property Evaluation](#).

Part C: Other Considerations

5a. Is there local or Aboriginal knowledge or accessible documentation suggesting that the property (or project area) is considered a landmark in the local community or contains any structures or sites that are important to defining the character of the area?

Local or Aboriginal knowledge may reveal that the project location is situated on a parcel of land that has potential landmarks or defining structures and sites, for instance:

- buildings or landscape features accessible to the public or readily noticeable and widely known
- complexes of buildings
- monuments
- ruins

5b. Is there local or Aboriginal knowledge or accessible documentation suggesting that the property (or project area) has a special association with a community, person or historical event?

Local or Aboriginal knowledge may reveal that the project location is situated on a parcel of land that has a special association with a community, person or event of historic interest, for instance:

- Aboriginal sacred site
- traditional-use area
- battlefield
- birthplace of an individual of importance to the community

5c. Is there local or Aboriginal knowledge or accessible documentation suggesting that the property (or project area) contains or is part of a cultural heritage landscape?

Landscapes (which may include a combination of archaeological resources, built heritage resources and landscape elements) may be of cultural heritage value or interest to a community.

For example, an Aboriginal trail, historic road or rail corridor may have been established as a key transportation or trade route and may have been important to the early settlement of an area. Parks, designed gardens or unique landforms such as waterfalls, rock faces, caverns, or mounds are areas that may have connections to a particular event, group or belief.

For more information on Questions 5.a., 5.b. and 5.c., contact:

- Elders in Aboriginal Communities or community researchers who may have information on potential cultural heritage resources. Please note that Aboriginal traditional knowledge may be considered sensitive.
- [municipal heritage committees](#) or local heritage organizations
- Ontario Historical Society's "[Heritage Directory](#)" - for a list of historical societies and heritage organizations in the province

An internet search may find helpful resources, including:

- historical maps
- historical walking tours
- municipal heritage management plans
- cultural heritage landscape studies
- municipal cultural plans

Information specific to trails may be obtained through [Ontario Trails](#).

The **purpose of the checklist** is to determine:

- if a property(ies) or project area may contain archaeological resources i.e., have archaeological potential
- it includes all areas that may be impacted by project activities, including – but not limited to:
 - the main project area
 - temporary storage
 - staging and working areas
 - temporary roads and detours

Processes covered under this checklist, such as:

- *Planning Act*
- *Environmental Assessment Act*
- *Aggregates Resources Act*
- *Ontario Heritage Act* – Standards and Guidelines for Conservation of Provincial Heritage Properties

Archaeological assessment

If you are not sure how to answer one or more of the questions on the checklist, you may want to hire a licensed consultant archaeologist (see page 4 for definitions) to undertake an archaeological assessment.

The assessment will help you:

- identify, evaluate and protect archaeological resources on your property or project area
- reduce potential delays and risks to your project

Note: By law, archaeological assessments **must** be done by a licensed consultant archaeologist. Only a licensed archaeologist can assess – or alter – an archaeological site.

What to do if you:

- **find an archaeological resource**

If you find something you think may be of archaeological value during project work, you must – by law – stop all activities immediately and contact a licensed consultant archaeologist

The archaeologist will carry out the fieldwork in compliance with the *Ontario Heritage Act* [s.48(1)].

- **unearth a burial site**

If you find a burial site containing human remains, you must immediately notify the appropriate authorities (i.e., police, coroner's office, and/or Registrar of Cemeteries) and comply with the *Funeral, Burial and Cremation Services Act*.

Other checklists

Please use a separate checklist for your project, if:

- you are seeking a Renewable Energy Approval under Ontario Regulation 359/09 – [separate checklist](#)
- your Parent Class EA document has an approved screening criteria (as referenced in Question 1)

Please refer to the Instructions pages when completing this form.

Project or Property Name

Logie Street Sewage Pumping Station

Project or Property Location (upper and lower or single tier municipality)

Lindsay - 77 Logie Street

Proponent Name

The City of Kawartha Lakes

Proponent Contact Information

Jeanorth Sinnakandu - jeanorth.sinnakandu@jp2g.com - (613) 966-3068 ext. 392

Screening Questions

	Yes	No
1. Is there a pre-approved screening checklist, methodology or process in place?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

If Yes, please follow the pre-approved screening checklist, methodology or process.

If No, continue to Question 2.

	Yes	No
2. Has an archaeological assessment been prepared for the property (or project area) and been accepted by MTCS?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

If Yes, do **not** complete the rest of the checklist. You are expected to follow the recommendations in the archaeological assessment report(s).

The proponent, property owner and/or approval authority will:

- summarize the previous assessment
- add this checklist to the project file, with the appropriate documents that demonstrate an archaeological assessment was undertaken e.g., MTCS letter stating acceptance of archaeological assessment report

The summary and appropriate documentation may be:

- submitted as part of a report requirement e.g., environmental assessment document
- maintained by the property owner, proponent or approval authority

If No, continue to Question 3.

	Yes	No
3. Are there known archaeological sites on or within 300 metres of the property (or the project area)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Yes	No
4. Is there Aboriginal or local knowledge of archaeological sites on or within 300 metres of the property (or project area)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Yes	No
5. Is there Aboriginal knowledge or historically documented evidence of past Aboriginal use on or within 300 metres of the property (or project area)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Yes	No
6. Is there a known burial site or cemetery on the property or adjacent to the property (or project area)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Yes	No
7. Has the property (or project area) been recognized for its cultural heritage value?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

If Yes to any of the above questions (3 to 7), do **not** complete the checklist. Instead, you need to hire a licensed consultant archaeologist to undertake an archaeological assessment of your property or project area.

If No, continue to question 8.

	Yes	No
8. Has the entire property (or project area) been subjected to recent, extensive and intensive disturbance?	<input checked="" type="checkbox"/>	<input type="checkbox"/>

If Yes to the preceding question, do **not** complete the checklist. Instead, please keep and maintain a summary of documentation that provides evidence of the recent disturbance.

An archaeological assessment is not required.

If No, continue to question 9.

	Yes	No
9. Are there present or past water sources within 300 metres of the property (or project area)?	<input type="checkbox"/>	<input type="checkbox"/>

If Yes, an archaeological assessment is required.

If No, continue to question 10.

	Yes	No
10. Is there evidence of two or more of the following on the property (or project area)?	<input type="checkbox"/>	<input type="checkbox"/>

- elevated topography
- pockets of well-drained sandy soil
- distinctive land formations
- resource extraction areas
- early historic settlement
- early historic transportation routes

If Yes, an archaeological assessment is required.

If No, there is low potential for archaeological resources at the property (or project area).

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

Instructions

Please have the following available, when requesting information related to the screening questions below:

- a clear map showing the location and boundary of the property or project area
 - large scale and small scale showing nearby township names for context purposes
- the municipal addresses of all properties within the project area
- the lot(s), concession(s), and parcel number(s) of all properties within a project area

In this context, the following definitions apply:

- **consultant archaeologist** means, as defined in Ontario regulation as an archaeologist who enters into an agreement with a client to carry out or supervise archaeological fieldwork on behalf of the client, produce reports for or on behalf of the client and provide technical advice to the client. In Ontario, these people also are required to hold a valid professional archaeological licence issued by the Ministry of Tourism, Culture and Sport.
- **proponent** means a person, agency, group or organization that carries out or proposes to carry out an undertaking or is the owner or person having charge, management or control of an undertaking.

1. Is there a pre-approved screening checklist, methodology or process in place?

An existing checklist, methodology or process may be already in place for identifying archaeological potential, including:

- one prepared and adopted by the municipality e.g., archaeological management plan
- an environmental assessment process e.g., screening checklist for municipal bridges
- one that is approved by the Ministry of Tourism, Culture and Sport under the Ontario government's [Standards & Guidelines for Conservation of Provincial Heritage Properties](#) [s. B.2.]

2. Has an archaeological assessment been prepared for the property (or project area) and been accepted by MTCS?

Respond 'yes' to this question, if all of the following are true:

- an archaeological assessment report has been prepared and is in compliance with MTCS requirements
 - a letter has been sent by MTCS to the licensed archaeologist confirming that MTCS has added the report to the Ontario Public Register of Archaeological Reports (Register)
- the report states that there are no concerns regarding impacts to archaeological sites

Otherwise, if an assessment has been completed and deemed compliant by the MTCS, and the ministry recommends further archaeological assessment work, this work will need to be completed.

For more information about archaeological assessments, contact:

- approval authority
- proponent
- consultant archaeologist
- Ministry of Tourism, Culture and Sport at archaeology@ontario.ca

3. Are there known archaeological sites on or within 300 metres of the property (or project area)?

MTCS maintains a database of archaeological sites reported to the ministry.

For more information, contact MTCS Archaeological Data Coordinator at archaeology@ontario.ca.

4. Is there Aboriginal or local knowledge of archaeological sites on or within 300 metres of the property?

Check with:

- Aboriginal communities in your area
- local municipal staff

They may have information about archaeological sites that are not included in MTCS' database.

Other sources of local knowledge may include:

- property owner
- [local heritage organizations and historical societies](#)
- local museums
- [municipal heritage committee](#)
- published local histories

5. Is there Aboriginal knowledge or historically documented evidence of past Aboriginal use on or within 300 metres of the property (or property area)?

Check with:

- Aboriginal communities in your area
- local municipal staff

Other sources of local knowledge may include:

- property owner
- [local heritage organizations and historical societies](#)
- local museums
- [municipal heritage committee](#)
- published local histories

6. Is there a known burial site or cemetery on the property or adjacent to the property (or project area)?

For more information on known cemeteries and/or burial sites, see:

- Cemeteries Regulation Unit, Ontario Ministry of Consumer Services – for [database of registered cemeteries](#)
- Ontario Genealogical Society (OGS) – to [locate records of Ontario cemeteries](#), both currently and no longer in existence; cairns, family plots and burial registers
- Canadian County Atlas Digital Project – to [locate early cemeteries](#)

In this context, ‘adjacent’ means ‘contiguous’, or as otherwise defined in a municipal official plan.

7. Has the property (or project area) been recognized for its cultural heritage value?

There is a strong chance there may be archaeological resources on your property (or immediate area) if it has been listed, designated or otherwise identified as being of cultural heritage value by:

- your municipality
- Ontario government
- Canadian government

This includes a property that is:

- designated under *Ontario Heritage Act* (the OHA), including:
 - individual designation (Part IV)
 - part of a heritage conservation district (Part V)
 - an archaeological site (Part VI)
- subject to:
 - an agreement, covenant or easement entered into under the OHA (Parts II or IV)
 - a notice of intention to designate (Part IV)
 - a heritage conservation district study area by-law (Part V) of the OHA
- listed on:
 - a municipal register or inventory of heritage properties
 - Ontario government’s list of provincial heritage properties
 - Federal government’s list of federal heritage buildings
- part of a:
 - National Historic Site
 - UNESCO World Heritage Site
- designated under:
 - *Heritage Railway Station Protection Act*
 - *Heritage Lighthouse Protection Act*
- subject of a municipal, provincial or federal commemorative or interpretive plaque.

To determine if your property or project area is covered by any of the above, see:

- Part A of the MTCS Criteria for Evaluating Potential for Built Heritage and Cultural Heritage Landscapes

Part VI – Archaeological Sites

Includes five sites designated by the Minister under Regulation 875 of the Revised Regulation of Ontario, 1990 (Archaeological Sites) and 3 marine archaeological sites prescribed under Ontario Regulation 11/06.

For more information, check [Regulation 875](#) and [Ontario Regulation 11/06](#).

8. Has the entire property (or project area) been subjected to recent extensive and intensive ground disturbance?

Recent: after-1960

Extensive: over all or most of the area

Intensive: thorough or complete disturbance

Examples of ground disturbance include:

- quarrying
- major landscaping – involving grading below topsoil
- building footprints and associated construction area
 - where the building has deep foundations or a basement
- infrastructure development such as:
 - sewer lines
 - gas lines
 - underground hydro lines
 - roads
 - any associated trenches, ditches, interchanges. **Note:** this applies only to the excavated part of the right-of-way; the remainder of the right-of-way or corridor may not have been impacted.

A ground disturbance does **not** include:

- agricultural cultivation
- gardening
- landscaping

Site visits

You can typically get this information from a site visit. In that case, please document your visit in the process (e.g., report) with:

- photographs
- maps
- detailed descriptions

If a disturbance isn't clear from a site visit or other research, you need to hire a licensed consultant archaeologist to undertake an archaeological assessment.

9. Are there present or past water bodies within 300 metres of the property (or project area)?

Water bodies are associated with past human occupations and use of the land. About 80-90% of archaeological sites are found within 300 metres of water bodies.

Present

- Water bodies:
 - primary - lakes, rivers, streams, creeks
 - secondary - springs, marshes, swamps and intermittent streams and creeks
- accessible or inaccessible shoreline, for example:
 - high bluffs
 - swamps
 - marsh fields by the edge of a lake
 - sandbars stretching into marsh

Water bodies not included:

- man-made water bodies, for example:
 - temporary channels for surface drainage
 - rock chutes and spillways
 - temporarily ponded areas that are normally farmed
 - dugout ponds
- artificial bodies of water intended for storage, treatment or recirculation of:
 - runoff from farm animal yards
 - manure storage facilities
 - sites and outdoor confinement areas

Past

Features indicating past water bodies:

- raised sand or gravel beach ridges – can indicate glacial lake shorelines
- clear dip in the land – can indicate an old river or stream
- shorelines of drained lakes or marshes
- cobble beaches

You can get information about water bodies through:

- a site visit
- aerial photographs
- 1:10,000 scale [Ontario Base Maps](#) - or [equally detailed and scaled maps](#).

10. Is there evidence of two or more of the following on the property (or project area)?

- elevated topography
- pockets of well-drained sandy soil
- distinctive land formations
- resource extraction areas
- early historic settlement
- early historic transportation routes

• **Elevated topography**

Higher ground and elevated positions - surrounded by low or level topography - often indicate past settlement and land use.

Features such as eskers, drumlins, sizeable knolls, plateaus next to lowlands, or other such features are a strong indication of archaeological potential.

Find out if your property or project area has elevated topography, through:

- site inspection
- aerial photographs
- [topographical maps](#)

• **Pockets of well-drained sandy soil, especially within areas of heavy soil or rocky ground**

Sandy, well-drained soil - in areas characterized by heavy soil or rocky ground - may indicate archaeological potential

Find out if your property or project area has sandy soil through:

- site inspection
- [soil survey reports](#)

- **Distinctive land formations**

Distinctive land formations include – but are not limited to:

- waterfalls
- rock outcrops
- rock faces
- caverns
- mounds, etc.

They were often important to past inhabitants as special or sacred places. The following sites may be present – or close to – these formations:

- burials
- structures
- offerings
- rock paintings or carvings

Find out if your property or project areas has a distinctive land formation through:

- a site visit
- aerial photographs
- 1:10,000 scale [Ontario Base Maps](#) - or [equally detailed and scaled maps](#).

- **Resource extraction areas**

The following resources were collected in these extraction areas:

- food or medicinal plants e.g., migratory routes, spawning areas, prairie
- scarce raw materials e.g., quartz, copper, ochre or outcrops of chert
- resources associated with early historic industry e.g., fur trade, logging, prospecting, mining

Aboriginal communities may hold traditional knowledge about their past use or resources in the area.

- **Early historic settlement**

Early Euro-Canadian settlement include – but are not limited to:

- early military or pioneer settlement e.g., pioneer homesteads, isolated cabins, farmstead complexes
- early wharf or dock complexes
- pioneers churches and early cemeteries

For more information, see below – under the early historic transportation routes.

- **Early historic transportation routes** - such as trails, passes, roads, railways, portage routes, canals.

For more information, see:

- historical maps and/or historical atlases
 - for information on early settlement patterns such as trails (including Aboriginal trails), monuments, structures, fences, mills, historic roads, rail corridors, canals, etc.
 - [Archives of Ontario](#) holds a large collection of historical maps and historical atlases
 - digital versions of historic atlases are available on the [Canadian County Atlas Digital Project](#)
- commemorative markers or plaques such as local, [provincial](#) or [federal](#) agencies
- [municipal heritage committee](#) or other [local heritage organizations](#)
 - for information on early historic settlements or landscape features (e.g., fences, mill races, etc.)
 - for information on commemorative markers or plaques

Purpose

The **purpose of this checklist** is to help proponents determine:

- if a property or project area may contain marine archaeological resources or have marine archaeological potential

A marine archaeological site is fully or partially submerged, or lies below or partially below the high-water mark of any body of water.

The property or project area includes all submerged areas that may be impacted by project activities, including, but not limited to:

- the main project area
- temporary storage and stockpiling locations
- staging and work areas, such as docking platforms and dredging locations
- temporary features such as access routes, anchors, moorings and cofferdams.

Please refer to the **instructions** on pages 4 through 9 when completing this checklist

Processes covered

- *Planning Act*
- *Environmental Assessment Act*
- *Aggregate Resources Act*
- *Ontario Heritage Act*
 - Standards & Guidelines for Conservation of Provincial Heritage Properties
- *Canadian Environmental Assessment Act*
- *Canada Shipping Act*

Marine archaeological assessment

The assessment will help you:

- identify, evaluate and protect marine archaeological resources on your property or project area
- reduce potential delays and risks to your project

If you are not sure how to answer one or more of the questions on the checklist, you may want to hire a licensed marine archaeologist (defined on page 5) to undertake a marine archaeological assessment.

Note: Under Part VI of the *Ontario Heritage Act*, all marine archaeological assessments **must** be done by a licensed marine archaeologist. Only a licensed marine archaeologist can assess – or alter – a marine archaeological site.

Have you found a site?

If you find something you think may be of marine archaeological value during project work, you **must** – by law – stop all activities immediately and contact a licensed marine archaeologist. The marine archaeologist will carry out the fieldwork in compliance with the *Ontario Heritage Act*.

Have you found human remains?

If you find remains (e.g., bones) that could be of human origin, you **must** – by law – immediately notify the appropriate authorities (police, coroner's office, or Registrar of Cemeteries) and comply with the *Funeral, Burial and Cremation Services Act*.

Other Checklists

Please use a separate checklist for your project if:

- your Parent Class EA document has approved screening criteria
- your ministry's or prescribed public body's approved Identification and Evaluation Process includes approved screening criteria

Project or Property Name
Logie Street Sewage Pumping Station

Project or Property Location (upper and lower or single tier municipality)
Lindsay - 77 Logie Street

Proponent Name
Jeanorth Sinnakandu on behalf of The City of Kawartha Lakes

Proponent Contact Information

Telephone Number
613-966-3068

Fax Number
613-966-3087

Email Address
jeanorth.sinnakandu@jp2g.com

Screening Questions

1. Is there a government-authorized, pre-approved screening checklist, methodology or process in place?

☐ Yes ☒ No

If **Yes**, please follow the pre-approved screening checklist, methodology or process. Do not complete the rest of this checklist.

If **No**, continue to Question 2.

2. Has a marine archaeological assessment been prepared for the property or project area and been entered by MTCS into the Ontario Public Register of Archaeological Reports?

☐ Yes ☒ No

If **Yes**, do **not** complete the rest of the checklist. You are expected to follow the recommendations in the marine archaeological assessment report(s).

The proponent and/or approval authority will:

- summarize the previous marine archaeological assessment
- follow any recommendations for further marine archaeological assessment work, as applicable
- add this checklist to the project file, with the appropriate documents that demonstrate a marine archaeological assessment was undertaken (e.g. MTCS letter that states that the report has been entered into the Ontario Public Register of Archaeological Reports)

The summary and appropriate documentation may be:

- submitted as part of a report requirement, e.g. environmental assessment document
- maintained by the proponent or approval authority

If **No**, continue to Question 3.

3. Are there known marine or land-based archaeological sites on or within 500 metres of the property or project area?

☐ Yes ☒ No

4. Is there Aboriginal or local knowledge of marine or land-based archaeological sites on or within 500 metres of the property or project area?

☐ Yes ☒ No

5. Is there Aboriginal knowledge or historically documented evidence of past Aboriginal use on or within 500 metres of the property or project area?

☐ Yes ☒ No

6. Is there a known burial site or cemetery on the property or adjacent to the property or project area?

☐ Yes ☒ No

7. Has the property or project area been recognized for its cultural heritage value?

☐ Yes ☒ No

If **Yes** to any of questions 3 to 7, do **not** complete the checklist. Your property or project area could contain marine archaeological resources: please hire a licensed marine archaeologist to conduct a marine archaeological assessment.

If **No**, continue to Question 8.

8. Has the entire property or project area been subjected to recent, extensive and intensive disturbance?

☒ Yes ☐ No

If **Yes**, do **not** complete the checklist. Instead, please keep and maintain a summary of documentation that provides evidence of the recent disturbance. A marine archaeological assessment is not required.

If **No**, continue to Question 9.

9. Are there two or more reported or registered ship wreck sites or reports of lost ships within a five kilometre radius of the property or project area?
☐ Yes ☐ No
 If **Yes**, a marine archaeological assessment is required.
 If **No**, continue to Question 10.

10. Is the property or project area within one kilometre of an active or historic harbour, seaplane or floatplane base, tunnel, ferry route, marine terminal, or winter road?
☐ Yes ☐ No
 If **Yes**, a marine archaeological assessment is required.
 If **No**, continue to Question 11.

11. Where the project impacts fourth order or higher watercourses, are there existing narrows, rapids, waterfalls or does the watercourse enter or leave a body of water within 300 metres of the property or project area?
☐ Yes ☐ No
 If **Yes**, a marine archaeological assessment is required.
 If **No**, continue to Question 12.

12. Are there potential built heritage or cultural heritage landscape resources that may be of cultural heritage value or interest adjacent to the watercourse or water body?
☐ Yes ☐ No
 If **Yes**, a marine archaeological assessment is required.
 If **No**, continue to Question 13.

13. Are there inundated beaches, bluffs, lakeshores, streams or river banks within 300 metres of the property or project area?
☐ Yes ☐ No
 If **Yes**, a marine archaeological assessment is required.
 If **No**, continue to Question 14.

14. Are there inundated beaches, lakeshores or river/creek banks beyond 300 metres and at greater depth than the project area with evidence of two or more of the following in the project area?

- elevated bathymetric features such as drumlins, eskers, kames, ridges, etc.
- pockets of sandy lakebed
- distinctive bathymetric formations such as escarpments, shoals, promontories, reefs, etc.
- inundated resource extraction areas (quarry, fishery)
- inundated historical settlement including built heritage resources or cultural heritage landscapes
- inundated historical transportation routes

☐ Yes ☐ No
 If **Yes**, a marine archaeological assessment is required.
 If **No**, there is low potential for marine archaeological resources at the property (or project area).
 The proponent, property owner and/or approval authority will:

- summarize the conclusion
- add this checklist with the appropriate documentation to the project report or 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 and retained by the property owner, proponent or approval authority

Instructions

Please have the following available, when requesting information related to the screening questions:

- a clear map or chart showing the location and boundary of the property or project area
 - large scale and small scale maps/charts showing nearby islands or township names for context
- the municipal addresses of all properties or water lots within or adjacent to the project area, if any
- the lot, concession, parcel number or mining claims of any properties within the project area

In this context, the following definitions apply:

- **licensed marine archaeologist** means an archaeologist who has a valid marine archaeology licence issued by the Ministry of Tourism, Culture and Sport to practice in Ontario. As a consultant, a licensed marine archaeologist enters into an agreement with a client to carry out or supervise marine archaeological work on behalf of the client, produce reports for or on behalf of the client and provide technical advice to the client.
- **proponent** means a person, agency, group or organization that carries out or proposes to carry out an undertaking or is the owner or person having charge, management or control of an undertaking.

