niagara peninsula energy inc.
Your Local Utility

Spring Creek Municipal Transformer Station Project

Screening Report

Completed in Accordance with the Class Environmental Assessment for Transmission Facilities

DECEMBER 2024

INDEPENDENT ENVIRONMENTAL CONSULTANTS
IN ASSOCIATION WITH AVAANZ LTD., PARSLOW HERITAGE CONSULTANCY INC. AND BEACON ENVIRONMENTAL LTD.

Spring Creek Municipal Transformer Station Project

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Executive Summary

Niagara Peninsula Energy Inc. (NPEI) is proposing to construct a new transformer station connecting to existing transmission circuits in the Town of Lincoln, Niagara Region, Ontario. The Spring Creek Municipal Transformer Station (MTS) project (the project) will be in the Town of Lincoln on Spring Creek Road between Mountain Road and Frost Road. The existing transmission circuits operate at 230 kilovolts (kV).

The project is subject to the Environmental Assessment Act and as directed by the *Class Environmental Assessment for Transmissions Facilities* (Hydro One, 2024) it is classified as a Category B project. Category B projects are those which have potential environmental effects that can likely be mitigated. As a Category B project, the Spring Creek MTS is required to complete a Screening under the Class Environmental Assessment process before construction of the facility.

The Screening process was led by the Independent Environmental Consultants (IEC) team, which is composed of consultant specialists in environmental assessment, air, noise, climate change engagement, terrestrial and aquatic ecology, cultural heritage, and archaeology. The project was evaluated against the screening criteria outlined in the Class Environmental Assessment (EA) for Transmission Facilities (TF) (Hydro One, 2024) to determine whether the project would result in negative environmental effects. This process concluded that the facility could be constructed and operated without residual negative environmental effects and that all EA screening questions could be answered "No" in their entirety. Given this, the proposed project was considered to have been successfully screened and satisfies the requirements of the Class EA for TF Screening process.

NPEI will continue to advance the project through environmental permitting. As part of the Screening Process, the following list provides a set of future commitments that NPEI has made to further reduce the potential for significant negative environmental effects:

- Continue to engage with interested Indigenous Nations and communities, review agencies (i.e., Ministry of the Environment, Conservation and Parks (MECP), Ministry of Citizenship and Multiculturalism (MCM), Ontario Ministry of Transportation (MTO), Town of Lincoln, Niagara Peninsula Conservation Authority (NPCA)), Region of Niagara and other interested parties.
- Obtain the required permits and approvals, including completion of detailed technical studies and drawings as required, currently anticipated to include:
  - Environmental Activity and Sector Registry (EASR) (Noise)
  - Town of Lincoln (various approvals and technical requirements under the *Planning Act*)
  - MCM archaeological clearance
  - NPCA permit(s)
- Prior to construction and operations, applicable Environmental Management Plans (EMPs) for the project will be developed. The EMPs will identify the standard construction management practices to be applied, and any site-specific measures identified because of environmental permits and approvals and/or commitments resulting from the engagement program.

Land Acknowledgement

Niagara Peninsula Energy Inc. (NPEI) acknowledges that the proposed Spring Creek Municipal Transformer Station project (the project) is situated on the traditional and treaty lands of the Mississaugas of the Credit First Nation and Six Nations of the Grand River, known today as Treaty #3 Between the Lakes Purchase.

We honour the First Nations' enduring presence, resilience, and deep connection to the land, which has been home to their ancestors for countless generations. We also value the cultural heritage, wisdom, and ongoing contributions that the Indigenous peoples of this territory bring to the wider community.

As we progress with the project, we are committed to building meaningful relationships and maintaining open dialogue with Indigenous Nations and communities. We understand the importance of respecting their rights, traditions, and sacred knowledge, and we aim to collaborate in a spirit of mutual trust, equity, and cooperation.

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Glossary of Terms

ANSI .....Areas of Natural and Scientific Interest

dBA.....A-weighted decibel

DS .....Distribution Station

EA .....Environmental Assessment

EASR.....Environmental Activity and Sector Registry

ECA .....Environmental Compliance Approval

EMP .....Environmental Management Plan

ESA.....*Endangered Species Act*

GHG.....Greenhouse Gas