1. Is there a pre-approved screening checklist, methodology or process in place?

An existing checklist, methodology or process may be already in place to identify marine archaeological potential, including:

- one prepared and adopted by the municipality, such as an archaeological management plan
- an environmental assessment process, such as a screening checklist for municipal bridges
- projects being reviewed under the Canadian *Environmental Assessment Act*.
- one that is approved by the Ministry of Tourism, Culture and Sport under the Ontario government's [Standards & Guidelines for Conservation of Provincial Heritage Properties](#) [s. B.2.]

2. Has a marine archaeological assessment been prepared for the property or project area and been entered into the Ontario Public register of Archaeological Reports?

Respond 'yes' to this question, if all of the following are true:

- a marine archaeological assessment report has been prepared and complies with MTCS requirements
 - a letter has been sent by MTCS to the licensed marine archaeologist confirming that MTCS has entered the report into the Ontario Public Register of Archaeological Reports (Register)
- the report contains a recommendation stating that there are no further concerns regarding impacts to marine archaeological sites

If a marine archaeological assessment report has been completed and deemed compliant by MTCS, and the report contains a recommendation that further marine archaeological assessment work be undertaken, this work will need to be completed.

For more information about previously conducted marine archaeological assessments, contact:

- approval authority (such as a municipality or conservation authority)
- proponent for whom the marine archaeological assessment was carried out
- consultant archaeologist qualified to hold a marine archaeology licence in Ontario
- Ministry of Tourism, Culture and Sport at archaeology@ontario.ca

3. Are there known marine or land-based archaeological sites on or within 500 metres of the property or project area?

MTCS maintains a database of marine and land-based archaeological sites reported to the ministry. Land-based archaeological sites may extend into adjacent waterbodies.

For more information, contact MTCS Archaeological Data Coordinator at archaeology@ontario.ca.

4. Is there Aboriginal or local knowledge of marine or land-based archaeological sites on or within 500 metres of the property or project area?

Check with:

- Aboriginal communities in your area
- local municipal staff

Aboriginal communities may have knowledge that can contribute to the identification of cultural heritage resources, and we suggest that any engagement with Aboriginal communities includes a discussion about known or potential cultural heritage resources that are of value to these communities. Aboriginal communities and local municipal staff may have information about marine archaeological sites that are not included in the MTCS database or reported to the ministry.

Other sources of local knowledge include the following:

- property owner
- [local heritage organizations and historical societies](#), [Association for Great Lakes Maritime History](#)
- local and provincial dive organizations ([Save Ontario Shipwrecks](#), [Ontario Underwater Council](#)), [Preserve Our Wrecks](#), Ontario Marine Heritage Committee)
- local dive shops
- local amateur divers and diving associations
- local museums
- [municipal heritage committees](#)
- published local histories

5. Is there Aboriginal knowledge or historically documented evidence of past Aboriginal use on or within 500 metres of the property or project area?

Check with:

- Aboriginal communities in your area
- local municipal staff

Other sources of local knowledge include the following:

- property owner
- [local heritage organizations and historical societies](#)
- local museums
- [municipal heritage committees](#)
- published local histories

6. Is there a known burial site or cemetery on the property or adjacent to the property or project area?

For more information on known cemeteries or burial sites contact the following:

- Cemeteries Regulation Unit, Ontario Ministry of Consumer Services – for [database of registered cemeteries](#)
- Ontario Genealogical Society (OGS) – [to locate records of Ontario cemeteries](#), both currently and no longer in existence; cairns, family plots and burial registers
- Canadian County Atlas Digital Project – to [locate early cemeteries](#)

In this context, ‘adjacent’ means ‘contiguous’, or as otherwise defined in a municipal official plan.

When wrecks are associated with a loss of life, the area in the vicinity of the wreck may be established as a cemetery.

7. Has the property or project area been recognized for its cultural heritage value?

There is a strong chance there may be marine archaeological resources on the property or project area if it has been listed, designated or otherwise identified as being of cultural heritage value by:

- Municipal government
- Ontario government
- Canadian government

This includes a property that is:

- designated under *Ontario Heritage Act* (the OHA), including:
 - individual designation (Part IV)
 - part of a heritage conservation district (Part V)
 - a land or marine archaeological site (Part VI)
- subject to:
 - an agreement, covenant or easement entered into under the OHA (Parts II or IV)
 - a notice of intention to designate (Part IV)
 - a heritage conservation district study area by-law (Part V) of the OHA
- included on:
 - a municipal register or inventory of heritage properties
 - Ontario government's list of provincial heritage properties
 - Federal government's list of federal heritage buildings
- part of a:
 - National Historic Site
 - UNESCO World Heritage Site
- designated under:
 - *Heritage Railway Station Protection Act*
 - *Heritage Lighthouse Protection Act*
- subject of a municipal, provincial or federal commemorative or interpretive plaque.

To determine if your property or project area is covered by any of the above, see:

- Part A of the MTCS [Criteria for Evaluating Potential for Built Heritage and Cultural Heritage Landscapes](#)

Part VI – Archaeological Sites

Includes three marine archaeological sites prescribed under Ontario Regulation 11/06 and five terrestrial archaeological sites designated by the Minister under Regulation 875 of the Revised Regulation of Ontario, 1990.

For more information, refer to [Regulation 875](#) and Ontario [Regulation 11/06](#).

8. Has the entire property or project area been subjected to recent, extensive and intensive disturbance?

Recent: after-1960

Extensive: over all or most of the area

Intensive: thorough or complete disturbance

Examples of ground disturbance include:

- quarrying
- dredging
- structural footprints and associated construction areas
 - where the structure has deep foundations or footings
- infrastructure development such as:
 - dams
 - pipelines, hydro lines or other utility trenches
 - causeways
 - bridges

Note: this applies only to the excavated part of the right-of-way or corridor as the remainder may not be impacted

A ground disturbance does not include:

- aqua-cultural activities, such as a fish farm
- areas of traditional or commercial harvesting of fish, shellfish or water-based vegetation
- traditional agricultural areas that have been inundated

Property (Project Area) Inspection

Some documentation may provide evidence of prior disturbance, such as:

- photographs
- maps
- detailed descriptions and blueprints of prior projects

If complete disturbance isn't clear from documents available, an archaeologist licensed for marine archaeology can be hired to undertake an underwater and/or remote-sensing inspection of the study area to determine whether there is any remaining marine archaeological potential.

9. Are there two or more reported or registered ship wreck sites or reports of lost ships within a five kilometre radius of the property or project area?

The presence of two or more ship wreck sites or reports of lost ships in the vicinity may indicate increased marine archaeological potential for additional marine wrecks.

10. Is the property or project area within one kilometre of an active or historic harbour, seaplane or floatplane base, tunnel, ferry route, marine terminal, or winter road?

Focussed areas of marine activity on- and off-shore are indicators for potential marine archaeology due to:

- deliberate structures built in or on the water, such as:
 - mooring and anchoring structures
 - weirs, piers, docks, cribwork
 - groynes, breakwaters, artificial reefs
 - vessels scuttled for utilitarian or other purposes
 - infrastructure related to the construction or operation of a facility like marine railways
- incidental features, such as:
 - beached or sunken vessels or aircraft
 - dropped objects

As a result, there is potential for marine archaeological features or artifacts.

11. Where the project impacts fourth order or higher watercourses, are there existing narrows, rapids, waterfalls or does the watercourse enter or leave a body of water within 300 metres of the property or project area?

Fourth order and higher watercourses (on the Strahler scale) have potential association with human activity around narrows, rapids, waterfalls and proximity to waterbodies such as lakes due to:

- fish harvesting and related dams or weirs
- portage locations for navigable waterways
- early historical fording locations
- early historical water power sources for mills

These activities may result in marine archaeological features or artifacts.

12. Are there potential built heritage or cultural heritage landscape resources that may be of cultural heritage value or interest adjacent to the watercourse or water body?

Euro-Canadian settlement immediately adjacent to water bodies or watercourses may be focussed on the water for specific industrial, commercial or residential uses resulting in marine archaeological features or artifacts. For guidance, see the MTCS [Criteria for Evaluating Potential for Built Heritage Resources and Cultural Heritage Landscapes](#)

13. Are there inundated beaches, bluffs, lakeshores, streams or river banks within 300 metres of the property or project area?

The margins of water bodies are associated with past human occupations and use of the land. About 80-90% of archaeological sites are found within 300 metres of water bodies.

- water body types:
 - primary - lakes, rivers, streams, creeks
 - secondary - springs, marshes, swamps and intermittent streams and creeks
- water bodies can include constructed water bodies or watercourses, such as:
 - temporary channels for surface drainage
 - rock chutes and spillways
- Accessible or inaccessible shorelines can also have archaeological potential, for example:
 - high bluffs or cliffs
 - sandbars

You can get information about inundated shoreline features through:

- a site visit
- aerial photographs
- bathymetric data
- geological and physiographic studies

14. Are there inundated beaches, lakeshores or river/creek banks beyond 300 metres and at greater depth than the project area with evidence of two or more of the following in the project area?

- elevated bathymetric features such as drumlins, eskers, kames, ridges, etc.
- pockets of sandy lakebed
- distinctive bathymetric formations such as escarpments, shoals, promontories, reefs, etc.
- inundated resource extraction areas (quarry, fishery)
- inundated historical settlement including built heritage resources or cultural heritage landscapes
- inundated historical transportation routes

Landforms associated with past human occupations that have later been inundated, as historically documented or demonstrated through water-level chronologies, retain their archaeological potential.

- **Elevated bathymetric features**

Higher ground and elevated positions, surrounded by low or level topography, often indicate past settlement and land use. Features such as eskers, drumlins, sizeable knolls, plateaus next to lowlands or other such features are a strong indication of archaeological potential.

Find out if your property or project area had elevated topography prior to inundation through:

- nautical charts
- bathymetric data

- **Pockets of sandy lakebed**

Areas of sandy soil, prior to being inundated, that would be well-drained and in areas characterized by heavy soil or rocky ground may indicate archaeological potential

Find out if your property or project area had sandy soil through:

- site visits
- lakebed studies and sediment borehole data

- **Distinctive bathymetric formations**

Distinctive land formations include – but are not limited to:

- waterfalls
- rock outcrops or faces
- caverns
- mounds

Prior to inundation such features were often important to past inhabitants as special or sacred places. The following sites may be present at – or close to – these formations:

- burials
- structures
- offerings
- rock paintings or carvings

Find out if your property or project area has a distinctive land formation through:

- site visits
- aerial photographs
- bathymetric data

- **Inundated resource extraction areas**

Prior to inundation, the following resources were collected in these extraction areas:

- food or medicinal plants e.g. migratory routes, spawning areas, prairie
- scarce raw materials e.g. quartz, copper, ochre or outcrops of chert
- resources associated with early historic industry e.g. fur trade, logging, prospecting, mining

Aboriginal communities may hold traditional knowledge about their past use or resources in the area.

- **Inundated early historic settlement**

Early Euro-Canadian settlements include – but are not limited to:

- early military or pioneer settlement, e.g. pioneer homesteads, isolated cabins, farmstead complexes
- early wharf or dock complexes
- pioneers churches and early cemeteries

- **Inundated early historic transportation routes** - such as trails, passes, roads, railways, portage routes, canals.

For more information, see:

- historical maps or atlases
 - for information on early settlement patterns such as trails (including Aboriginal trails), monuments, structures, fences, mills, historic roads, rail corridors, canals, etc.
 - [Archives of Ontario](#) holds a large collection of historical maps and atlases
 - digital versions of historical atlases are available on the [Canadian County Atlas Digital Project](#)
- commemorative markers or plaques such as those posted by local, [provincial](#) or [federal](#) agencies
- [municipal heritage committees](#) or [other local heritage organizations](#)
 - for information on early historic settlements or landscape features (e.g. fences, mill races)
 - for information on commemorative markers or plaques

The image contains two technical drawings of a generator enclosure:

- PLAN VIEW:** A top-down view of the enclosure. It shows an outer rectangular boundary with overall dimensions of 3.5 (width) and 3.4 (depth). Inside this is a 6-foot chain-link fenced enclosure for the generator, with dimensions of 2.8 (width) and 3.1 (depth). The fenced area is labeled "GENERATOR" and "CONCRETE PAD". The fenced enclosure is 1.1 units from the top and bottom edges and 0.5 units from the right edge. A "LOCKED DOUBLE GATE TO FENCED IN AREA" is shown on the right side, with a 0.9 unit opening. "15mm STEEL REEBAR" is indicated at the corners of the fenced area.
- SIDE VIEW:** A side elevation of the enclosure. It shows the "CAT DIESEL GENERATOR SET D80-2S - WEATHERPROOF ENCLOSURE" mounted on a "CONCRETE PAD". The top of the enclosure is at "TOP EL. 255.00". The concrete pad is 0.45 units high. The generator set is 1.756 units high. The base of the concrete pad is labeled "GRANULAR 'A' BASE".

Figure 1: Typical Pump Station Installation. The diagram illustrates the components and dimensions of a pump station installation. Key elements include the Pump Station Control Panel, Hydro Meter and Service Panel, and the concrete pad/granular base. Dimensions are provided for the concrete pad (0.45m), the control panel (1.5m x 1.0m), and the hydro meter/service panel (0.9m x 0.6m). The top elevation is noted as 255.90.

[illegible]

250mmØ FORCEMAIN

T/P 251.86

VALVE STACK

1.8 MIN

STEPS 300mm C/C QPSD 405.01

250mmØ DRESSER COUPLING

FLOW

INV. 251.67

PC CONCRETE MAINTENANCE HOLE 1500Ø QPSD 710.010

TO CONTROL PANEL

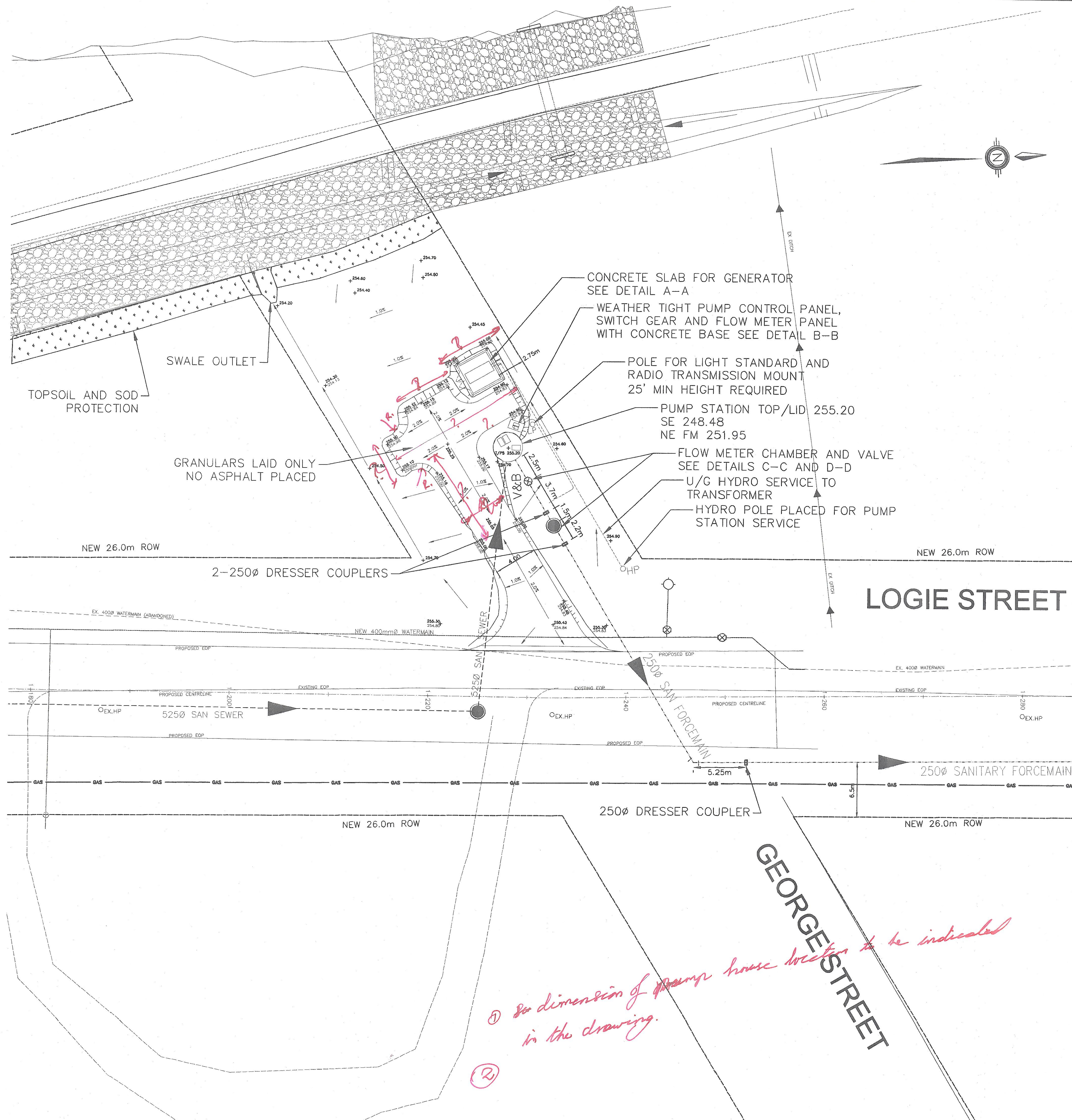
250mmØ MAGNETIC FLOWMETER













T/P 251.99

250mmØ FORCEMAIN

250mmØ DRESSER COUPLING

GRANULAR BASE

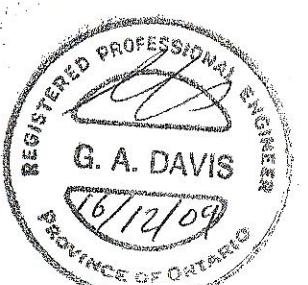



	STORM PIPE
MH32 	STORM MANHOLE
CB5 	CATCHBASIN
DCB14 	DOUBLE CATCHBASIN
	SANITARY PIPE
MH20A 	SANITARY MANHOLE
	SANITARY FORCEMAIN
	WATERMAIN PIPE
H&V 	HYDRANT AND VALVE
V&B 	VALVE AND BOX
TEE 	WATERMAIN TEE
REDUCER 	WATERMAIN REDUCER
<u>1.0%</u> + 254.13 - 254.00	PROPOSED DRAINAGE ELEVATIONS PROPOSED EXISTING ELEVATIONS

CAUTION :

THE POSITION OF POLE LINES, CONDUITS, WATERMANS, SEWERS AND OTHER UNDERGROUND AND OVERGROUND UTILITIES AND STRUCTURES IS NOT NECESSARILY SHOWN ON THE CONTRACT DRAWINGS, AND, WHERE SHOWN, THE ACCURACY OF THE POSITION OF SUCH UTILITIES AND STRUCTURES IS NOT GUARANTEED. BEFORE STARTING WORK, THE CONTRACTOR SHALL INFORM HIMSELF OF THE EXACT LOCATION OF ALL SUCH UTILITIES AND STRUCTURES, AND SHALL ASSUME ALL LIABILITY FOR DAMAGE TO THEM.

04/12/09	AS CONSTRUCTED
20/05/09	REGRAIDING OF PUMPING STATION AREA
DATE	DESCRIPTION
	REVISION / ISSUE




HENDERSON PADDON
& ASSOCIATES LIMITED
CIVIL & ENVIRONMENTAL ENGINEERING CONSULTANTS
OWEN SOUND • THE BLUE MOUNTAINS • GRIMSBY • HANOVER
PHONE (519) 364-5700 SINCE 1972

Title: COUNTRY CLUB ESTATES
PUMP STATION DETAILS

Client: 2119945 ONTARIO INC.

Design: GAD	Scale: 1:200
Drawn: DJM	Approved:
Checked: GAD	
Date: FEB 2009	
DRAWING No. 507032-134 Design Engineer	



Appendix G: Notice of Commencement



The City of Kawartha Lakes

NOTICE OF COMMENCEMENT

Logie and Ridout Street Sewage Pumping Stations – Class Environmental Assessment

The City of Kawartha Lakes (City) is initiating a planning process to upgrade the wastewater collection system for the community of Lindsay. The community of Lindsay is rapidly expanding with new developments and requires upgrades to the wastewater collection system to support the increasing needs of the residents of the community. The project is being carried out with the requirements for a Schedule 'B' project under the terms of the Municipal Class Environmental Assessment (Class EA) process. A keymap is attached showing the study area including the Logie and Ridout Street pumping stations, forcemains, and discharge manholes. The Class EA process includes:

- Consultation with the public, review agencies, and other stakeholders
- Field investigations
- Evaluation of viable alternative solutions
- Assessment of the impacts of the alternative solutions and identification of measures to mitigate any adverse environmental, social, cultural, and economic impacts
- Selection of a preferred solution

Public input into the planning and design of this project is encouraged. The City will be sharing information with the Public and interested Stakeholders through the City's website. As part of the Class EA process for reviewing the upgrades to the wastewater collection system, a Public Information Centre (PIC) will be conducted by the City. Notice of this PIC will be provided at least two weeks in advance. If you have any comments or questions regarding this project, or would like to receive further information, please send an email to one of the following project contacts:

Marten Leclerc
Senior Engineering Tech
City of Kawartha Lakes
26 Francis Street
Lindsay, ON, K9V 5R8
T: (705) 324 9411 x 1131
Email: mleclerc@kawarthalakes.ca

Tony Guerrero, P.Eng.
The Greer Galloway Group Inc.
1620 Wallbridge Loyalist Road
Belleville, ON K8N 4Z5
T: (613) 966-3068
F: (613) 966-3087
Email: tguerrera@greergalloway.com

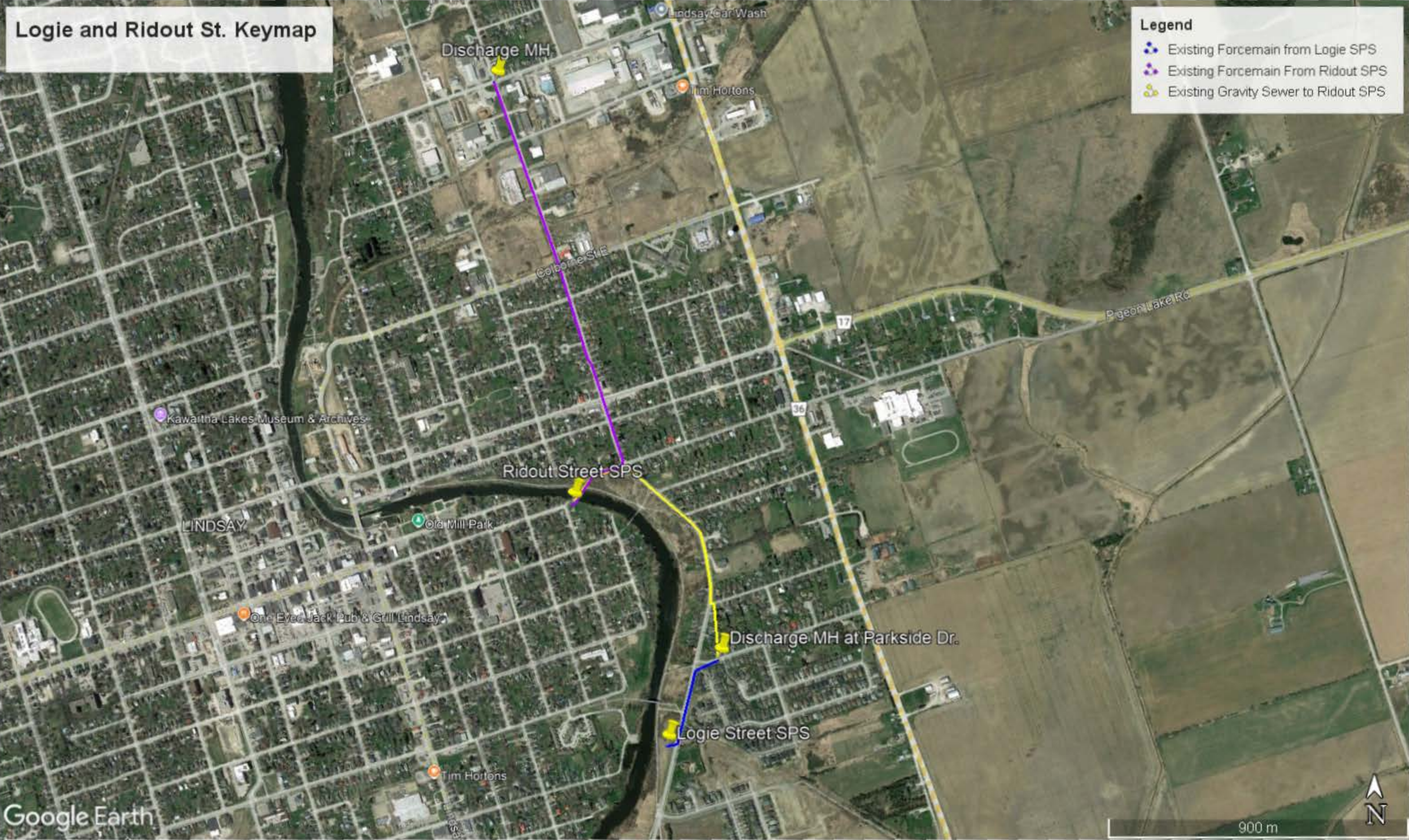
This notice issued October 2, 2024

Under the *Freedom of Information and Protection of Privacy Act* and the *Environmental Assessment Act*, unless otherwise stated in the submission, any personal information such as name, address, telephone number and property location included in a submission will become part of the public record files for this project and will be released, if requested, to any person.

Logie and Ridout St. Keymap

Legend

- Existing Forcemain from Logie SPS
- Existing Forcemain From Ridout SPS
- Existing Gravity Sewer to Ridout SPS





Appendix H: Public Information Centre



The City of Kawartha Lakes

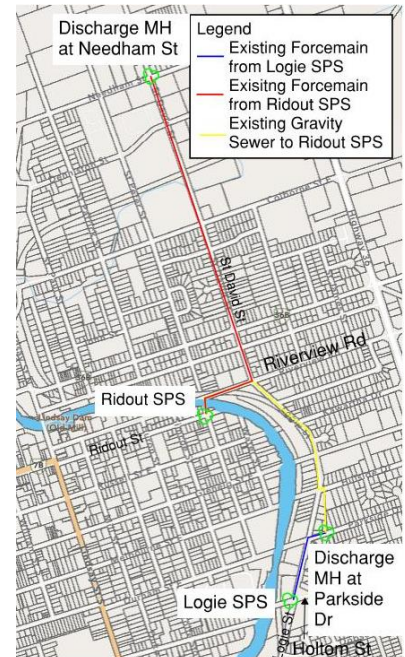
NOTICE OF PUBLIC INFORMATION CENTER

Logie St. Sewage Pumping Station and Ridout St. Sewage Pumping Station Upgrades – Municipal Class Environmental Assessment

The City of Kawartha Lakes (City) is currently planning to upgrade the wastewater collection system for the community of Lindsay. The community of Lindsay is rapidly expanding with new developments and upgrades to the wastewater collection system are required to support the increasing needs of the residents of the community.

The project is being carried out with the requirements for a Schedule 'B' project under the terms of the Municipal Class Environmental Assessment (Class EA) process. As part of the class EA process for reviewing the upgrades to the wastewater collection system, public comment during the evaluation of alternatives will be requested.

The City is conducting a public information center on **Thursday, May 29, 2025, from 5:00 pm to 7:00 pm**. This will be held at the **Victoria Room at City Hall**, located at **26 Francis St, Lindsay, ON K9V 5R8**. We are interested in hearing any comments or concerns that you may have about this project. A public database of comments will be maintained and, except for personal information, included in the study documentation made available for public review. Parties interested in providing input or that wish to obtain additional information at this stage of the study are asked to submit comments in writing to:



Marten Leclerc
Senior Engineering Tech
City of Kawartha Lakes
26 Francis Street
Lindsay, ON, K9V 5R8
T: (705) 324 9411 x 1131
Email: mleclerc@kawarthalakes.ca

Tony Guerrero, P.Eng.
Greer Galloway,
a division of Jp2g Consultants Inc.
1620 Wallbridge Loyalist Road
Belleville, ON K8N 4Z5
T: (613) 966-3068 F: (613) 966-3087
Email: tony.guerrera@jp2g.com

This notice is issued on May 13, 2025

Under the *Freedom of Information and Protection of Privacy Act* and the *Environmental Assessment Act*, unless otherwise stated in the submission, any personal information such as name, address, telephone number and property location included in a submission will become part of the public record files for this project and will be released, if requested, to any person. Signatories to a Petition are deemed to have waived any expectation of privacy as a result of the record being created for review by the general public. Questions about the collection and disclosure of personal information contained in this petition should be directed to the City Clerk at 705.324.9411 ext. 1295.

Public Information Centre

Logie St. and Ridout St. Sewage Pumping Station Upgrades

May 29, 2025

Location:

Victoria Room – City Hall

Time:

5:00 pm – 7:00 pm



Background Information

The City of Kawartha Lakes (City) is initiating a planning process to upgrade the wastewater collection system for the community of Lindsay. The community of Lindsay is rapidly expanding with new developments and upgrades to the wastewater collection system are required to support the increasing needs of the residents of the community.

To accommodate developments within the South-Eastern area of Lindsay, upgrades will be required to the sanitary collection system in this area. Currently, sewage flows to the Logie St. sewage pumping station (SPS) and is pumped to a nearby gravity sewer and siphon system that carry the flows across the Scugog River to the Ridout St. SPS where all sewage is pumped back across the river to the existing discharge maintenance hole located at the intersection of St David St. and Needham St.

Based on an assessment of future flows, one or both of the Logie St. and Ridout St. sewage pumping stations will require capacity upgrades.

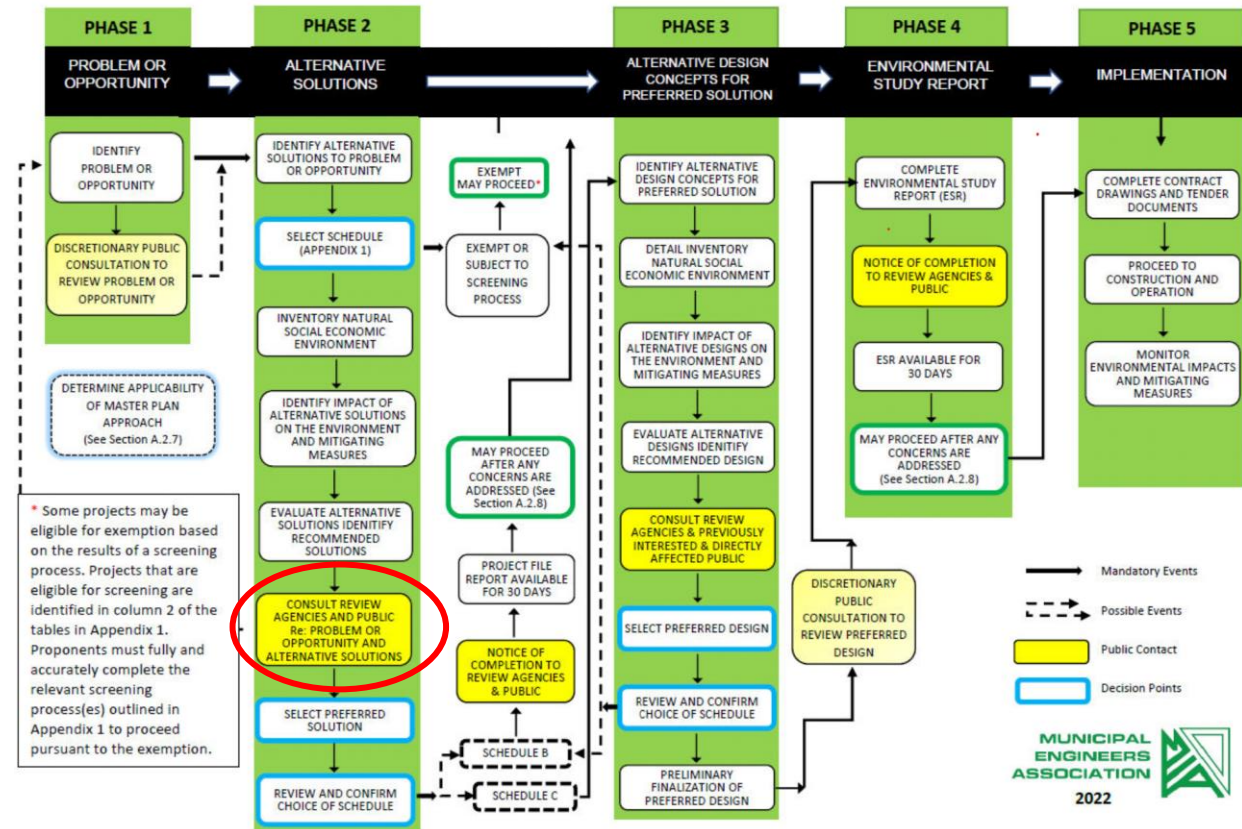
These upgrades and recommendations will be carried out as a Schedule 'B' project under the terms of the Municipal Class Environmental Assessment (Class EA) process, which is approved under the Environmental Assessment Act.

Municipal Class EA Process

- Meets the requirements of Ontario's Environmental Assessment Act by ensuring that potential environmental impacts of projects are considered.
- Consultation with the public and interested stakeholders including government review agencies and First Nations is required to identify environmental impacts of alternative solutions, develop mitigating measures and identify a preferred solution.

EXHIBIT A.2. MUNICIPAL CLASS EA PLANNING AND DESIGN PROCESS

NOTE: This flow chart is to be read in conjunction with Part A of the MCEA



Opportunity Statement

Upgrades to the capacity of the existing wastewater collection system are required to support new and future developments mainly within the South-East area of Lindsay.

Alternative 1

Alternative 1 - Do Nothing/Limit Growth

This alternative would have the lowest capital cost and would involve continuing to use the existing wastewater collection system without any changes. This alternative is not feasible as the current system will not be able to support future developments.

Alternative 1

Existing System

Legend

- Existing Discharge MH
- Existing Logie St. SPS Wet Well
- Existing Forcemain from Logie SPS
- Existing Forcemain From Ridout SPS
- Existing Gravity Sewer to Ridout SPS
- Ridout St. SPS

Existing Discharge MH

Ridout St. SPS

Existing Logie St. SPS Wet Well

Google Earth

Image © 2025 Airbus

N

600 m

Alternative 2

Alternative 2 - Staged Upgrade of Logie Street SPS and Minor Upgrades to Ridout SPS

This option includes the replacement of the Logie St. SPS wetwell with a new wetwell, allowing for the necessary storage volume and sufficient space to install three new sewage pumps. This option will include associated electrical upgrades at the Logie St. station. As an interim step, two new sewage pumps will be installed within the wetwell, each capable of providing 180 L/s of flow for a firm capacity of 180 L/s for the station, with piping for a third pump to be added in future.

A new 500 mm diameter forcemain will be constructed from Logie St. SPS to connect to the existing abandoned 400 mm forcemain that previously connected Ridout St SPS to the existing discharge point.

Ultimately, the station will be upgraded in the future to add a third pump providing 180 L/s and the station will operate with two duty pumps and the third pump as a backup. The two duty pumps operating together will provide a firm capacity flow of approximately 250 L/s to meet the full build-out design requirements. The 500 mm forcemain will also be disconnected from the abandoned forcemain and be extended the remaining distance of 1200 m up to the discharge point.


These upgrades to Logie St. divert existing flows away from Ridout St. SPS and therefore, minor upgrades to aging equipment will be required at Ridout SPS. It is recommended that the City proactively replace the aging pumps at Ridout St. SPS with higher capacity pumps to meet the future demands of the station and avoid duplicate costs in the near (estimated 5-year) future. Ridout St. SPS will be upgraded with three (3) new pumps to provide a firm station capacity of 320 L/s in addition to related electrical equipment, valves, and piping upgrades.


Alternative 2 has a preliminary cost estimate of \$7.0 million including HST.


Alternative 2


Staged Upgrade of Logie SPS and Minor Upgrades to Ridout SPS


Legend


 Existing Discharge MH

 Existing 400 mm Abandoned Forcemain

 New 500 mm Forcemain (Stage 1)

 New 500mm Forcemain (Stage 2)

 New Logie St. SPS Wet Well

 Ridout St. SPS

Design Parameter	Logie St. SPS	Ridout St. SPS
Forcemain Diameter (mm)	500	N/A
Forcemain Length (m)	1000	N/A
Pump Flow (L/s)	180	230
Number of Pumps	2	3
Upgrade Notes	Upgraded Pumps and forcemain. Future upgrades for a third pump and forcemain section. New wet well. Electrical upgrades.	Upgraded pumps. Electrical upgrades. Existing forcemain to remain.

Existing Discharge MH

EXTENSION OF 500mm FORCEMAIN TO DISCHARGE MH (STAGE 2)

CONNECTION TO EXISTING 400mm ABANDONED FORCEMAIN (STAGE 1)

Ridout St. SPS

New Logie St. SPS Wet Well



Alternative 3

Alternative 3 – Full Upgrade of Logie St. SPS and Minor Upgrades to Ridout St. SPS

Alternative 3 will provide the full build out upgrade to the Logie St. SPS immediately. This option includes the replacement of the Logie St. SPS wetwell with a new wetwell allowing for the necessary storage volume. The wetwell will be equipped with three new pumps providing the station with a firm capacity of 250 L/s to meet the full buildout flow requirements. This option will include associated electrical upgrades at the Logie St. station.

A new 500 mm diameter forcemain will be constructed from Logie St. SPS to the existing discharge point. This results in a new 500 mm forcemain length of approximately 2200 m to connect to the discharge point.

These upgrades to Logie St. divert existing flows away from Ridout St. SPS and therefore, Ridout St. SPS will only require minor upgrades to any aging equipment. It is recommended that the City proactively replace the aging pumps at Ridout St. SPS with higher capacity pumps to meet the future demands of the station and avoid duplicate costs in the near (estimated 5-year) future. Ridout St. SPS will be upgraded with three (3) new pumps to provide a firm station capacity of 320 L/s in addition to related electrical equipment, valves, and piping upgrades.

For this option, Logie St. SPS will be fully upgraded to be capable of handling all proposed and anticipated growth in the future. Diverting flows from Logie St. SPS to be pumped directly to the discharge point will limit much of the required works for Ridout St. SPS upgrades. This option will result in significantly higher costs in the short term for the construction of the new 500 mm forcemain for the full distance of 2200 m and the third pump as compared to Alternative 2. Additionally, if developments proceed at the anticipated pace, higher operating costs will be incurred in the short term due to the Logie St. SPS pumps operating inefficiently at the existing lower flows.

Alternative 3 has a preliminary cost estimate of \$8.7 million Including HST.

Alternative 3

Full Upgrade of Logie St. SPS and Minor Upgrades to Ridout St. SPS

Legend

- Existing Discharge MH
- New 500 mm Forcemain
- New Logie St. SPS Wet Well
- Ridout St. SPS

Design Parameter	Logie St. SPS	Ridout St. SPS
Forcemain Diameter (mm)	500	N/A
Forcemain Length (m)	2200	N/A
Pump Flow (L/s)	180	230
Number of Pumps	3	3
Upgrade Notes	Upgraded Pumps and forcemain. New wet well. Electrical upgrades.	Upgraded pumps. Electrical upgrades. Existing forcemain to remain.

Alternative 4

Alternative 4 – Full Upgrades of Logie St. SPS and Ridout St. SPS

Alternative 4 will provide a full build out upgrade to both Logie St. SPS and Ridout St. SPS. This option will not divert any existing flow away from the Ridout SPS.

This option requires major upgrades to both Logie St. SPS and Ridout St SPS including new wet wells with sufficient storage volume at both stations and associated electrical upgrades. Logie St. SPS will be equipped with three new pumps providing a firm capacity of 250 L/s to meet the full build out requirement. Ridout St. SPS will be equipped with three new pumps each providing 380 L/s of flow. Ridout St. SPS will continue to operate with two duty pumps and the third pump being a backup. The two duty pumps together will provide a firm capacity flow of approximately 570 L/s to meet the full build-out requirement.

A new 500 mm forcemain will be constructed from Logie St. SPS to the existing gravity sewer connecting across the river to Ridout St. SPS. The gravity sewer and siphon will also require additional upgrades to accommodate the increased flows. The existing 500 mm forcemain and the existing 400 mm abandoned forcemain will be twinned to split the flows from the Ridout SPS to the existing discharge point.

No forcemain upgrade will be needed from Ridout St. to the discharge point. Ridout St. SPS would also be fully refurbished as part of the upgrades with this option. This option, however, will result in the highest overall costs from the capital costs of upgrading both stations and the operating costs of pumping all flows from Logie St. SPS twice. This option will also have additional environmental and economic impact due to construction works done around the river crossing.

Alternative 4 has a preliminary cost estimate of \$12.7 million including HST.

Alternative 4

Full Upgrades of Logie St. SPS and Ridout St. SPS

Legend

- Existing 500mm Forcemain from Ridout SPS
- Existing Discharge MH
- Existing 400 mm Abandoned Forcemain
- New Logie St. SPS Wet Well
- Upgraded 500 mm Forcemain from Logie SPS
- Upgraded Gravity Sewer and River Crossing Siphon to Ridout SPS
- Upgraded Ridout St. SPS

Design Parameter	Logie St. SPS	Ridout St. SPS
Forcemain Diameter (mm)	500	N/A
Forcemain Length (m)	350	N/A
Pump Flow (L/s)	180	380
Number of Pumps	3	3
Upgrade Notes	Upgraded Pumps, Forcemain, Gravity Sewer & Siphon Connection to Ridout St. SPS. New wet well. Electrical upgrades.	Upgraded pumps. Electrical upgrades. Existing 500mm and abandoned 400mm forcemain to be twinned.

New Logie St. SPS Wet Well

Upgraded Ridout St. SPS

Existing Discharge MH



600 m

Alternatives Summary Table

Alternative	Station	Forcemain Diameter (mm)	Forcemain Length (m)	Pump Flow (L/s)	Number of Pumps	Upgrade Notes	Preliminary Cost Estimate (Including HST)
1. Do Nothing/Limit Growth	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2. Staged Upgrade of Logie St. SPS and Minor Upgrades to Ridout St. SPS	Logie St.	500	1000	180	2	Upgraded pumps and forcemain. Future upgrades for a third pump and forcemain section. New wet well. Electrical upgrades.	\$7.0 million
	Ridout St.	N/A	N/A	230	3	Upgraded pumps, existing forcemain to remain. Electrical upgrades.	
3. Full upgrade of Logie St. SPS and Minor Upgrades to Ridout St. SPS	Logie St.	500	2200	180	3	Upgraded pumps and forcemain. New wet well. Electrical upgrades.	\$8.7 million
	Ridout St.	N/A	N/A	230	3	Upgraded pumps, existing forcemain to remain. Electrical upgrades.	
4. Full Upgrades of Logie St. SPS and Ridout St. SPS	Logie St.	500	350	180	3	Upgraded pumps, forcemain, gravity sewer, and siphon connecting to Ridout SPS. New wet well. Electrical upgrades.	\$12.7 million
	Ridout St.	N/A	N/A	380	3	Upgraded pumps and forcemain. Existing 500mm and abandoned 400mm forcemain to be twinned. Electrical upgrades.	

Alternatives Evaluation Matrix

City of Kawartha Lakes Logie and Ridout Sewage Pumping Stations									
Project No. 2437800									
Evaluation of Alternative Solutions									
Description/Elements		Alternative 1		Alternative 2		Alternative 3		Alternative 4	
		Do Nothing		Logie St. Staged Upgrade		Logie St. Full Upgrade		Logie St. and Ridout St. Full Upgrades	
	Weighing Factor	Score	Weighted Score	Score	Weighted Score	Score	Weighted Score	Score	Weighted Score
Meet Flow Capacity Requirements	0.25	0	0	4	1	5	1.25	5	1.25
Site/Neighbourhood/Impact/Noise/Odour/Aesthetics	0.05	5	0.25	4	0.2	4	0.2	1	0.05
Property Acquisition/Availability	0.05	5	0.25	5	0.25	5	0.25	5	0.25
Expansion Potential	0.2	0	0	5	1	0	0	0	0
Ease of Integration/Constructability	0.05	5	0.25	4	0.2	3	0.15	1	0.05
Terrestrial Habitat/Wildlife	0.05	5	0.25	3	0.15	3	0.15	1	0.05
Archaeological Resources	0.05	5	0.25	4	0.2	4	0.2	4	0.2
Operability	0.1	0	0	4	0.4	4	0.4	3	0.3
Capital/Operating Costs	0.2	5	1	4	0.8	3	0.6	1	0.2
Total Weighted Score	1		2.25		4.2		3.2		2.35

*Scoring: 5 is the highest (best). The highest scoring alternative reflects the preferred solution

Preferred Alternative

- The preferred alternative is Alternative 2. The existing abandoned forcemain has been determined to be in good condition, as such, Alternative 2 will provide substantial cost savings in the short term as compared to Alternative 3, likely in the range of \$1.7 million.
- The upgraded Logie St. SPS will be a wetwell type with space for three submersible pumps. Initially, two submersible pumps will be installed in the new wetwell each capable of providing 180 L/s of flow for a firm capacity of 180 L/s for the station. Piping for a third, future pump will be included.
- Ultimately the station will be upgraded in the future with the addition of a third pump providing 180 L/s. The fully upgraded station will operate with two duty pumps and the third pump as a backup. The two duty pumps operating together will provide a firm capacity flow of approximately 250 L/s to meet the full build out requirements.
- A new, 500 mm diameter, 1000 m long, forcemain will be installed from the Logie St. SPS to the existing 400 mm abandoned forcemain. Future upgrades will include the disconnection of the 500mm forcemain from the abandoned forcemain and the extension of the 500 mm forcemain the remaining 1200m to the discharge point.
- The high-level cost estimate for the Alternative 2 Stage 1 upgrades of the pumping station and forcemain , is \$7.0 million including HST.

Consultation

Agency Consultation

Consultation with review agencies has been undertaken throughout the project to evaluate environmental impacts of the alternative solutions and develop mitigating measures. Agencies consulted include the Kawartha Conservation, Ministry of Environment, Conservation and Parks (MECP) and the Ministry of Citizenship and Multiculturalism (MCM).

First Nations Consultation

Consultation with relevant First Nations groups has been undertaken throughout the project to assess the impacts of the project on Aboriginal or treaty rights. The list of relevant First Nations groups to be contacted was provided by the MECP.

Public Consultation

Interested members of the public will be added to the project contact list. Project notices were circulated and received questions will be addressed from interested public stakeholders.

Existing Environmental Inventory

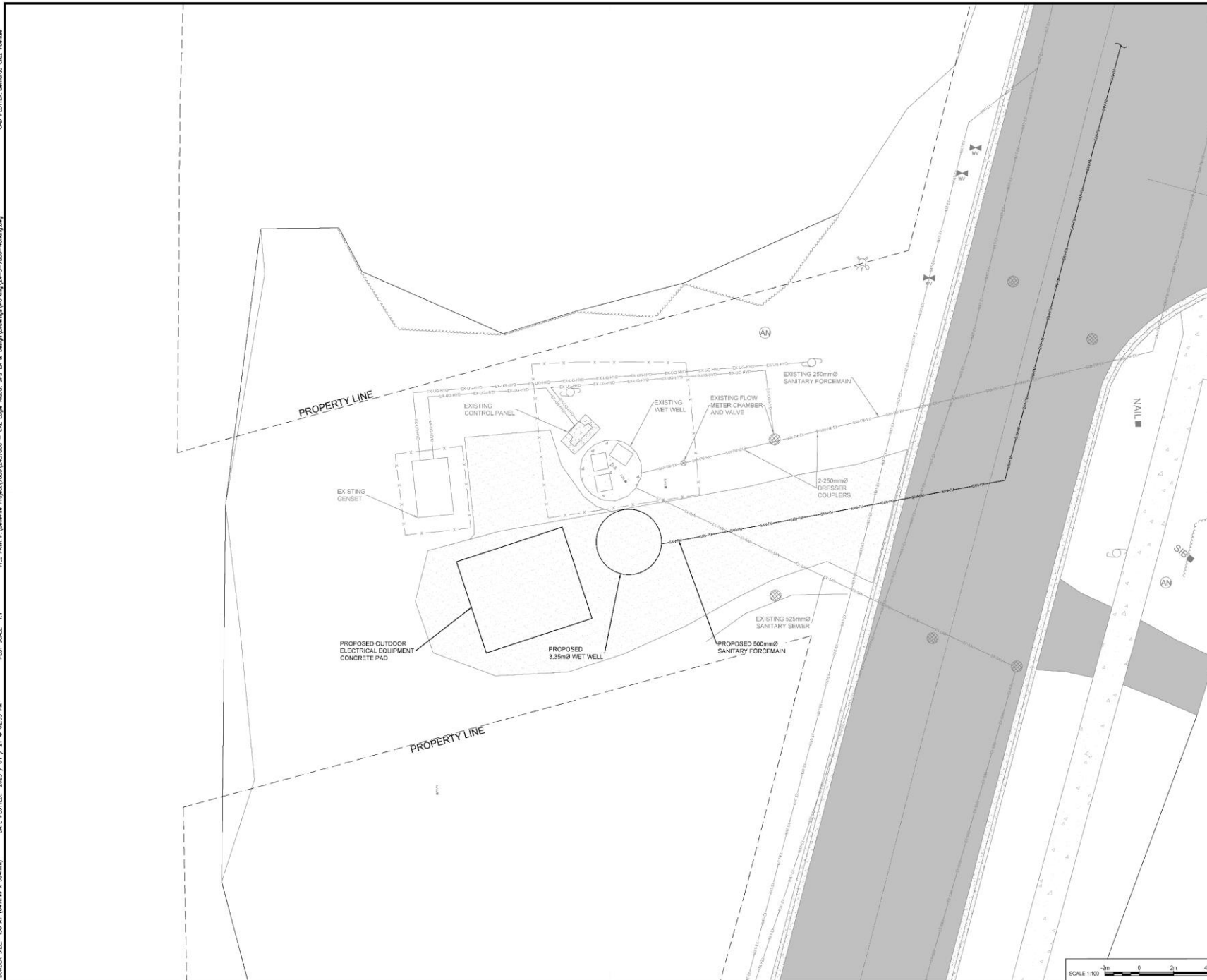
Studies Completed – Environmental Impact Study

The project site has been subjected to a desktop Environmental Impact Study and a site investigation is currently underway to assess existing conditions of natural features and document wildlife and vegetation in the area.

Studies Completed – Stage 1 and 2 Archeological Assessment

The project site has been subjected to a Stage 1 and 2 Archeological Assessment which concluded that there is no presence of any archeological resources of cultural value or interest.

A noise assessment study of the station will be completed in the future



GREER GALLOWAY CONSULTING ENGINEERS
PETERBOROUGH
BELLEVILLE
KINGSTON
1620 WALLBRIDGE LOYALIST ROAD
BELLEVILLE, ONTARIO, K8N 4Z5
PHONE: 613-866-3068
FAX: 613-866-3067

NOTES:

1. ALL WORK SHALL BE IN ACCORDANCE WITH RELEVANT CODES AND GUIDELINES.
2. ALL DRAWINGS AND ADDENDA ARE TO BE READ AS, AND IN CONJUNCTION WITH THE SPECIFICATIONS.
3. ALL EQUIPMENT SHALL BE INSTALLED AS SPECIFIED OR APPROVED EQUIVALENT.
4. CONTRACTOR MUST CHECK AND VERIFY ALL DIMENSIONS BEFORE PROCEEDING WITH WORK AND BE RESPONSIBLE FOR SAME.
5. CONTRACTOR MUST REPORT ANY DISCREPANCIES TO ENGINEER FOR RESOLUTION BEFORE COMMENCING THE WORK.
6. ANY CHANGES MUST BE APPROVED BY THE ENGINEER.

DETAIL NO.
A
B
B DRAWING NO. - WHERE DETAILED

TOPOGRAPHICAL SURVEY SOURCE:
GREER GALLOWAY GROUP
SEPT 25 2024

UTILITY LOCATE SOURCE:
N/A

GEOTECHNICAL SOURCE:
N/A

CONTROL POINTS/BENCHMARKS:
SIB A
ELV=256.229m
N=4913071.8600m
E=681404.6300

CONTROL POINTS/BENCHMARKS:
SIB B
ELV=256.180m
N=4912676.9000m
E=681433.7100m

REVISION	DESCRIPTION	DATE
01	-	YY/MM/DD

PROJECT
LOGIE ST & RIDOUT ST PUMP STATION
LINDSAY ON, CITY OF KAWARTHA LAKES

DRAWING TITLE
SITE PLAN
PUMPING STATION

DESIGNED BY
G. GOUD

DRAWN BY
B. CRUZ-FUENTES

REVIEWED BY
-

APPROVED BY
-

PROJECT DATE
2024/09/25
(YYYY/MM/DD)

PROJECT #
24-3-7800

DRAWING #
SP1

DRAWING SCALE (ISO A1)
HOR: 1:100
VER: N/A

Next Steps

- Review and finalize choice of preferred solution
- Identify alternative design concepts for preferred solution
- Finalize preferred design and proceed towards Project File Report
- Complete Contract Drawings and Tender Documents

Project Contact Information

Marten Leclerc
Senior Engineering Tech
City of Kawartha Lakes
26 Francis Street
Lindsay, ON, K9V 5R8
T: (705) 324 9411 x 1131
Email: mleclerc@kawarthalakes.ca

Tony Guerrero, P. Eng
Greer Galloway, a division of Jp2g Consultants Inc.
1620 Wallbridge Loyalist Road
Belleville, ON K8N 4Z5
T: (613) 966-3068
F: (613) 966-3087
Email: tony.guerrera@jp2g.com

Slides will be made available on the City of Kawartha Lakes website following the presentation.

Thank you

LOGIE AND RIDOUT SEWAGE PUMPING STATION UPGRADES

Public Information Centre (PIC) – Sign-in Sheet

Date: May 29th, 2024

Location: Victoria Room – City Hall, 26 Francis St, Lindsay, Ontario

PLEASE PRINT CLEARLY

NAME	TELEPHONE NUMBER	EMAIL ADDRESS
MARK DOYLE	[REDACTED]	[REDACTED]
DAN SINCLAIR	[REDACTED]	[REDACTED]
Dave Troost	[REDACTED]	[REDACTED]



Appendix I: Project Contacts

Contact	Address	Phone Number	Email	Attention	CC
Alderville First Nation	11696 Line Rd 2, Roseneath, ON K0K 2X0		tsimpson@alderville.ca	Chief Taynar Simpson	Dave Simpson, Lands & Resources Coordinator: consultation@alderville.ca Karry Sandy McKenzie: inquiries@williamstreatiesfirstnations.ca
Beausoleil First Nation	141 General Delivery, Cedar Point, ON L0K 1C0		jsandy@chimnissing.ca, council@chimnissing.ca	Chief Joanne Sandy	Dana Monague, Co-Lands Manager: danamonague@chimnissing.ca info@chimnissing.ca Karry Sandy McKenzie: inquiries@williamstreatiesfirstnations.ca
Chippewas of Georgina Island	RR2, P.O. Box 13, Sutton West, ON L0E 1R0		donna.bigcanoe@georginaisland.com	Chief Donna Big Canoe	JL Porte, Consultation Coordinator: jl.porte@georginaisland.com Karry Sandy McKenzie: inquiries@williamstreatiesfirstnations.ca
Chippewas of Rama First Nation	200-5884, Rama Road, Rama ON L3V 6H6		tedw@ramafirstnation.ca	Chief Ted Williams	consultation@ramafirstnation.ca evelynb@ramafirstnation.ca shardayj@ramafirstnation.ca Karry Sandy McKenzie: inquiries@williamstreatiesfirstnations.ca
Curve Lake First Nation	22 Winookeedaa Road, Curve Lake, Ontario K0L1R0		KeithK@curvelake.ca	Chief Keith Knott	Shannon Day, Executive Assistant to Chief and Council: ShannonD@curvelake.ca Karry Sandy McKenzie: inquiries@williamstreatiesfirstnations.ca
Hiawatha First Nation	123 Paudash Street, Hiawatha, Ontario K9J 0E6 Canada	705-295-4421	chiefcarr@hiawathafn.ca	Chief Laurie Carr	Tom Cowie, Lands Resource Consultation Liaison: tcowie@hiawathafn.ca sdavison@hiawathafn.ca Karry Sandy McKenzie: inquiries@williamstreatiesfirstnations.ca
Huron-Wendat			consultations@wendake.ca		
Kawartha Nishnawbe		807-623-8228	kawarthanishnawbecouncil@outlook.com		nodin.webb@hotmail.com samgharvey@live.com
Mississaugas of Scugog Island First Nation	22521 Island Road, Port Perry, ON L9L 1B6		consultation@scugogfirstnation.com		
Mowhawks of the Bay of Quinte	24 Meadow Drive, Tyendinaga Mohawk Territory, ON K0K 1X0		rdonm@mbq-tmt.org	Chief Donald Maracle	General email: reception@mbq-tmt.org consultation@mbq-tmt.org; lisam@mbq-tmt.org;
Kawartha Conservation	277 Kenrei Road Lindsay, ON K9V 4R1	705-328-2271	geninfo@kawarthaconservation.com		
MECP - Eastern Region	1259 Gardiners Road, Unit 3 Kingston ON K7P 3J6	613-549-4000	Jacqueline.Fuller@ontario.ca Jon.Orpana@ontario.ca; eanotification.eregion@ontario.ca;	Notices go the the specific notice email	
Ministry of Heritage, Sport, Tourism and Culture Industries			Joseph.Harvey@ontario.ca Karla.Barboza@ontario.ca;	Barboza, Karla Harvey, Joseph	
Environment Canada, Public Works Canada	4900 Yonge St., Suite 1205 North York, ON M2N 6A6	416-952-0813	ONT.Web@pwgsc-tpsgc.gc.ca;		
Ministry of Citizenship and Multiculturalism	56 Wellesley Street West, 14th Floor Toronto, Ontario M7A 2E7	416-212-0036	Dan.Minkin@ontario.ca;	Dan Minkin	



Appendix J: Agency Correspondance

Gabriel Goad

From: Smythe, Liam (He/Him) (MCM) <Liam.Smythe@ontario.ca>
Sent: Thursday, November 7, 2024 12:30 PM
To: Marten Leclerc
Cc: Tony Guerrero; Jeanorth Sinnakandu; Gabriel Goad; Nafiur Rahman; Barboza, Karla (She/Her) (MCM)
Subject: MCM Response - Notice of Commencement - Logie and Ridout Street Sewage Pumping Stations EA [MCM File # 0022628]
Attachments: 2024-11-07_TIP_LogieRidout_MCM_InitialLetter.pdf
Follow Up Flag: Follow up
Flag Status: Completed

CAUTION: This email originated from outside the organization. Do not click links or open attachments unless you recognize the sender, their email address, and know the content is safe.

Good afternoon,

Thank you for providing the Ministry of Citizenship and Multiculturalism (MCM) with the Notice of Commencement for the above-referenced project.

MCM's initial letter on this project is attached. Please do not hesitate to contact us if you have any questions or require additional information.

Best regards,

Liam Smythe, CAHP (he/him)

Heritage Planner | Citizenship, Inclusion and Heritage Division
Ministry of Citizenship and Multiculturalism | Ontario Public Service
416-301-4797 | Liam.Smythe@ontario.ca



Taking pride in strengthening Ontario, its places and its people

From: Jeanorth Sinnakandu <jsinnakandu@greergalloway.com>
Sent: Thursday, October 10, 2024 1:29 PM
To: tsimpson <tsimpson@alderville.ca>; KeithK@curvelake.ca; Chief Laurie Carr <chiefcarr@hiawathafn.ca>; Bureau_politique <bureaupolitique@wendake.ca>; kawarthanishnawbecouncil@outlook.com; klarocca@scugogfirstnation.com; Joanne Sandy <jsandy@chimnissing.ca>; council@chimnissing.ca; donna.bigcanoe@georginaisland.com; tedw@ramafirstnation.ca; rdonm@mbq-tmt.org; Fuller, Jacqueline (MECP) <Jacqueline.Fuller@ontario.ca>; Orpana, Jon (MECP) <Jon.Orpana@ontario.ca>; Harvey, Joseph (MCM) <Joseph.Harvey@ontario.ca>; Barboza, Karla (She/Her) (MCM) <Karla.Barboza@ontario.ca>; ONT.Web@pwgsc-tpsgc.gc.ca; Minkin, Dan (MCM) <Dan.Minkin@ontario.ca>
Cc: consultation@alderville.ca; ShannonD@curvelake.ca; Tom Cowie <tcowie@hiawathafn.ca>; Sean Davison <sdavison@hiawathafn.ca>; dominic.sainte-marie@wendake.ca; nodin webb <nodin.webb@hotmail.com>; samgharvey@live.com; Don Richardson <drichardson@scugogfirstnation.com>; inquiries@williamstreatiesfirstnations.ca; danamonague@chimnissing.ca; info@chimnissing.ca;

jcopegog@chimnissing.ca; jl.porte@georginaisland.com; consultation@ramafirstnation.ca; evelynb@ramafirstnation.ca; shardayj@ramafirstnation.ca; reception@mbq-tmt.org; Cassie Thompson <consultation@mbq-tmt.org>; Lisa Maracle <lisam@mbq-tmt.org>; Tony Guerrera <tguerrera@greergalloway.com>; Gabriel Goad <ggoad@greergalloway.com>; Marten Leclerc <mleclerc@kawarthalakes.ca>; Nafiur Rahman <nrahman@kawarthalakes.ca>

Subject: Notice of Commencement - Logie and Ridout Street Sewage Pumping Stations EA

CAUTION -- EXTERNAL E-MAIL - Do not click links or open attachments unless you recognize the sender.

Hello,

Please find attached the Notice of Commencement for the Logie and Ridout Street Sewage Pumping Stations EA project.

Please contact us if you have any questions or comments. Thank you.

Regards,

Jeanorth Sinnakandu, P.Eng.



1620 Wallbridge Loyalist Road, Belleville ON K8N 4Z5

Tel: (613) 966-3068 Ext: 392; Fax: (613) 966-3087

Cell: (647) 680-4973

Web Site: www.greergalloway.com

E-Mail: jsinnakandu@greergalloway.com

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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.: 416-301-4797

**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.: 416-301-4797



November 7, 2024

EMAIL ONLY

Marten Leclerc
Senior Engineering Tech
City of Kawartha Lakes
26 Francis Street
Lindsay, ON, K9V 5R8
mleclerc@kawarthalakes.ca

MCM File : **0022628**
Proponent : **City of Kawartha Lakes**
Subject : **Municipal Class Environmental Assessment – Schedule B – Notice of Commencement**
Project : **Logie and Ridout Street Sewage Pumping Stations**
Location : **Lindsay, City of Kawartha Lakes, Ontario**

Dear Marten Leclerc:

Thank you for providing the Ministry of Citizenship and Multiculturalism (MCM) with the Notice of 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 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 City of Kawartha Lakes is initiating a planning process to upgrade the wastewater collection system for the community of Lindsay. The community of Lindsay is rapidly expanding with new developments and requires upgrades to the wastewater collection system to support the increasing needs of the residents of the community. The project is being carried out with the requirements for a Schedule 'B' project under the terms of the Municipal Class Environmental Assessment (Class EA) process.

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](#) and [Criteria for Evaluating Marine Archaeological Potential](#) (if shoreline or in-water works are proposed) to determine if an archaeological assessment is needed.

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.

Approval authorities and/or proponents should wait to receive the MCM's written confirmation that the archaeological assessment report(s) has been entered into the Register before issuing a decision or proceeding with any ground disturbing activities. The letter will also indicate either that there are no further concerns for impacts to archaeological resources or articulate next steps to mitigate those concerns.

Proponents must follow the recommendations of the archaeological assessment report(s). MCM recommends that further stages of archaeological assessment (if recommended) be undertaken as early as possible during detailed design and prior to any ground disturbing activities.

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 within the project area, then a Cultural Heritage Report: Existing Conditions and Preliminary Impact Assessment should be undertaken for the entire study area during the planning phase and will be summarized in the EA Report. This study will:

1. Describe the existing baseline cultural heritage conditions within the study area by identifying all known or potential built heritage resources and cultural heritage landscapes, including a historical summary of the study area. The Ministry has developed a screening checklist that may assist with this exercise: [Criteria for Evaluating for Potential Built Heritage Resources and Cultural Heritage Landscapes](#).
2. Identify preliminary potential project-specific impacts on the known and potential built heritage resources and cultural heritage landscapes that have been identified. The report should include a description of the anticipated impact to each known or potential built heritage resource or cultural heritage landscape that has been identified.
3. Recommend measures to avoid or mitigate potential negative impacts to known or potential built heritage resources and cultural heritage landscapes. The proposed mitigation measures are to inform the next steps of project planning and design.

Given that this project covers a large study area, MCM recommends that the Cultural Heritage Report is carried out so that step 1 described above is undertaken early in the planning process. Then, steps 2 and 3 can be undertaken once the preferred alternatives have been selected.

Cultural Heritage Reports will be undertaken by a qualified person who has expertise, recent experience, and knowledge relevant to the type of cultural heritage resources being considered and the nature of the activity being proposed.

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 myself.

- Karla Barboza, Team Lead - Heritage | Heritage Planning Unit (Citizenship and Multiculturalism) | 416-660-1027 | karla.barboza@ontario.ca
- Liam Smythe, Heritage Planner | Heritage Planning Unit (Citizenship and Multiculturalism) | 416-301-4797 | Liam.Smythe@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,

Liam Smythe
Heritage Planner
Liam.Smythe@ontario.ca

Copied to: Tony Guerrero, The Greer Galloway Group Inc.
Jeanorth Sinnakandu, The Greer Galloway Group Inc.
Gabriel Goad, The Greer Galloway Group Inc.
Nafiur Rahman, City of Kawartha Lakes
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*.

Gabriel Goad

From: Jeanorth Sinnakandu <jsinnakandu@greergalloway.com>
Sent: Thursday, October 10, 2024 1:29 PM
To: tsimpson@alderville.ca; KeithK@curvelake.ca; Chief Laurie Carr; Bureau_politique; kawarthanishnawbecouncil@outlook.com; klarocca@scugogfirstnation.com; Joanne Sandy; council@chimnissing.ca; donna.bigcanoe@georginaisland.com; tedw@ramafirstnation.ca; rdonm@mbq-tmt.org; Fuller, Jacqueline (MECP); Jon.Orpana@ontario.ca; Joseph.Harvey@ontario.ca; Karla.Barboza@ontario.ca; ONT.Web@pwgsc-tpsgc.gc.ca; Dan.Minkin@ontario.ca
Cc: consultation@alderville.ca; ShannonD@curvelake.ca; Tom Cowie; Sean Davison; dominic.sainte-marie@wendake.ca; nodin webb; samgharvey@live.com; drichardson@scugogfirstnation.com; inquiries@williamstreatiesfirstnations.ca; danamonague@chimnissing.ca; info@chimnissing.ca; jcopegog@chimnissing.ca; jl.porte@georginaisland.com; consultation@ramafirstnation.ca; evelynb@ramafirstnation.ca; shardayj@ramafirstnation.ca; reception@mbq-tmt.org; Cassie Thompson; Lisa Maracle; Tony Guerrero; Gabriel Goad; Marten Leclerc; Nafiur Rahman
Subject: Notice of Commencement - Logie and Ridout Street Sewage Pumping Stations EA
Attachments: Notice of Commencement + Keymap - Logie and Ridout St. SPS.pdf

Hello,

Please find attached the Notice of Commencement for the Logie and Ridout Street Sewage Pumping Stations EA project.

Please contact us if you have any questions or comments. Thank you.

Regards,

Jeanorth Sinnakandu, P.Eng.



1620 Wallbridge Loyalist Road, Belleville ON K8N 4Z5
Tel: (613) 966-3068 Ext: 392; Fax: (613) 966-3087
Cell: (647) 680-4973
Web Site: www.greergalloway.com
E-Mail: jsinnakandu@greergalloway.com

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Hello Marten,

Please see MECP's preliminary comments on the above mentioned file. Also included is the list of indigenous communities which should be consulted with at a minimum. Nothing precludes the City to reach out to other indigenous communities that you may have developed a consultative relationship with.

In addition, there are a variety of resources and hyperlinks that you may refer to in undertaking your study(ies).

Jon K. Orpana [hear name](#)
Regional Environmental Planner
Environmental Assessment Branch
Ministry of the Environment, Conservation and Parks
Kingston Regional Office
PO Box 22032, 1259 Gardiners Road
Kingston, Ontario
K7M 8S5

Phone: (613) 548-6918
Fax: (613) 548-6908
Email: jon.orpana@ontario.ca

**Ministry of the Environment,
Conservation and Parks**

**Ministère de l'Environnement,
de la Protection de la nature
et des Parcs**

Environmental Assessment
Branch

Direction des évaluations
environnementales

1st Floor
135 St. Clair Avenue W
Toronto ON M4V 1P5
Tel.: 416 314-8001
Fax.: 416 314-8452

Rez-de-chaussée
135, avenue St. Clair Ouest
Toronto ON M4V 1P5
Tél. : 416 314-8001
Télec. : 416 314-8452

October 9, 2024

BY EMAIL ONLY

City of Kawartha Lakes

Attention: Marten Leclerc, Senior Engineering Tech

Email: mleclerc@kawarthalakes.ca

Reg: **City of Kawartha Lakes**
Logie & Rideout Sewage Pumping Stations – Class Environmental Assessment,
Schedule B – MECP Response to Notice of Commencement

Dear Marten Leclerc,

This letter is in response to the Notice of Commencement issued October 2, 2024, for the above noted project. The Ministry of the Environment, Conservation and Parks (MECP) acknowledges that the proponent has indicated that the study is following the approved environmental planning process for a Schedule B project under the Municipal Class Environmental Assessment (Class EA), 2023 as amended.

Background

The City of Kawartha Lakes (City) is initiating a planning process to upgrade the wastewater collection system for the community of Lindsay. The community of Lindsay is rapidly expanding with new developments and requires upgrades to the wastewater collection system to support the increasing needs of the residents of the community. The project is being carried out with the requirements for a Schedule 'B' project under the terms of the Municipal Class Environmental Assessment (Class EA) process. A keymap is attached showing the study area including the Logie and Ridout Street pumping stations, forcemains, and discharge manholes.

The Class EA process includes:

- Consultation with the public, review agencies, and other stakeholders
- Field investigations
- Evaluation of viable alternative solutions
- Assessment of the impacts of the alternative solutions and identification of measures to mitigate any adverse environmental, social, cultural, and economic impacts
- Selection of a preferred solution

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:

- **Alderville First Nation**
- **Curve Lake First Nation**
- **Hiawatha First Nation**
- **Mississaugas of Scugog Island First Nation**

For the above Williams Treaties communities, please cc Karry Sandy McKenzie, William Treaties First Nations Process Co-ordinator, inquiries@williamstreatiesfirstnations.ca

- **Kawartha Nishnawbe**

If the proponent has undertaken archeological studies and are required to undertake any work related to archeological resources, they should also include:

- **Huron-Wendat**

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 subsequent to 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 on the basis of 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 also ensure a copy of the final notice is sent to the ministry's Eastern Region EA notification email account (eanotification.eregion@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 jon.orpana@ontario.ca.

Sincerely,



Jon K. Orpana

Regional Environmental Planner – Eastern Region

Cc:

Brad Jackson, (A)Water Compliance Supervisor, Peterborough District Office, MECP
Email: brittney.wielgos@ontario.ca

Tony Guerra, P. Eng.
The Greer Galloway Group Inc.
Email: tuerrera@greergalloway.com

Encl. Areas of Interest

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.

- 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 this mapping tool: <http://www.applications.ene.gov.on.ca/swp/en/index.php>. 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 projects under a Class EA or EA Act Regulation 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.
- 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
 - A discussion of potential mitigation measures.
- 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.
- The MECP recommends that non-chloride dust-suppressants be applied. For a comprehensive list of fugitive dust prevention and control measures that could be applied, refer to [Cheminfo Services Inc. Best Practices for the Reduction of Air Emissions from Construction and Demolition Activities](#) report prepared for Environment Canada. March 2005.
- The report should consider the potential impacts of increased noise levels during the operation of the completed project. The proponent should explore all potential measures to mitigate significant noise impacts during the assessment of alternatives.
- Noise associated with a proposed transformer station should be evaluated. Note that any noise monitoring and assessment should be conducted in accordance with the

requirements of MECP guidelines, such as MECP Publication NPC-233, *“Information to be Submitted for Approval of Stationary Sources of Sound”*.

- In order to address potential noise impacts of the transformer station, it may be necessary to first monitor ambient noise levels prior to the installation of the transformer station, and to then conduct a noise assessment after the transformer station is installed and operational. Depending on the results of these studies and the proximity to sensitive receptors, remedial measures may be needed to address noise generated by the transformer station.
- ☐ 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.
 - Key Hydrologic Features: Permanent streams, intermittent streams, inland lakes and their littoral zones, seepage areas and springs, and wetlands.
 - 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.

☐ Species at Risk

- 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, SAR Considerations etc., proponents / consultants should 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 prepared as part of the Class EA process should include:
 - 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.
- 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 work.

□ 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. For example, where construction of transmission towers is proposed, any pile driving into the subsurface that is required for steel pile type tower foundations, particularly to the bedrock surface at depth, may have an adverse effect on local groundwater resources.
- 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.
- Groundwater should be protected from the potential for spills, dewatering and wood pole preservative during construction. A plan should be in place for preventing and dealing with spills. All spills that could potentially cause damage to the environment should be reported to the Spills Action Centre of the Ministry of the Environment, Conservation and Parks at 1-800-268-6060.

☐ 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. Consideration of potential environmental contamination should be given following regulatory guidance where the project involves decommissioning of facilities. Please contact the appropriate MECP District Office for further consultation if contaminated sites are present.

- Where poles are being removed that have been chemically treated, we recommend that the proponent consider soil testing to determine the extent of any related soil contamination. Soil testing may be contingent on factors such as proximity to water bodies or wetlands, proximity to wells, locations where poles are being removed but not replaced, and the treatment chemicals used (i.e. chromated copper arsenate (CCA) or creosote). In the case of poles which have been treated with CCA or creosote, testing for arsenic, copper and creosote should be completed.

☐ 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 effects monitoring strategies and programs must be documented in the report.
- The proponent must consider cumulative effects when planning projects. The assessment will include the proposed undertaking and any other proposed undertakings in the immediate project area where documentation is available (e.g. other environmental assessments).

☐ 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 Guide to Environmental Assessment Requirements for Electricity Projects to include full documentation).
- Please include the full stakeholder distribution/consultation list in the documentation.

☐ Class EA Process

- 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 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 (for projects in MECP Southwest Region, the email is eanotification.swregion@ontario.ca).

The public has the ability to 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
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

Client's Guide to Preliminary Screening for Species at Risk

***Ministry of the Environment, Conservation and Parks
Species at Risk Branch, Permissions and Compliance
DRAFT - May 2019***

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1.0 Purpose, Scope, Background and Context

1.1 Purpose of this Guide

This guide has been created to:

- help clients better understand their obligation to gather information and complete a preliminary screening for species at risk before contacting the ministry,
- outline guidance and advice clients can expect to receive from the ministry at the preliminary screening stage,
- help clients understand how they can gather information about species at risk by accessing publicly available information housed by the Government of Ontario, and
- provide a list of other potential sources of species at risk information that exist outside the Government of Ontario.

It remains the client's responsibility to:

- carry out a preliminary screening for their projects,
- obtain best available information from all applicable information sources,
- conduct any necessary field studies or inventories to identify and confirm the presence or absence of species at risk or their habitat,
- consider any potential impacts to species at risk that a proposed activity might cause, and
- comply with the *Endangered Species Act* (ESA).

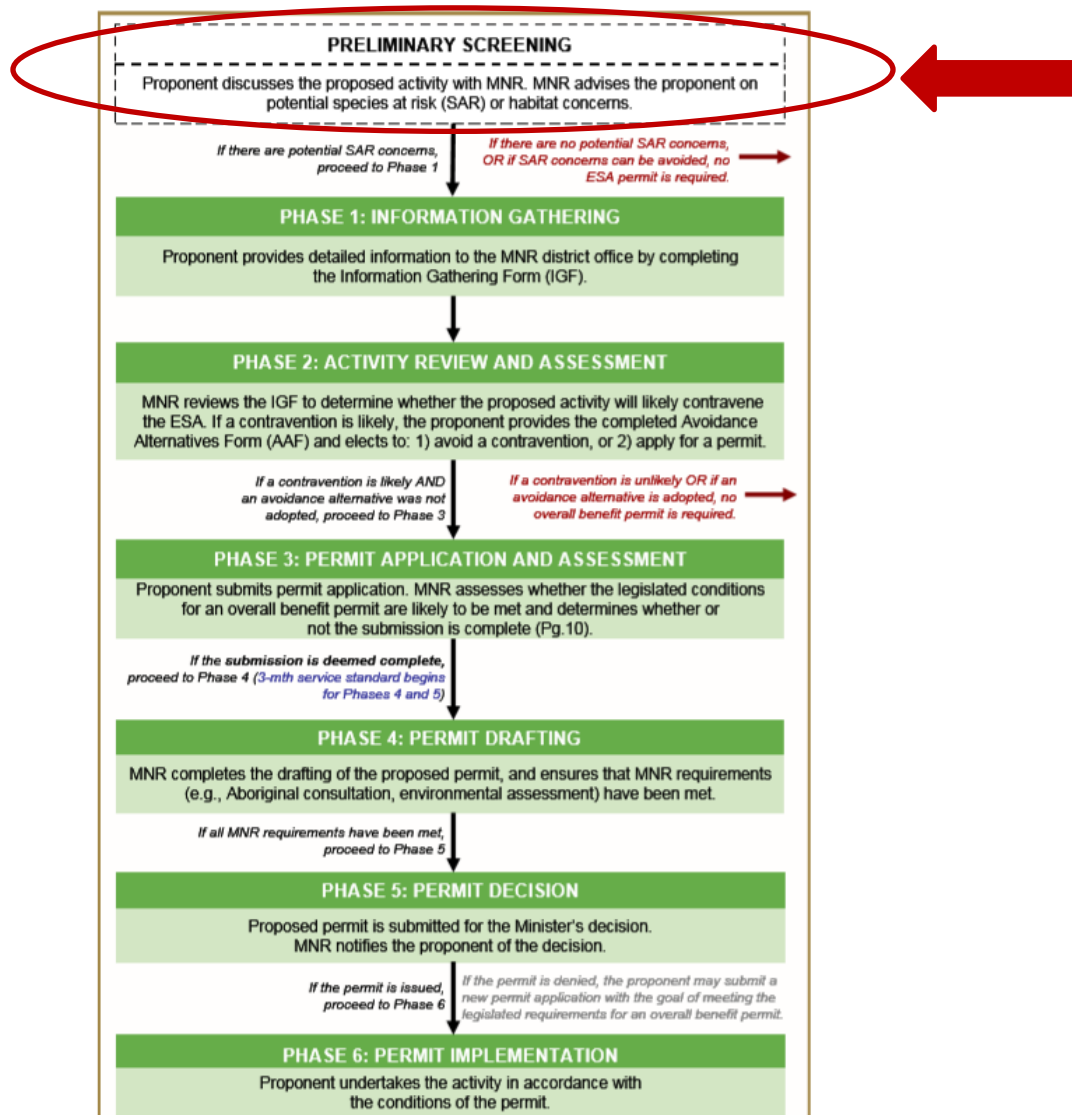
To provide the most efficient service, clients should initiate species at risk screenings and seek information from all applicable information sources identified in this guide, at a minimum, prior to contacting Government of Ontario ministry offices for further information or advice.

1.2 Scope

This guide is a resource for clients seeking to understand if their activity is likely to impact species at risk or if they are likely to trigger the need for an authorization under the ESA. It is not intended to circumvent any detailed site surveys that may be necessary to document species at risk or their habitat nor to circumvent the need to assess the impacts of a proposed activity on species at risk or their habitat. This guide is not an exhaustive list of available information sources for any given area as the availability of information on species at risk and their habitat varies across the province. This guide is intended to support projects and activities carried out on Crown and private land, by private landowners, businesses, other provincial ministries and agencies, or municipal government.

1.3 Background and Context

To receive advice on their proposed activity, clients must first determine whether any species at risk or their habitat exist or are likely to exist at or near their proposed activity, and whether their proposed activity is likely to contravene the ESA. Once this step is complete, clients may contact the ministry at SAROntario@ontario.ca to discuss the main purpose, general methods, timing and location of their proposed activity as well as information obtained about species at risk and their habitat at, or near, the site. At this stage, the ministry can provide advice and guidance to the client about potential species at risk or habitat concerns, measures that the client is considering to avoid adverse effects on species at risk or their habitat and whether additional field surveys are advisable. This is referred to as the “Preliminary Screening” stage. For more information on additional phases in the diagram below, please refer to the *Endangered Species Act Submission Standards for Activity Review and 17(2)(c) Overall Benefit Permits* policy available online at <https://www.ontario.ca/page/species-risk-overall-benefit-permits>



2.0 Roles and Responsibilities

To provide the most efficient service, clients should initiate species at risk screenings and seek information from all applicable information sources identified in this guide prior to contacting Government of Ontario ministry offices for further information or advice.

Step 1: Client seeks information regarding species at risk or their habitat that exist, or are likely to exist, at or near their proposed activity by referring to all applicable information sources identified in this guide.

Step 2: Client reviews and consider guidance on whether their proposed activity is likely to contravene the ESA (see section 3.4 of this guide for guidance on what to consider).

Step 3: Client gathers information identified in the checklist in section 4 of this guide.

Step 4: Client contacts the ministry at SAROntario@ontario.ca to discuss their preliminary screening. Ministry staff will ask the client questions about the main purpose, general methods, timing and location of their proposed activity as well as information obtained about species at risk and their habitat at, or near, the site. Ministry staff will also ask the client for their interpretation of the impacts of their activity on species at risk or their habitat as well as measures the client has considered to avoid any adverse impacts.

Step 5: Ministry staff will provide advice on next steps.

Option A: Ministry staff may advise the client they can proceed with their activity without an authorization under the ESA where the ministry is confident that:

- no protected species at risk or habitats are likely to be present at or near the proposed location of the activity; or
- protected species at risk or habitats are known to be present but the activity is not likely to contravene the ESA; or
- through the adoption of avoidance measures, the modified activity is not likely to contravene the ESA.

Option B: Ministry staff may advise the client to proceed to Phase 1 of the overall benefit permitting process (i.e. Information Gathering in the previous diagram), where:

- there is uncertainty as to whether any protected species at risk or habitats are present at or near the proposed location of the activity; or
- the potential impacts of the proposed activity are uncertain; or
- ministry staff anticipate the proposed activity is likely to contravene the ESA.

3.0 Information Sources

Land Information Ontario (LIO) and the Natural Heritage Information Centre (NHIC) maintain and provide information about species at risk, as well as related information about fisheries, wildlife, crown lands, protected lands and more. This information is made available to organizations, private individuals, consultants, and developers through online sources and is often considered under various pieces of legislation or as part of regulatory approvals and planning processes.

The information available from LIO or NHIC and the sources listed in this guide should not be considered as a substitute for site visits and appropriate field surveys. Generally, this information can be regarded as a starting point from which to conduct further field surveys, if needed. While this data represents best available current information, it is important to note that a lack of information for a site does not mean that species at risk or their habitat are not present. There are many areas where the Government of Ontario does not currently have information, especially in more remote parts of the province. The absence of species at risk location data at or near your site does not necessarily mean no species at risk are present at that location. On-site assessments can better verify site conditions, identify and confirm presence of species at risk and/or their habitats.

Information on the location (i.e. observations and occurrences) of species at risk is considered sensitive and therefore publicly available only on a 1km square grid as opposed to as a detailed point on a map. This generalized information can help you understand which species at risk are in the general vicinity of your proposed activity and can help inform field level studies you may want to undertake to confirm the presence, or absence of species at risk at or near your site.

Should you require specific and detailed information pertaining to species at risk observations and occurrences at or near your site on a finer geographic scale; you will be required to demonstrate your need to access this information, to complete data sensitivity training and to obtain a Sensitive Data Use License from the NHIC. Information on how to obtain a license can be found online at <https://www.ontario.ca/page/get-natural-heritage-information>.

Many organizations (e.g. other Ontario ministries, municipalities, conservation authorities) have ongoing licensing to access this data so be sure to check if your organization has this access and consult this data as part of your preliminary screening if your organization already has a license.

3.1 Make a Map: Natural Heritage Areas

The Make a Natural Heritage Area Map (available online at http://www.gisapplication.lrc.gov.on.ca/mamnh/Index.html?site=MNR_NHLUPS_NaturalHeritage&viewer=NaturalHeritage&locale=en-US) provides public access to natural heritage information, including species at risk, without the user needing to have Geographic Information System (GIS) capability. It allows users to view and identify generalized species at risk information, mark areas of interest, and create and print a custom map directly from the web application. The tool also shows topographic information such as roads, rivers, contours and municipal boundaries.

Users are advised that sensitive information has been removed from the natural areas dataset and the occurrences of species at risk has been generalized to a 1-kilometre grid to mitigate the risks to the species (e.g. illegal harvest, habitat disturbance, poaching).

The web-based mapping tool displays natural heritage data, including:

- Generalized Species at risk occurrence data (based on a 1-km square grid),
- Natural Heritage Information Centre data.

Data cannot be downloaded directly from this web map; however, information included in this application is available digitally through Land Information Ontario (LIO) at <https://www.ontario.ca/page/land-information-ontario>.

3.2 Land Information Ontario (LIO)

Most natural heritage data is publicly available. This data is managed in a large provincial corporate database called the LIO Warehouse and can be accessed online through the LIO Metadata Management Tool at <https://www.javacoeapp.lrc.gov.on.ca/geonetwork/srv/en/main.home>. This tool provides descriptive information about the characteristics, quality and context of the data. Publicly available geospatial data can be downloaded directly from this site.

While most data are publicly available, some data may be considered highly sensitive (i.e. nursery areas for fish, species at risk observations) and as such, access to some data maybe restricted.

3.3 Additional Species at Risk Information Sources

- The Breeding Bird Atlas can be accessed online at <http://www.birdsontario.org/atlas/index.jsp?lang=en>
- eBird can be accessed online at <https://ebird.org/home>
- iNaturalist can be accessed online at <https://www.inaturalist.org/>
- The Ontario Reptile and Amphibian Atlas can be accessed online at <https://ontarionature.org/programs/citizen-science/reptile-amphibian-atlas>
- Your local Conservation Authority. Information to help you find your local Conservation Authority can be accessed online at <https://conservationontario.ca/conservation-authorities/find-a-conservation-authority/>

Local naturalist groups or other similar community-based organizations

- Local Indigenous communities
- Local land trusts or other similar Environmental Non-Government Organizations
- Field level studies to identify if species at risk, or their habitat, are likely present or absent at or near the site.
- When an activity is proposed within one of the continuous caribou ranges, please be sure to consider the caribou Range Management Policy. This policy includes figures and maps of the continuous caribou range, can be found online at <https://www.ontario.ca/page/range-management-policy-support-woodland-caribou-conservation-and-recovery>

3.4 Information Sources to Support Impact Assessments

- Guidance to help you understand if your activity is likely to adversely impact species at risk or their habitat can be found online at <https://www.ontario.ca/page/policy-guidance-harm-and-harass-under-endangered-species-act> and <https://www.ontario.ca/page/categorizing-and-protecting-habitat-under-endangered-species-act>
- A list of species at risk in Ontario is available online at <https://www.ontario.ca/page/species-risk-ontario>. On this webpage, you can find out more about each species, including where it lives, what threatens it and any specific habitat protections that apply to it by clicking on the photo of the species.

4.0 Check-List

Please feel free to use the check list below to help you confirm you have explored all applicable information sources and to support your discussion with Ministry staff at the preliminary screening stage.

- ✓ Land Information Ontario (LIO)
- ✓ Natural Heritage Information Centre (NHIC)
- ✓ The Breeding Bird Atlas
- ✓ eBird
- ✓ iNaturalist
- ✓ Ontario Reptile and Amphibian Atlas
- ✓ List Conservation Authorities you contacted: _____

- ✓ List local naturalist groups you contacted: _____

- ✓ List local Indigenous communities you contacted: _____

- ✓ List any other local land trusts or Environmental Non-Government Organizations you contacted: _____

- ✓ List and field studies that were conducted to identify species at risk, or their habitat, likely to be present or absent at or near the site: _____

- ✓ List what you think the likely impacts of your activity are on species at risk and their habitat (e.g. damage or destruction of habitat, killing, harming or harassing species at risk): _____

A PROPONENT'S INTRODUCTION TO THE DELEGATION OF PROCEDURAL ASPECTS OF CONSULTATION WITH ABORIGINAL COMMUNITIES

DEFINITIONS

The following definitions are specific to this document and may not apply in other contexts:

Aboriginal communities – the First Nation or Métis communities identified by the Crown for the purpose of consultation.

Consultation – the Crown's legal obligation to consult when the Crown has knowledge of an established or asserted Aboriginal or treaty right and contemplates conduct that might adversely impact that right. This is the type of consultation required pursuant to s. 35 of the *Constitution Act, 1982*. Note that this definition does not include consultation with Aboriginal communities for other reasons, such as regulatory requirements.

Crown – the Ontario Crown, acting through a particular ministry or ministries.

Procedural aspects of consultation – those portions of consultation related to the process of consultation, such as notifying an Aboriginal community about a project, providing information about the potential impacts of a project, responding to concerns raised by an Aboriginal community and proposing changes to the project to avoid negative impacts.

Proponent – the person or entity that wants to undertake a project and requires an Ontario Crown decision or approval for the project.

I. PURPOSE

The Crown has a legal duty to consult Aboriginal communities when it has knowledge of an existing or asserted Aboriginal or treaty right and contemplates conduct that may adversely impact that right. In outlining a framework for the duty to consult, the Supreme Court of Canada has stated that the Crown may delegate procedural aspects of consultation to third parties. This document provides general information about the Ontario Crown's approach to delegation of the procedural aspects of consultation to proponents.

This document is not intended to instruct a proponent about an individual project, and it does not constitute legal advice.

II. WHY IS IT NECESSARY TO CONSULT WITH ABORIGINAL COMMUNITIES?

The objective of the modern law of Aboriginal and treaty rights is the *reconciliation* of Aboriginal peoples and non-Aboriginal peoples and their respective rights, claims and interests. Consultation is an important component of the reconciliation process.

The Crown has a legal duty to consult Aboriginal communities when it has knowledge of an existing or asserted Aboriginal or treaty right and contemplates conduct that might adversely impact that right. For example, the Crown's duty to consult is triggered when it considers

issuing a permit, authorization or approval for a project which has the potential to adversely impact an Aboriginal right, such as the right to hunt, fish, or trap in a particular area.

The scope of consultation required in particular circumstances ranges across a spectrum depending on both the nature of the asserted or established right and the seriousness of the potential adverse impacts on that right.

Depending on the particular circumstances, the Crown may also need to take steps to accommodate the potentially impacted Aboriginal or treaty right. For example, the Crown may be required to avoid or minimize the potential adverse impacts of the project.

III. THE CROWN'S ROLE AND RESPONSIBILITIES IN THE DELEGATED CONSULTATION PROCESS

The Crown has the responsibility for ensuring that the duty to consult, and accommodate where appropriate, is met. However, the Crown may delegate the procedural aspects of consultation to a proponent.

There are different ways in which the Crown may delegate the procedural aspects of consultation to a proponent, including through a letter, a memorandum of understanding, legislation, regulation, policy and codes of practice.

If the Crown decides to delegate procedural aspects of consultation, the Crown will generally:

- Ensure that the delegation of procedural aspects of consultation and the responsibilities of the proponent are clearly communicated to the proponent;
- Identify which Aboriginal communities must be consulted;
- Provide contact information for the Aboriginal communities;
- Revise, as necessary, the list of Aboriginal communities to be consulted as new information becomes available and is assessed by the Crown;
- Assess the scope of consultation owed to the Aboriginal communities;
- Maintain appropriate oversight of the actions taken by the proponent in fulfilling the procedural aspects of consultation;
- Assess the adequacy of consultation that is undertaken and any accommodation that may be required;
- Provide a contact within any responsible ministry in case issues arise that require direction from the Crown; and
- Participate in the consultation process as necessary and as determined by the Crown.

IV. THE PROPONENT'S ROLE AND RESPONSIBILITIES IN THE DELEGATED CONSULTATION PROCESS

Where aspects of the consultation process have been delegated to a proponent, the Crown, in meeting its duty to consult, will rely on the proponent's consultation activities and documentation of those activities. The consultation process informs the Crown's decision of whether or not to approve a proposed project or activity.

A proponent's role and responsibilities will vary depending on a variety of factors including the extent of consultation required in the circumstance and the procedural aspects of consultation the Crown has delegated to it. Proponents are often in a better position than the Crown to discuss a project and its potential impacts with Aboriginal communities and to determine ways to avoid or minimize the adverse impacts of a project.

A proponent can raise issues or questions with the Crown at any time during the consultation process. If issues or concerns arise during the consultation that cannot be addressed by the proponent, the proponent should contact the Crown.

a) What might a proponent be required to do in carrying out the procedural aspects of consultation?

Where the Crown delegates procedural aspects of consultation, it is often the proponent's responsibility to provide notice of the proposed project to the identified Aboriginal communities. The notice should indicate that the Crown has delegated the procedural aspects of consultation to the proponent and should include the following information:

- a description of the proposed project or activity;
- mapping;
- proposed timelines;
- details regarding anticipated environmental and other impacts;
- details regarding opportunities to comment; and
- any changes to the proposed project that have been made for seasonal conditions or other factors, where relevant.

Proponents should provide enough information and time to allow Aboriginal communities to provide meaningful feedback regarding the potential impacts of the project. Depending on the nature of consultation required for a project, a proponent also may be required to:

- provide the Crown with copies of any consultation plans prepared and an opportunity to review and comment;
- ensure that any necessary follow-up discussions with Aboriginal communities take place in a timely manner, including to confirm receipt of information, share and update information and to address questions or concerns that may arise;

- as appropriate, discuss with Aboriginal communities potential mitigation measures and/or changes to the project in response to concerns raised by Aboriginal communities;
- use language that is accessible and not overly technical, and translate material into Aboriginal languages where requested or appropriate;
- bear the reasonable costs associated with the consultation process such as, but not limited to, meeting hall rental, meal costs, document translation(s), or to address technical & capacity issues;
- provide the Crown with all the details about potential impacts on established or asserted Aboriginal or treaty rights, how these concerns have been considered and addressed by the proponent and the Aboriginal communities and any steps taken to mitigate the potential impacts;
- provide the Crown with complete and accurate documentation from these meetings and communications; and
- notify the Crown immediately if an Aboriginal community not identified by the Crown approaches the proponent seeking consultation opportunities.

b) What documentation and reporting does the Crown need from the proponent?

Proponents should keep records of all communications with the Aboriginal communities involved in the consultation process and any information provided to these Aboriginal communities.

As the Crown is required to assess the adequacy of consultation, it needs documentation to satisfy itself that the proponent has fulfilled the procedural aspects of consultation delegated to it. The documentation required would typically include:

- the date of meetings, the agendas, any materials distributed, those in attendance and copies of any minutes prepared;
- the description of the proposed project that was shared at the meeting;
- any and all concerns or other feedback provided by the communities;
- any information that was shared by a community in relation to its asserted or established Aboriginal or treaty rights and any potential adverse impacts of the proposed activity, approval or disposition on such rights;
- any proposed project changes or mitigation measures that were discussed, and feedback from Aboriginal communities about the proposed changes and measures;
- any commitments made by the proponent in response to any concerns raised, and feedback from Aboriginal communities on those commitments;
- copies of correspondence to or from Aboriginal communities, and any materials distributed electronically or by mail;

- information regarding any financial assistance provided by the proponent to enable participation by Aboriginal communities in the consultation;
- periodic consultation progress reports or copies of meeting notes if requested by the Crown;
- a summary of how the delegated aspects of consultation were carried out and the results; and
- a summary of issues raised by the Aboriginal communities, how the issues were addressed and any outstanding issues.

In certain circumstances, the Crown may share and discuss the proponent's consultation record with an Aboriginal community to ensure that it is an accurate reflection of the consultation process.

c) Will the Crown require a proponent to provide information about its commercial arrangements with Aboriginal communities?

The Crown may require a proponent to share information about aspects of commercial arrangements between the proponent and Aboriginal communities where the arrangements:

- include elements that are directed at mitigating or otherwise addressing impacts of the project;
- include securing an Aboriginal community's support for the project; or
- may potentially affect the obligations of the Crown to the Aboriginal communities.

The proponent should make every reasonable effort to exempt the Crown from confidentiality provisions in commercial arrangements with Aboriginal communities to the extent necessary to allow this information to be shared with the Crown.

The Crown cannot guarantee that information shared with the Crown will remain confidential. Confidential commercial information should not be provided to the Crown as part of the consultation record if it is not relevant to the duty to consult or otherwise required to be submitted to the Crown as part of the regulatory process.

V. WHAT ARE THE ROLES AND RESPONSIBILITIES OF ABORIGINAL COMMUNITIES' IN THE CONSULTATION PROCESS?

Like the Crown, Aboriginal communities are expected to engage in consultation in good faith. This includes:

- responding to the consultation notice;
- engaging in the proposed consultation process;
- providing relevant documentation;

- clearly articulating the potential impacts of the proposed project on Aboriginal or treaty rights; and
- discussing ways to mitigate any adverse impacts.

Some Aboriginal communities have developed tools, such as consultation protocols, policies or processes that provide guidance on how they would prefer to be consulted. Although not legally binding, proponents are encouraged to respect these community processes where it is reasonable to do so. Please note that there is no obligation for a proponent to pay a fee to an Aboriginal community in order to enter into a consultation process.

To ensure that the Crown is aware of existing community consultation protocols, proponents should contact the relevant Crown ministry when presented with a consultation protocol by an Aboriginal community or anyone purporting to be a representative of an Aboriginal community.

VI. WHAT IF MORE THAN ONE PROVINCIAL CROWN MINISTRY IS INVOLVED IN APPROVING A PROPONENT'S PROJECT?

Depending on the project and the required permits or approvals, one or more ministries may delegate procedural aspects of the Crown's duty to consult to the proponent. The proponent may contact individual ministries for guidance related to the delegation of procedural aspects of consultation for ministry-specific permits/approvals required for the project in question. Proponents are encouraged to seek input from all involved Crown ministries sooner rather than later.



Appendix K: First Nations Correspondance

Gabriel Goad

From: Tom Cowie <tcowie@hiawathafn.ca>
Sent: Thursday, October 10, 2024 1:54 PM
To: Jeanorth Sinnakandu; tsimpson@alderville.ca; KeithK@curvelake.ca; Chief Laurie Carr; Bureau_politique; kawarthanishnawbecouncil@outlook.com; klarocca@scugogfirstnation.com; Joanne Sandy; council@chimnissing.ca; donna.bigcanoe@georginaisland.com; tedw@ramafirstnation.ca; rdonm@mbq-tmt.org; Fuller, Jacqueline (MECP); Jon.Orpana@ontario.ca; Joseph.Harvey@ontario.ca; Karla.Barboza@ontario.ca; ONT.Web@pwgsc-tpsgc.gc.ca; Dan.Minkin@ontario.ca
Cc: consultation@alderville.ca; ShannonD@curvelake.ca; Sean Davison; dominic.sainte-marie@wendake.ca; nodin webb; samgharvey@live.com; drichardson@scugogfirstnation.com; inquiries@williamstreatiesfirstnations.ca; danamonague@chimnissing.ca; info@chimnissing.ca; jcopegog@chimnissing.ca; jl.porte@georginaisland.com; consultation@ramafirstnation.ca; evelynb@ramafirstnation.ca; shardayj@ramafirstnation.ca; reception@mbq-tmt.org; Cassie Thompson; Lisa Maracle; Tony Guerrero; Gabriel Goad; Marten Leclerc; Nafiur Rahman
Subject: RE: Notice of Commencement - Logie and Ridout Street Sewage Pumping Stations EA

CAUTION: This email originated from outside the organization. Do not click links or open attachments unless you recognize the sender, their email address, and know the content is safe.

Aaniin Jeanorth,

Chi miigwech for the information regarding the sewage pumping station upgrades. At his moment I have no questions or concerns. If any should arise I will not hesitate to contact your office. Have a great weekend.

Gichi manaadendamowin

Tom Cowie

Tom Cowie
Lands/Resources Consultation
Hiawatha First Nation
431 Hiawatha Line,
Hiawatha, On
K9J 0E6
705 295-4421 Ext. 216
Email tcowie@hiawathafn.ca



We, the Michi Saagiig of Hiawatha First Nation, are a vibrant, proud, independent and healthy people balanced in the richness of our culture and traditional way of life

From: Jeanorth Sinnakandu <jsinnakandu@greergalloway.com>
Sent: Thursday, October 10, 2024 1:29 PM

To: tsimpson@alderville.ca; KeithK@curvelake.ca; Chief Laurie Carr <chiefcarr@hiawathafn.ca>; Bureau_politique <bureaupolitique@wendake.ca>; kawarthanishnawbecouncil@outlook.com; klarocca@scugogfirstnation.com; Joanne Sandy <jsandy@chimnissing.ca>; council@chimnissing.ca; donna.bigcanoe@georginaisland.com; tedw@ramafirstnation.ca; rdonm@mbq-tmt.org; Fuller, Jacqueline (MECP) <Jacqueline.Fuller@ontario.ca>; Jon.Orpana@ontario.ca; Joseph.Harvey@ontario.ca; Karla.Barboza@ontario.ca; ONT.Web@pwgsc-tpsgc.gc.ca; Dan.Minkin@ontario.ca

Cc: consultation@alderville.ca; ShannonD@curvelake.ca; Tom Cowie <tcowie@hiawathafn.ca>; Sean Davison <sdavison@hiawathafn.ca>; dominic.sainte-marie@wendake.ca; nodin webb <nodin.webb@hotmail.com>; samgharvey@live.com; drichardson@scugogfirstnation.com; inquiries@williamstreatiesfirstnations.ca; danamonague@chimnissing.ca; info@chimnissing.ca; jcopegog@chimnissing.ca; jl.porte@georginaisland.com; consultation@ramafirstnation.ca; evelynb@ramafirstnation.ca; shardayj@ramafirstnation.ca; reception@mbq-tmt.org; Cassie Thompson <consultation@mbq-tmt.org>; Lisa Maracle <lisam@mbq-tmt.org>; Tony Guerrero <tguerrera@greergalloway.com>; Gabriel Goad <ggoad@greergalloway.com>; Marten Leclerc <mleclerc@kawarthalakes.ca>; Nafiur Rahman <nrahman@kawarthalakes.ca>

Subject: Notice of Commencement - Logie and Ridout Street Sewage Pumping Stations EA

ALERT: This message originated outside of HFN's network. **BE CAUTIOUS** before clicking any link or attachment.

Hello,

Please find attached the Notice of Commencement for the Logie and Ridout Street Sewage Pumping Stations EA project.

Please contact us if you have any questions or comments. Thank you.

Regards,

Jeanorth Sinnakandu, P.Eng.



1620 Wallbridge Loyalist Road, Belleville ON K8N 4Z5
Tel: (613) 966-3068 Ext: 392; Fax: (613) 966-3087
Cell: (647) 680-4973
Web Site: www.greergalloway.com
E-Mail: jsinnakandu@greergalloway.com

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Gabriel Goad

Subject: FW: Notice of Commencement - Logie and Ridout Street Sewage Pumping Stations EA

From: Benjamin Labbe <Benjamin.Labbe@wendake.ca>

Sent: Monday, October 28, 2024 1:44 PM

To: Jeanorth Sinnakandu <jsinnakandu@greergalloway.com>

Subject: RE: Notice of Commencement - Logie and Ridout Street Sewage Pumping Stations EA

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Kwe Jeanorth,

Thank you for your email. Please note that the Huron-Wendat Nation is interested in participating in all archaeological fieldwork for this project, as well as receiving copies of the draft reports for review and comments.

Please note that we have updated our way of processing consultations. Any new consultation or project notice must be sent to the following email address: consultations@wendake.ca. We also kindly ask that you remove any other email address that you have on file from all your mailing lists.

Tiawenhk,



NATION HURONNE-WENDAT

Bureau du Nionwentsio

Benjamin Labbé, M. Sc
Conseiller en gestion du territoire

255, place Chef Michel Laveau
Wendake (QC) G0A 4V0
T : 418 843-3767
@ : Benjamin.Labbe@wendake.ca

WENDAKE.CA

De : Jeanorth Sinnakandu <jsinnakandu@greergalloway.com>

Envoyé : 10 octobre 2024 13:29

À : tsimpson@alderville.ca; KeithK@curvelake.ca; Chief Laurie Carr <chiefcarr@hiawathafn.ca>; Bureau_politique <bureaupolitique@wendake.ca>; kawarthanishnawbecouncil@outlook.com; klarocca@scugogfirstnation.com; Joanne Sandy <jsandy@chimnissing.ca>; council@chimnissing.ca; donna.bigcanoe@georginaisland.com; tedw@ramafirstnation.ca; rdonm@mbq-tmt.org; Fuller, Jacqueline (MECP) <Jacqueline.Fuller@ontario.ca>; Jon.Orpana@ontario.ca; Joseph.Harvey@ontario.ca; Karla.Barboza@ontario.ca; ONT.Web@pwgsc-tpsgc.gc.ca; Dan.Minkin@ontario.ca

Cc : consultation@alderville.ca; ShannonD@curvelake.ca; Tom Cowie <tcowie@hiawathafn.ca>; Sean Davison <sdavison@hiawathafn.ca>; Dominic Ste-Marie <Dominic.Ste-Marie@wendake.ca>; nodin webb <nodin.webb@hotmail.com>; samgharvey@live.com; drichardson@scugogfirstnation.com;

inquiries@williamstreatiesfirstnations.ca; danamonague@chimnissing.ca; info@chimnissing.ca;
jcopegog@chimnissing.ca; jl.porte@georginaisland.com; consultation@ramafirstnation.ca; evelynb@ramafirstnation.ca;
shardayj@ramafirstnation.ca; reception@mbq-tmt.org; Cassie Thompson <consultation@mbq-tmt.org>; Lisa Maracle
<lisam@mbq-tmt.org>; Tony Guerrero <tguerrera@greergalloway.com>; Gabriel Goad <ggoad@greergalloway.com>;
Marten Leclerc <mleclerc@kawarthalakes.ca>; Nafiur Rahman <nrahman@kawarthalakes.ca>

Objet : Notice of Commencement - Logie and Ridout Street Sewage Pumping Stations EA

You don't often get email from jsinnakandu@greergalloway.com. [Learn why this is important](#)

Hello,

Please find attached the Notice of Commencement for the Logie and Ridout Street Sewage Pumping Stations EA project.

Please contact us if you have any questions or comments. Thank you.

Regards,

Jeanorth Sinnakandu, P.Eng.



1620 Wallbridge Loyalist Road, Belleville ON K8N 4Z5
Tel: (613) 966-3068 Ext: 392; Fax: (613) 966-3087
Cell: (647) 680-4973
Web Site: www.greergalloway.com
E-Mail: jsinnakandu@greergalloway.com

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Gabriel Goad

Subject: FW: Consultation

-----Original Message-----

From: Jeanorth Sinnakandu <jsinnakandu@greergalloway.com>

Sent: Thursday, October 10, 2024 4:02 PM

To: nodin webb <nodin.webb@hotmail.com>

Cc: Tony Guerrero <tguerrera@greergalloway.com>; Gabriel Goad <ggoad@greergalloway.com>; Marten Leclerc <mleclerc@kawarthalakes.ca>; Nafiur Rahman <nrahman@kawarthalakes.ca>

Subject: RE: Consultation

Hello Nodin,

The Logie St. and Ridout St. Sewage Pumping Stations EA project is currently in the early stages. New information will be forwarded as the project progresses and we will consult with you in the future. Thank you.

Regards,

Jeanorth Sinnakandu, P.Eng.

1620 Wallbridge Loyalist Road, Belleville ON K8N 4Z5

Tel: (613) 966-3068 Ext: 392; Fax: (613) 966-3087

Cell: (647) 680-4973

Web Site: www.greergalloway.com

E-Mail: jsinnakandu@greergalloway.com

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-----Original Message-----

From: nodin webb <nodin.webb@hotmail.com>

Sent: Thursday, October 10, 2024 2:43 PM

To: Jeanorth Sinnakandu <jsinnakandu@greergalloway.com>

Subject: Consultation

CAUTION: This email originated from outside the organization. Do not click links or open attachments unless you recognize the sender, their email address, and know the content is safe.

Boozhoo,

KNFN appreciates you contacting us and we are interested to consult with you on this matter. We are available for virtual consultation bookings 2 weeks from now between Mon-Friday 1-4pm. KNFN is a non-funded First Nation and our council works voluntarily. We must schedule ahead and plan to take time from our full time jobs for consultations and require

the funding to adequately engage. KNFN will provide an invoice for \$1000.00 for funding for a virtual meeting. Please respond with a date(s) that works for you.

Miigwech,

Nodin Webb - Council Member of KNFN, a treaty 20 Mississauga First Nation Sent from my iPhone



Appendix L: Public Correspondance

Gabriel Goad

To: Gabriel Goad
Subject: RE: Public Meeting tonight (Sewage system along Logie Street)

From: Marten Leclerc
Sent: Friday, May 30, 2025 8:20 AM
To: Wendy Ellis <wellis@kawarthalakes.ca>
Cc: Juan Rojas <rojas@kawarthalakes.ca>; Nafiur Rahman <nrahman@kawarthalakes.ca>
Subject: RE: Public Meeting tonight (Sewage system along Logie Street)

Hi Wendy,

I am sorry I did not see this last night. The meeting was for public consultation for the Logie St Sewage Pumping Station and the Ridout St Sewage Pumping Station upgrade project.

Essentially the City, through the Water/Wastewater Masterplan project has identified these two sewage pumping stations as being unable to accommodate sewage flows for future growth in their existing condition. As a result, the City has begun the Municipal Class Environmental Assessment process to determine the best course of action to provide the necessary service levels in these areas.

At this meeting we presented boards outlining the various options staff are reviewing for recommendation to Council, provided a scoring matrix for each alternative, and demonstrated our records of consultation and studies to date.

These presentation boards will be available on the City website on the major projects page hopefully by end of day today.

If there are any further questions from residents, feel free to pass along my contact information.

Marten Leclerc

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Engineering & Corporate Assets, City of Kawartha Lakes
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From: Wendy Ellis <wellis@kawarthalakes.ca>
Sent: Thursday, May 29, 2025 4:49 PM
To: Marten Leclerc <mleclerc@kawarthalakes.ca>
Cc: Juan Rojas <rojas@kawarthalakes.ca>
Subject: Public Meeting tonight (Sewage system along Logie Street)

Hi Marten, I had someone inquire about the public meeting tonight in the Victoria Room. Could you give me a little more information about the meeting??

Wendy Ellis

Executive Assistant

Development Services, City of Kawartha Lakes www.kawarthalakes.ca

(705) 324-9411 ext. #1294

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Appendix M: Notice of Completion

PLACEHOLDER FOR NOTICE OF COMPLETION



Appendix N: Logie St. SPS and Ridout St. SPS Upgrades – Technical Memorandum

Logie St. Sewage Pumping Station and Ridout Sewage Pumping Station Upgrades Technical Memorandum

June 27, 2025



Prepared for:

City of Kawartha Lakes
26 Francis Street Lindsay, Ontario
K9V 5R8

Submitted by:

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Project No.: 2437800

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1. INTRODUCTION

1.1. Background

The Logie St. Sewage Pumping Station and Ridout St. Sewage Pumping Station (SPS) require upgrades to support the increasing needs of the residents of the community of Lindsay. Currently, sewage flows from Logie St. SPS are pumped to a nearby gravity sewer and siphon system that carry the flows to the Ridout St. SPS where all sewage is then pumped to the existing discharge maintenance hole located at the intersection of St David St. and Needham St. Various options for upgrades will be reviewed including options to pump sewage directly from Logie St. SPS to the discharge point and reduce flows received by Ridout St. SPS. The existing system conditions are summarized below (Table 1).

Table 1: Existing System Conditions

Station	Existing Firm Capacity (L/s)	Existing Forcemain Diameter (mm)	Existing Forcemain Length (m)
Logie	69.1	250	350
Ridout	275	500	1480

1.2. Design Flows and Existing Capacities

Both the Logie and Ridout Stations' existing flows and projected future flows were used to calculate the required design flow for the station upgrades. Both stations' flows were determined based on estimated flows from the various residential, institutional, and commercial zones that each station is servicing with the additional infiltration flows. Logie St. SPS station will be accepting future flows from the Hwy 7 SPS of 43 L/s and the calculated design flows also divert all Logie St. SPS flows away from Ridout to be pumped directly to the discharge point. There are large projected growths to the overall system along with high expenses, and complexity associated with upgrading the gravity sewer and siphon system that connects Logie St. SPS to Ridout St. SPS. If Logie St. SPS flows are pumped through a new forcemain directly to the discharge point, upgrades to the gravity sewer siphon system can be avoided. Additionally, upgrades to the Ridout St. SPS can be minimized if the received flows from Logie St. SPS are diverted. The design flows and required forcemain sizing for the stations are summarized below.

Table 2: Design Flows and Forcemain Sizing

Station	Full Build Out Design Flow (L/s)	Future Forcemain Diameter (mm)	Future Forcemain Length (m)
Logie	250	500	2200
Ridout (Logie Flows Diverted)	320	500 (existing)	1480
Ridout (Logie Flows NOT Diverted)	570	Twinned 400 (existing) and 500 (existing)	1480

Both Logie and Ridout stations' existing capacities were reviewed through a head loss analysis of the piping systems and drawdown tests completed in the field to verify the flows. The existing capacities were compared to the design flows for the upgrades to determine the extent of upgrades required.

Logie St. SPS will not be able to provide the required future 250 L/s design flow without upgrades to the station's current firm capacity of 69.1 L/s. Larger pumps are needed to provide the required flow and a larger diameter forcemain is required to avoid high velocities and excessive pressure losses in the forcemain. The drawdown field tests also verified the firm capacity with each individual pump providing an estimated 64 – 68 L/s of flow and both pumps together providing an estimated 95 L/s of flow. For the design flow of 250 L/s, a 500 mm diameter forcemain is recommended.

The existing Logie St. SPS wet well is a 3 m diameter, 9.3 m deep concrete wet well containing the two existing submersible pumps. The new pumps are expected to be much larger and for the required design flow of 250 L/s, there is very little space between the sewer inlet and the expected minimum liquid levels for the pumps. The limited available depth for the station's operating levels will also result in excessively high pump starts, which will increase the overall operating costs for the station. It is recommended that a new deeper wet well is to be used with the new larger pumps.

Ridout St. SPS has an existing firm capacity that will be sufficient in the short term. This was confirmed with a head loss analysis and field tests. The head loss analysis was completed, and a system curve was developed. The system curve was used with the existing pump curve to determine the expected theoretical flow. Subsequently, field test measurements were completed to verify the flow from the station. Drawdown tests were performed with all combinations of the existing pumps, but the measurements were inaccurate due to the inability to measure the varying fill rate of the wet well. The station's existing magnetic flow meters were used instead for the field measurement test values. The results of the analysis and field tests are summarized below.

Figure 1: Ridout St. SPS System Curve vs. Pump Curve

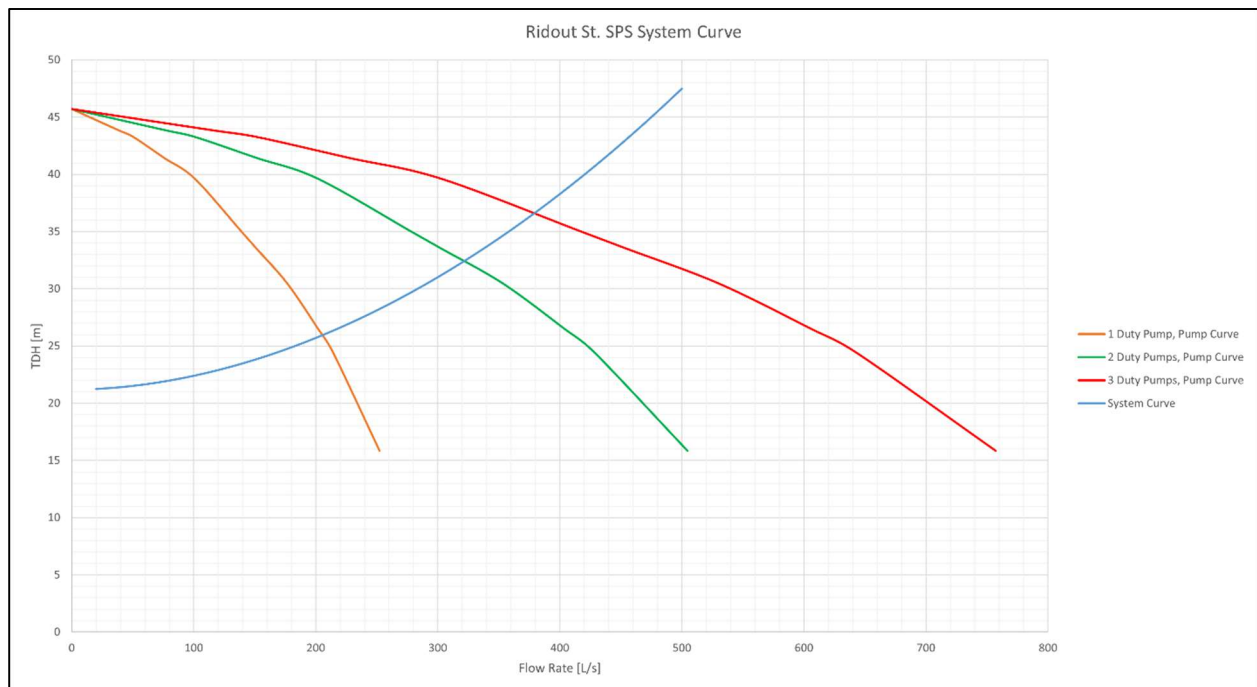


Table 3: Ridout St. SPS Theoretical Flow and Headloss

Ridout St. Station Number of Pumps Running	Theoretical Flow (L/s)	Theoretical Headloss (m)
1	205	26
2	320	32.5
3	380	36.5

Table 4: Ridout St. SPS Flow Meter Data

Ridout St. Station Number of Pumps Running	Measured Flow from Flow Meter (L/s)
1	168 – 175
2	275
3	308 – 359

The existing Ridout St. SPS wetwell is a 7.3 m x 2.4 m concrete wetwell with a depth of 6.7 m. The wet well has 300 mm diameter suction pipes that connect to each of the pumps in the dry well section of the station.

Assessment of future flows confirms that the proposed and future developments slated for the Logie St. SPS sewer shed will contribute an additional 150 L/s in the short term and 220 L/s in the long term of wastewater flow to the SPS. This results in a total build out flow requirement of 250 L/s for the Logie St. SPS. By diverting Logie St. SPS flows away from the Ridout St. SPS, the Ridout St. SPS is likely to have sufficient pumping capacity in the short-term, however the City's latest wastewater modeling confirms that the Ridout St. SPS will require a capacity increase to 320 L/s in the estimated 5-year future.

Although the pumps at the Ridout St. SPS can likely meet the short-term flow requirements, they are of significant age and should be replaced as part of the upgrades. It is recommended that the City proactively replace the aging pumps at Ridout St. SPS with higher capacity pumps to meet the future demands of the station and avoid duplicate costs in the near (estimated 5-year) future. Ridout St. SPS will be upgraded with three (3) new pumps to provide a firm station capacity of 320 L/s in addition to related electrical equipment, valves, and piping upgrades.

2. ALTERNATIVES

2.1. Alternative 1 – Do Nothing / Limit Growth

This alternative would have the lowest capital cost and would involve continuing to use the existing wastewater collection system without any changes. This alternative is not feasible as the current system will not be able to support future developments.

2.2. Alternative 2 – Staged Upgrade of Logie St. SPS and Minor Upgrades to Ridout St. SPS

Alternative 2 will provide a staged upgrade to the Logie St. SPS by utilizing the abandoned forcemain and deferring the full build out upgrades. This option includes the replacement of the Logie St. SPS wetwell

with a new wetwell, allowing for the necessary storage volume and sufficient space to install three new sewage pumps. As a partial upgrade, two new sewage pumps will be installed within the wetwell, each capable of providing 180 L/s of flow for a firm capacity of 180 L/s for the station. This option also includes associated electrical upgrades to support the new SPS.

A new 500 mm diameter forcemain will be constructed from Logie St. SPS to connect to the existing abandoned 400 mm forcemain from Ridout St SPS to the existing discharge point. The connection point from the new forcemain to the abandoned forcemain will be at the intersection of Riverview Rd and Logie St. This results in a new 500 mm forcemain length of approximately 1000 m to connect to the abandoned 400 mm forcemain.

Ultimately, the station will be upgraded in the future to add a third pump providing 180 L/s and the station will operate with two duty pumps and the third pump as a backup. The two duty pumps operating together will provide a firm capacity flow of approximately 250 L/s to meet the full build-out design requirements. The 500 mm forcemain will also be disconnected from the abandoned forcemain and be extended the remaining distance of 1200 m up to the discharge point. These upgrades to Logie St. divert existing flows away from Ridout St. SPS and therefore, minor upgrades to aging equipment will be required at Ridout SPS. It is recommended that the City proactively replace the aging pumps at Ridout St. SPS with higher capacity pumps to meet the future demands of the station and avoid duplicate costs in the near (estimated 5-year) future. Ridout St. SPS will be upgraded with three (3) new pumps to provide a firm station capacity of 320 L/s in addition to related electrical equipment, valves, and piping upgrades.

Table 5: Alternative 2 Design Parameters

Station	Forcemain Diameter (mm)	Forcemain Length (m)	Design Flow FBO (L/s)	Single Pump Flow (L/s)	Number of Pumps
Logie	500	1000*	250	180	2*
Ridout	500 (existing)	1480	320	230	3

* Future upgrades for adding a third pump and extension of the forcemain required

For this option, Logie St. SPS being upgraded by a staged approach will allow for significant short term cost savings likely in the range of \$1.7 million that can be deferred to a later time. Diverting flows from Logie St. SPS to be pumped directly to the discharge point will limit much of the required works for Ridout St. SPS upgrades. Additional work will be required in the future to install a third pump and extend the new 500 mm forcemain up to the discharge point.

2.3. Alternative 3 – Full Upgrade of Logie St. SPS and Minor Upgrades to Ridout St. SPS

Alternative 3 will provide the full build out upgrade to the Logie St. SPS immediately. This option includes the replacement of the Logie St. SPS wetwell with a new wetwell allowing for the necessary storage volume. The wetwell will be equipped with three new pumps providing 180 L/s of flow each. This will provide the station with a firm capacity of 250 L/s to meet the full buildout flow requirements.

A new 500 mm diameter forcemain will be constructed from Logie St. SPS to the existing discharge point. This results in a new 500 mm forcemain length of approximately 2200 m to connect to the discharge point. These upgrades to Logie St. divert existing flows away from Ridout St. SPS and therefore, Ridout St. SPS will only require minor upgrades to pumps and any aging equipment. It is recommended that the City proactively replace the aging pumps at Ridout St. SPS with higher capacity pumps to meet the future

demands of the station and avoid duplicate costs in the near (estimated 5-year) future. Ridout St. SPS will be upgraded with three (3) new pumps to provide a firm station capacity of 320 L/s in addition to related electrical equipment, valves, and piping upgrades.

Table 6: Alternative 3 Design Parameters

Station	Forcemain Diameter (mm)	Forcemain Length (m)	Design Flow FBO (L/s)	Single Pump Flow (L/s)	Number of Pumps
Logie	500	2200	250	180	3
Ridout	500 (existing)	1480	320	230	3

For this option, Logie St. SPS will be fully upgraded to be capable of handling all proposed and anticipated growth in the future. Diverting flows from Logie St. SPS to be pumped directly to the discharge point will limit much of the required works for Ridout St. SPS upgrades. This option will result in significantly higher costs in the short term for the construction of the new 500 mm forcemain for the full distance of 2200 m and the third pump as compared to Alternative 2. Additionally, if developments proceed at the anticipated pace, higher operating costs will be incurred in the short term due to the Logie St. SPS pumps operating inefficiently at the existing lower flows.

2.4. Alternative 4 – Full Upgrades of Logie St. SPS and Ridout St. SPS

Alternative 4 will provide a full build out upgrade to both Logie St. SPS and Ridout St. SPS. This option will not divert any flows away from the Ridout St. SPS. This option will continue pumping sewage from Logie St. SPS to Ridout St. SPS through the gravity sewer and siphon across the river and all sewage will then be pumped from Ridout St. SPS to the existing discharge point.

This option requires major upgrades to both Logie St. SPS and Ridout St SPS including new wet wells with sufficient storage volume at both stations. Logie St. SPS will be equipped with three pumps (two duty, one standby) each providing of 180 L/s of flow. The two duty pumps in the new Logie St. wet well will have a firm capacity of 250 L/s to meet the full build out requirement. Ridout St. SPS will be equipped with three new pumps each providing 380 L/s of flow. Ridout St. SPS will continue to operate with two duty pumps and the third pump being a backup. The two duty pumps together will provide a firm capacity flow of approximately 570 L/s to meet the full build-out requirement.

A new 500 mm forcemain will be constructed from Logie St. SPS to the existing gravity sewer connecting across the river to Ridout St. SPS. The gravity sewer and siphon will also require additional upgrades to accommodate the increased flows. The existing 500 mm forcemain and the existing 400 mm abandoned forcemain will be twinned to split the flows from the Ridout SPS to the existing discharge point.

Table 7: Alternative 4 Design Parameters

Station	Forcemain Diameter (mm)	Forcemain Length (m)	Design Flow FBO (L/s)	Single Pump Flow (L/s)	Number of Pumps
Logie	500	350*	250	180	2
Ridout	Twinned 400 (existing) and 500 (existing)	1480	570	380	3

* Upgrades to the gravity sewer and siphon system at the river crossing are required

No forcemain upgrade will be needed from Ridout St. to the discharge point. Ridout St. SPS would also be fully refurbished as part of the upgrades with this option. This option, however, will result in the highest overall costs from the capital costs of upgrading both stations and the operating costs of pumping all flows from Logie St. SPS twice. This option will also have additional environmental and economic impact due to construction works done around the river crossing.

2.5. Abandoned Forcemain Tests

A CCTV inspection and air pressure test of the abandoned forcemain were completed. A portion of the forcemain was inspected using a CCTV camera and a two-hour air pressure test was conducted on the forcemain in two sections that the available access points allowed for. The test results concluded that the forcemain should be in good condition to be utilized as part of the SPS upgrades.

3. EVALUATION OF ALTERNATIVES

3.1. Alternatives Evaluation Matrix

The above alternative solutions have been compared for their viability against various criteria including meeting the flow capacity requirements, capital and operating costs, impacts on archeological resources, terrestrial habitats and wildlife, and ease of integration and constructability. The evaluation matrix is provided below (Figure 2).

Figure 2: Alternatives Evaluation Matrix

City of Kawartha Lakes Logie and Ridout Sewage Pumping Stations									
Project No. 2437800									
Evaluation of Alternative Solutions									
Description/Elements		Alternative 1		Alternative 2		Alternative 3		Alternative 4	
		Do Nothing		Logie St. Staged Upgrade		Logie St. Full Upgrade		Logie St. and Ridout St. Full Upgrades	
	Weighting Factor	Score	Weighted Score	Score	Weighted Score	Score	Weighted Score	Score	Weighted Score
Meet Flow Capacity Requirements	0.25	0	0	4	1	5	1.25	5	1.25
Site/Neighbourhood/Impact/Noise/Odour/Aesthetics	0.05	5	0.25	4	0.2	4	0.2	1	0.05
Property Acquisition/Availability	0.05	5	0.25	5	0.25	5	0.25	5	0.25
Expansion Potential	0.2	0	0	5	1	0	0	0	0
Ease of Integration/Constructability	0.05	5	0.25	4	0.2	3	0.15	1	0.05
Terrestrial Habitat/Wildlife	0.05	5	0.25	3	0.15	3	0.15	1	0.05
Archaeological Resources	0.05	5	0.25	4	0.2	4	0.2	4	0.2
Operability	0.1	0	0	4	0.4	4	0.4	3	0.3
Capital/Operating Costs	0.2	5	1	4	0.8	3	0.6	1	0.2
Total Weighted Score	1		2.25		4.2		3.2		2.35

*Scoring: 5 is the highest (best). The highest scoring alternative reflects the preferred solution

3.2. Preferred Alternative

The preferred alternative for the upgrades is Alternative 2 or 3 due to having less overall capital and operational costs as well as reduced environmental and economic impacts from avoiding upgrades to the gravity sewer and siphon at the river crossing. Alternative 2 will allow for substantial cost savings for the short term if the abandoned forcemain can be utilized. The completed CCTV inspection and air pressure tests of the forcemain indicate the forcemain is in sufficient condition to be used as part of the SPS upgrades. Additionally, the road allowance along St David St. has been reviewed and sufficient space is available for the installation of a new 500 mm forcemain section as part of the Alternative 2 and 3 upgrades. The final route of the new forcemain will be determined during the design stage.

The preferred alternative will be Alternative 2. Logie St. will be equipped with a new wet well of sufficient storage volume and equipped with two pumps providing approximately 180 L/s of flow. A new 500 mm forcemain of approximately 1000 m in length will be constructed from Logie St. SPS to connect to the 400 mm abandoned forcemain. Future upgrades will include the addition of a third pump into the wet well and the extension of the 500 mm forcemain an additional 1200 m to the discharge point. Approximately 2700 additional homes to the existing 295 residential units can be serviced by the interim upgrade before the third pump and extended 500 mm forcemain are required. Ridout St. SPS will be upgraded with three (3) new pumps to provide a firm station capacity of 320 L/s in addition to related electrical equipment, valves, and piping upgrades.

A high-level cost estimate of the preferred Alternative 2 Stage 1 upgrades to Logie St. SPS is **\$7 million + HST**. The interim upgrade with Alternative 2 will provide substantial cost savings in the short term compared to Alternative 3, likely in the range of \$1.7 million. The high-level cost estimate breakdowns for all Alternatives can be found in Appendix A. Keymaps illustrating the upgrades for all Alternatives can be found in Appendix B.

APPENDIX A – Cost Estimates for All Alternatives

Logie and Ridout SPS Upgrades - Alternative 2 Cost Estimate

Item Number	Item Name	UOM	Quantity	Unit Price	Total	OPSS/OPSD
1	Mobilization and Demobilization	L.S.	1	\$ 200,000	\$ 200,000	-
2	Insurance and Bonding	L.S.	1	\$ 200,000	\$ 200,000	100
3	Maintenance Manuals and Record Drawings	L.S.	1	\$ 10,000	\$ 10,000	-
4	Environmental Protection and Dewatering	L.S.	1	\$ 300,000	\$ 300,000	219.210/219.100
5	Supply and Install 300 mm Granular 'B' Material for Driveway Construction and Road Restoration	Tonne	3800	\$ 50	\$ 190,000	1010
6	Supply and Install 150 mm Granular 'A' Material for Driveway Construction and Road Restoration	Tonne	1900	\$ 50	\$ 95,000	1010
7	Supply and Install 50 mm HL8 Asphalt for Driveway Construction and Road Restoration	Tonne	500	\$ 200	\$ 100,000	510, 311
8	Supply and Install 40 mm HL4 Asphalt for Driveway Construction and Road Restoration	Tonne	400	\$ 200	\$ 80,000	510, 311
9	Rock Excavation	m³	1200	\$ 300	\$ 360,000	206, 403, 510, 802.013
10	Supply and Installation of New 500mm I.D. Forcemain and Fittings	m	1000	\$ 750	\$ 750,000	510
11	Forcemain Connections to Limits	L.S.	1	\$ 100,000	\$ 100,000	-
12	Sidewalk and Curb Restoration	L.S.	1	\$ 100,000	\$ 100,000	-
13	Site Works	L.S.	1	\$ 100,000	\$ 100,000	206, 510
14	New Fence and Gate Extension	L.S.	1	\$ 25,000	\$ 25,000	972.102, 972.130
15	Mechanical General Work	L.S.	1	\$ 400,000	\$ 400,000	-
16	Electrical General Work	L.S.	1	\$ 400,000	\$ 400,000	-
17	Supply and Installation of New Gravity Sewer and Fittings Connect to New Wet Well	m	100	\$ 1,000	\$ 100,000	510
18	Supply and Installation of New Sewage Pumps (Logie St. SPS)	L.S.	1	\$ 200,000	\$ 200,000	-
19	Supply and Installation of New Sewage Pumps (Ridout St. SPS)	L.S.	1	\$ 500,000	\$ 500,000	-
20	Supply and Installation of New HDPE Wet Well and Discharge Piping	L.S.	1	\$ 500,000	\$ 500,000	-
21	Supply New Valves Logie	L.S.	1	\$ 150,000	\$ 150,000	-
22	Supply and Installation of New Valves Ridout	L.S.	1	\$ 200,000	\$ 200,000	-
22	Supply and Installation of Instrumentation and Controls Logie	L.S.	1	\$ 150,000	\$ 150,000	-
23	Supply and Installation of Instrumentation and Controls Ridout	L.S.	1	\$ 150,000	\$ 150,000	-
23	Supply and Installation of Outdoor Generator Set and Automatic Transfer Switch (ATS)	L.S.	1	\$ 200,000	\$ 200,000	-
24	Supply and Installation of Outdoor Concrete Pad for Electrical Equipment	L.S.	1	\$ 25,000	\$ 25,000	-
25	Supply and Installation of Safety Bollards	Ea.	10	\$ 1,000	\$ 10,000	-
26	Excavation, Backfill, and Removal for Installation of New Wet Well	L.S.	1	\$ 150,000	\$ 150,000	-
Sub-Total 1					\$ 5,745,000	
Contract Administration (7%)					\$ 402,150	
Sub-Total 2					\$ 6,147,150	
HST (13%)					\$ 799,130	
TOTAL					\$ 6,946,280	

Logie and Ridout SPS Upgrades - Alternative 3 Cost Estimate

Item Number	Item Name	UOM	Quantity	Unit Price	Total	OPSS/OPSD
1	Mobilization and Demobilization	L.S.	1	\$ 200,000	\$ 200,000	-
2	Insurance and Bonding	L.S.	1	\$ 200,000	\$ 200,000	100
3	Maintenance Manuals and Record Drawings	L.S.	1	\$ 10,000	\$ 10,000	-
4	Environmental Protection and Dewatering	L.S.	1	\$ 300,000	\$ 300,000	219.210/219.100
5	Supply and Install 300 mm Granular 'B' Material for Driveway Construction and Road Restoration	Tonne	7600	\$ 50	\$ 380,000	1010
6	Supply and Install 150 mm Granular 'A' Material for Driveway Construction and Road Restoration	Tonne	3800	\$ 50	\$ 190,000	1010
7	Supply and Install 50 mm HL8 Asphalt for Driveway Construction and Road Restoration	Tonne	1000	\$ 200	\$ 200,000	510, 311
8	Supply and Install 40 mm HL4 Asphalt for Driveway Construction and Road Restoration	Tonne	800	\$ 200	\$ 160,000	510, 311
9	Rock Excavation	m³	1200	\$ 300	\$ 360,000	206, 403, 510, 802.013
10	Supply and Installation of New 500mm I.D. Forcemain and Fittings	m	2200	\$ 750	\$ 1,650,000	510
11	Forcemain Connections to Limits	L.S.	1	\$ 100,000	\$ 100,000	-
12	Sidewalk and Curb Restoration	L.S.	1	\$ 100,000	\$ 100,000	-
13	Site Works	L.S.	1	\$ 100,000	\$ 100,000	206, 510
14	New Fence and Gate Extension	L.S.	1	\$ 25,000	\$ 25,000	972.102, 972.130
15	Mechanical General Work	L.S.	1	\$ 400,000	\$ 400,000	-
16	Electrical General Work	L.S.	1	\$ 400,000	\$ 400,000	-
17	Supply and Installation of New Gravity Sewer and Fittings Connect to New Wet Well	m	100	\$ 1,000	\$ 100,000	510
18	Supply and Installation of New Sewage Pumps (Logie St. SPS)	L.S.	1	\$ 250,000	\$ 250,000	-
19	Supply and Installation of New Sewage Pumps (Ridout St. SPS)	L.S.	1	\$ 500,000	\$ 500,000	-
20	Supply and Installation of New HDPE Wet Well and Discharge Piping	L.S.	1	\$ 500,000	\$ 500,000	-
21	Supply New Valves	L.S.	1	\$ 150,000	\$ 150,000	-
22	Supply and Installation of New Valves Ridout	L.S.	1	\$ 200,000	\$ 200,000	-
22	Supply and Installation of Instrumentation and Controls	L.S.	1	\$ 150,000	\$ 150,000	-
23	Supply and Installation of Instrumentation and Controls Ridout	L.S.	1	\$ 150,000	\$ 150,000	-
23	Supply and Installation of Outdoor Generator Set and Automatic Transfer Switch (ATS)	L.S.	1	\$ 200,000	\$ 200,000	-
24	Supply and Installation of Outdoor Concrete Pad for Electrical Equipment	L.S.	1	\$ 25,000	\$ 25,000	-
25	Supply and Installation of Safety Bollards	Ea.	10	\$ 1,000	\$ 10,000	-
26	Excavation, Backfill, and Removal for Installation of New Wet Well	L.S.	1	\$ 150,000	\$ 150,000	-
Sub-Total 1					\$ 7,160,000	
Contract Administration (7%)					\$ 501,200	
Sub-Total 2					\$ 7,661,200	
HST (13%)					\$ 995,956	
TOTAL					\$ 8,657,156	

Logie and Ridout SPS Upgrades - Alternative 4 Cost Estimate

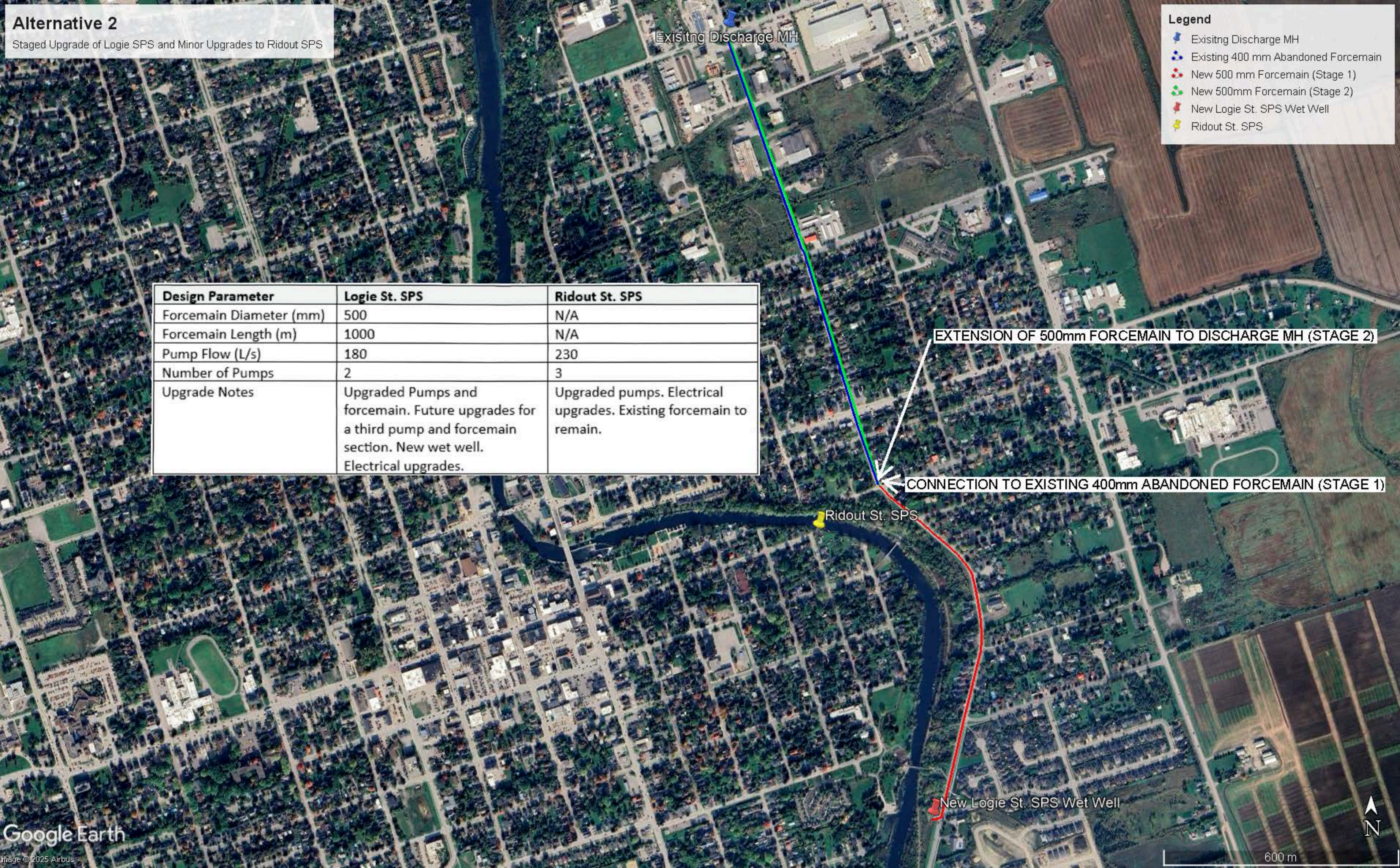
Item Number	Item Name	UOM	Quantity	Unit Price	Total	OPSS/OPSD
1	Mobilization and Demobilization	L.S.	1	\$ 500,000	\$ 500,000	-
2	Insurance and Bonding	L.S.	1	\$ 500,000	\$ 500,000	100
3	Maintenance Manuals and Record Drawings	L.S.	1	\$ 10,000	\$ 10,000	-
4	Environmental Protection and Dewatering	L.S.	1	\$ 800,000	\$ 800,000	219.210/219.100
5	Supply and Install 300 mm Granular 'B' Material for Driveway Construction and Road Restoration	Tonne	8600	\$ 50	\$ 430,000	1010
6	Supply and Install 150 mm Granular 'A' Material for Driveway Construction and Road Restoration	Tonne	4300	\$ 50	\$ 215,000	1010
7	Supply and Install 50 mm HL8 Asphalt for Driveway Construction and Road Restoration	Tonne	1100	\$ 200	\$ 220,000	510, 311
8	Supply and Install 40 mm HL4 Asphalt for Driveway Construction and Road Restoration	Tonne	900	\$ 200	\$ 180,000	510, 311
9	Rock Excavation	m³	1200	\$ 300	\$ 360,000	206, 403, 510, 802.013
10	Supply and Installation of New 500 mm I.D. Forcemain and Fittings Logie	m	350	\$ 750	\$ 262,500	510
11	Forcemain Connections to Limits Logie	L.S.	1	\$ 100,000	\$ 100,000	-
12	Mechanical General Work	L.S.	1	\$ 600,000	\$ 600,000	-
13	Electrical General Work	L.S.	1	\$ 600,000	\$ 600,000	-
14	Upgraded Gravity Sewer and Siphon System	L.S.	1	\$ 2,500,000	\$ 2,500,000	510
15	Supply and Installation of New Sewage Pumps Logie	L.S.	1	\$ 200,000	\$ 200,000	-
16	Supply and Installation of New HDPE Wet Well and Discharge Piping Logie	L.S.	1	\$ 500,000	\$ 500,000	-
17	Supply New Valves Logie	L.S.	1	\$ 150,000	\$ 150,000	-
18	Supply and Installation of Instrumentation and Controls Logie	L.S.	1	\$ 150,000	\$ 150,000	-
19	Supply and Installation of Outdoor Generator Set and Automatic Transfer Switch (ATS) Logie	L.S.	1	\$ 200,000	\$ 200,000	-
20	Supply and Installation of Outdoor Concrete Pad for Electrical Equipment Logie	L.S.	1	\$ 25,000	\$ 25,000	-
21	Supply and Installation of Safety Bollards	Ea.	20	\$ 1,000	\$ 20,000	-
22	Wet Well Upgrades Ridout	L.S.	1	\$ 150,000	\$ 150,000	-
23	Supply and Installation of New Sewage Pumps Ridout	L.S.	1	\$ 600,000	\$ 600,000	-
24	Supply and Installation of New Discharge Piping Ridout	L.S.	1	\$ 400,000	\$ 400,000	-
25	Supply and Installation New Valves Ridout	L.S.	1	\$ 250,000	\$ 250,000	-
26	Supply and Installation of Instrumentation and Controls Ridout	L.S.	1	\$ 300,000	\$ 300,000	-
27	Supply and Installation of Outdoor Generator Set and Automatic Transfer Switch (ATS) Ridout	L.S.	1	\$ 200,000	\$ 200,000	-
28	Supply and Installation of Outdoor Concrete Pad for Electrical Equipment Ridout	L.S.	1	\$ 25,000	\$ 25,000	-
Sub-Total 1					\$ 10,447,500	
Contract Administration (7%)					\$ 731,325	
Sub-Total 2					\$ 11,178,825	
HST (13%)					\$ 1,453,247	
TOTAL					\$ 12,632,072	

APPENDIX B – Alternatives Keymaps

Alternative 2
Staged Upgrade of Logie SPS and Minor Upgrades to Ridout SPS

- Legend**
- Existing Discharge MH
 - Existing 400 mm Abandoned Forcemain
 - New 500 mm Forcemain (Stage 1)
 - New 500mm Forcemain (Stage 2)
 - New Logie St. SPS Wet Well
 - Ridout St. SPS

Design Parameter	Logie St. SPS	Ridout St. SPS
Forcemain Diameter (mm)	500	N/A
Forcemain Length (m)	1000	N/A
Pump Flow (L/s)	180	230
Number of Pumps	2	3
Upgrade Notes	Upgraded Pumps and forcemain. Future upgrades for a third pump and forcemain section. New wet well. Electrical upgrades.	Upgraded pumps. Electrical upgrades. Existing forcemain to remain.



EXTENSION OF 500mm FORCEMAIN TO DISCHARGE MH (STAGE 2)

CONNECTION TO EXISTING 400mm ABANDONED FORCEMAIN (STAGE 1)

Ridout St. SPS

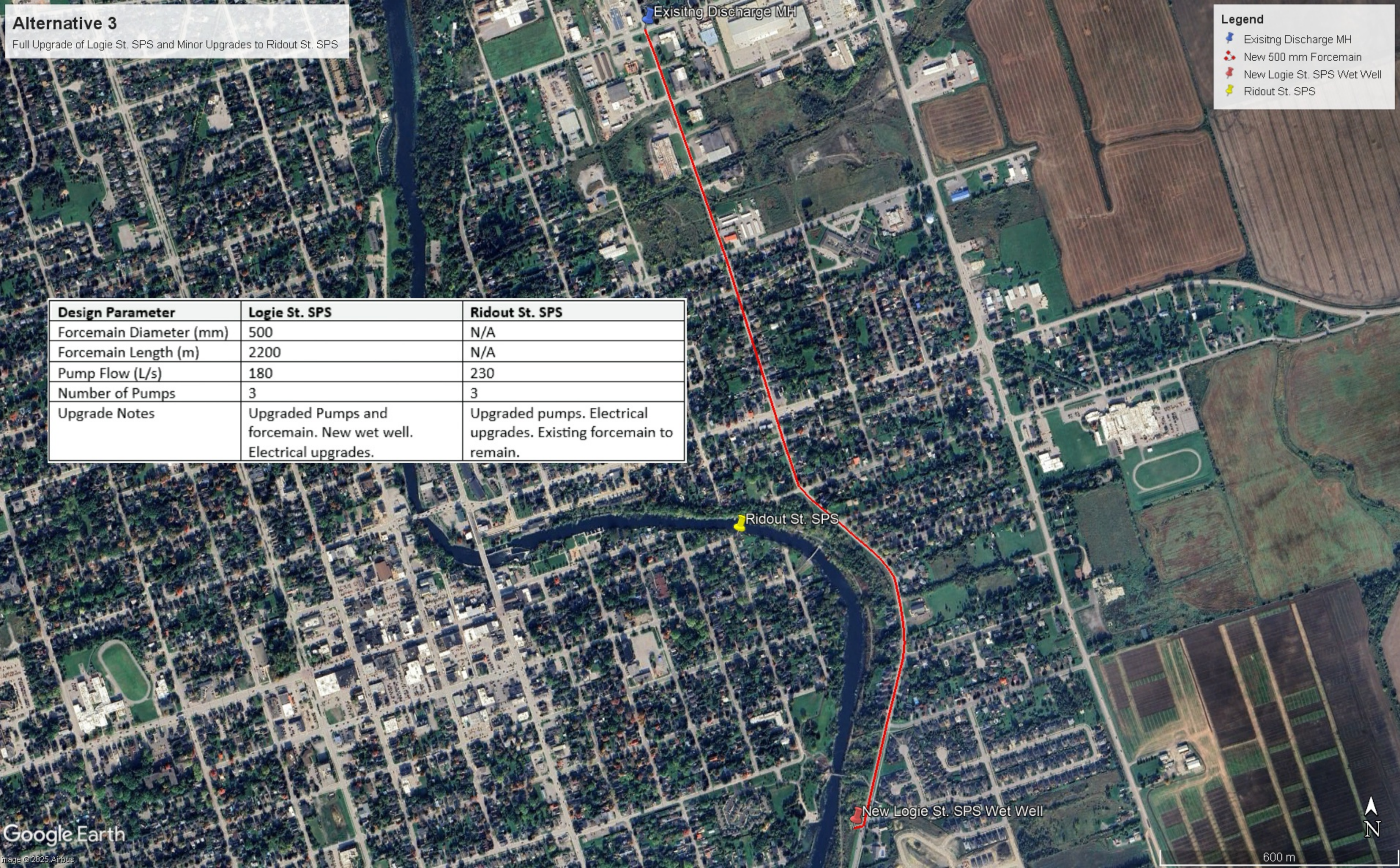
New Logie St. SPS Wet Well

Alternative 3
Full Upgrade of Logie St. SPS and Minor Upgrades to Ridout St. SPS

Legend

- Existing Discharge MH
- New 500 mm Forcemain
- New Logie St. SPS Wet Well
- Ridout St. SPS

Design Parameter	Logie St. SPS	Ridout St. SPS
Forcemain Diameter (mm)	500	N/A
Forcemain Length (m)	2200	N/A
Pump Flow (L/s)	180	230
Number of Pumps	3	3
Upgrade Notes	Upgraded Pumps and forcemain. New wet well. Electrical upgrades.	Upgraded pumps. Electrical upgrades. Existing forcemain to remain.

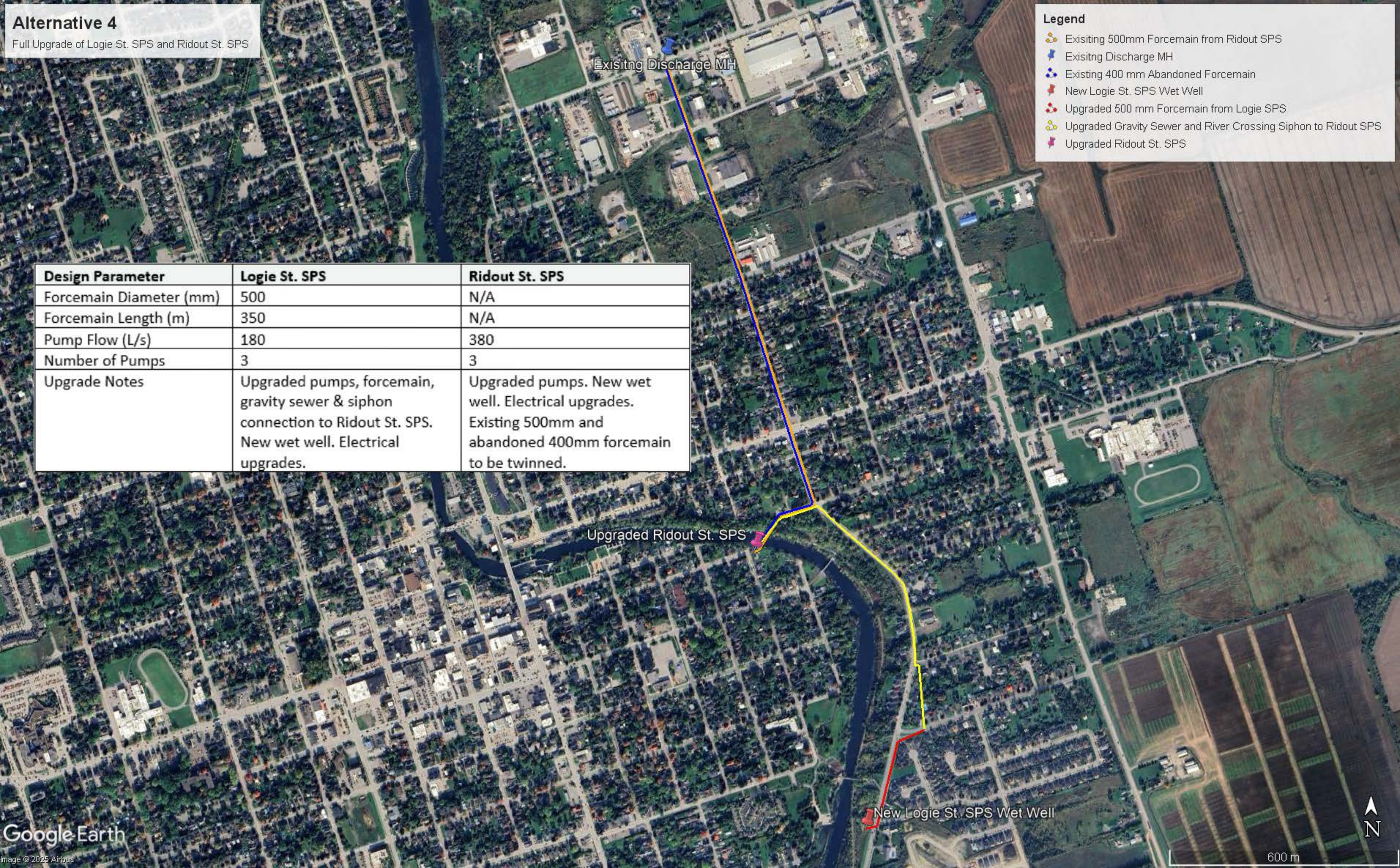


600 m

Alternative 4
Full Upgrade of Logie St. SPS and Ridout St. SPS

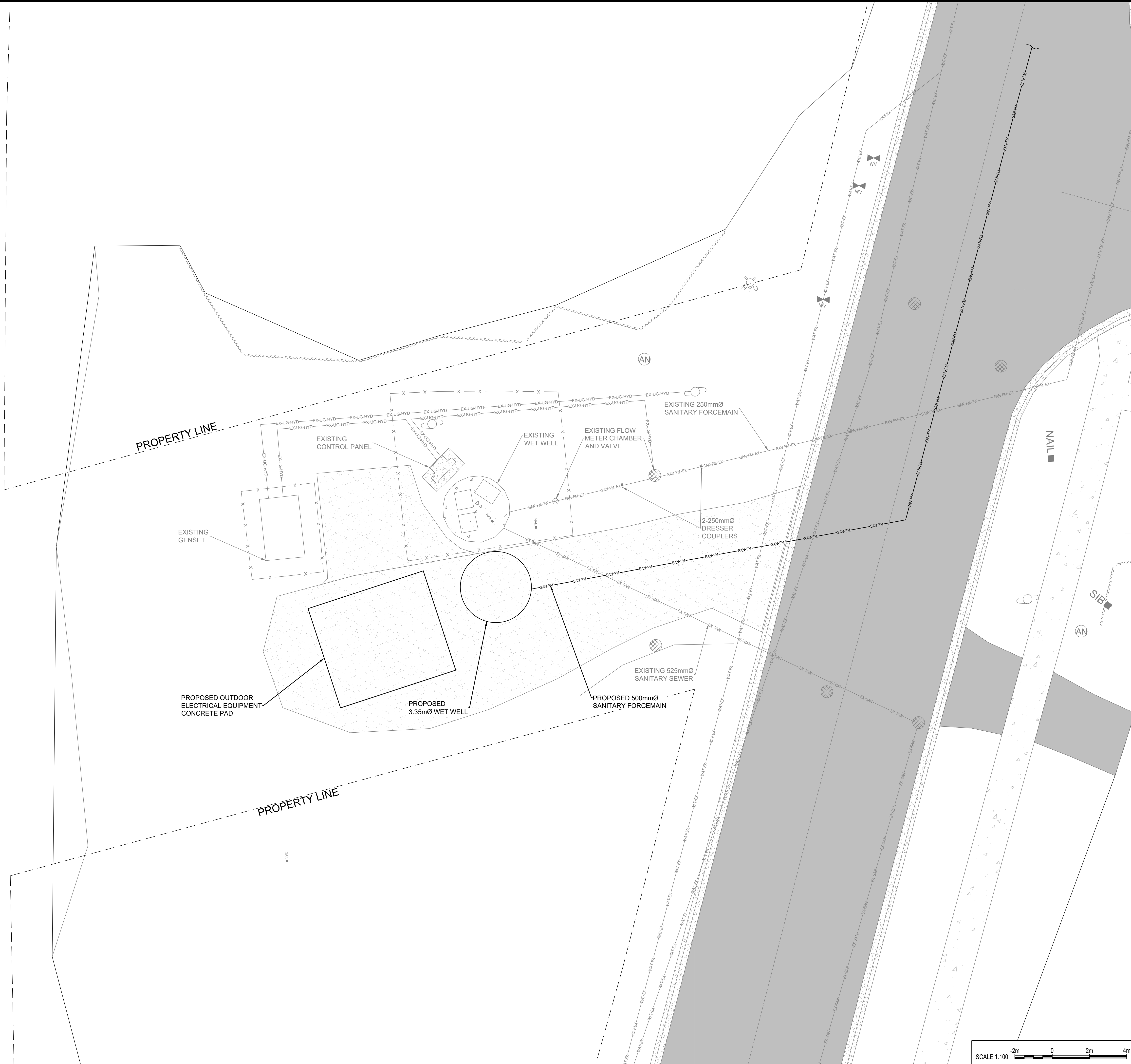
- Legend**
- Existing 500mm Forcemain from Ridout SPS
 - Existing Discharge MH
 - Existing 400 mm Abandoned Forcemain
 - New Logie St. SPS Wet Well
 - Upgraded 500 mm Forcemain from Logie SPS
 - Upgraded Gravity Sewer and River Crossing Siphon to Ridout SPS
 - Upgraded Ridout St. SPS

Design Parameter	Logie St. SPS	Ridout St. SPS
Forcemain Diameter (mm)	500	N/A
Forcemain Length (m)	350	N/A
Pump Flow (L/s)	180	380
Number of Pumps	3	3
Upgrade Notes	Upgraded pumps, forcemain, gravity sewer & siphon connection to Ridout St. SPS. New wet well. Electrical upgrades.	Upgraded pumps. New wet well. Electrical upgrades. Existing 500mm and abandoned 400mm forcemain to be twinned.





Appendix O: Site Plan Drawing



GREER GALLOWAY
CONSULTING ENGINEERS
PETERBOROUGH
BELLEVILLE
KINGSTON
1620 WALLBRIDGE LOYALIST ROAD
BELLEVILLE, ONTARIO, K8N 4Z5
PHONE: 613-966-3068
FAX: 613-966-3087

- NOTES:
1. ALL WORK SHALL BE IN ACCORDANCE WITH RELEVANT CODES AND GUIDELINES.
 2. ALL DRAWINGS AND ADDENDA ARE TO BE READ AS, AND IN CONJUNCTION WITH THE SPECIFICATIONS.
 3. ALL EQUIPMENT SHALL BE INSTALLED AS SPECIFIED OR APPROVED EQUIVALENT.
 4. CONTRACTOR MUST CHECK AND VERIFY ALL DIMENSIONS BEFORE PROCEEDING WITH WORK AND BE RESPONSIBLE FOR SAME.
 5. CONTRACTOR MUST REPORT ANY DISCREPANCIES TO ENGINEER FOR RESOLUTION BEFORE COMMENCING THE WORK.
 6. ANY CHANGES MUST BE APPROVED BY THE ENGINEER.

A A DETAIL NO.
B B DRAWING NO. - WHERE DETAILED

TOPOGRAPHICAL SURVEY SOURCE:
GREER GALLOWAY GROUP
SEPT 25 2024

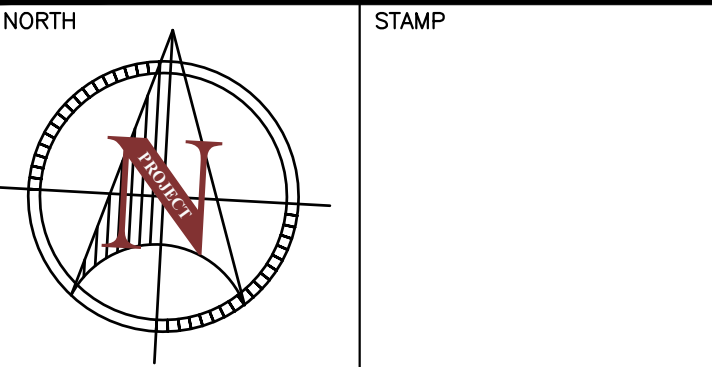
UTILITY LOCATE SOURCE:
N/A

GEOTECHNICAL SOURCE:
N/A

CONTROL POINTS/BENCHMARKS:
SIB A
ELV=256.229m
N=4913071.8600m
E=681404.6300

CONTROL POINTS/BENCHMARKS:
SIB B
ELV=256.180m
N=4912676.9000m
E=681433.7100m

01	-	YY/MM/DD
REVISION	DESCRIPTION	DATE



PROJECT
LOGIE ST & RIDOUT ST
PUMP STATION
LINDSAY ON, CITY OF KAWARTHA LAKES

DRAWING TITLE
SITE PLAN
PUMPING STATION

DESIGNED BY
G. GOUD

DRAWN BY
B. CRUZ-FUENTES

REVIEWED BY
-

APPROVED BY
-

PROJECT DATE
2024/09/25
(YY/MM/DD)

PROJECT #
24-3-7800

DRAWING #
SP1
DRAWING SCALE (ISO A1)
HOR: 1 : 100
VER: N/A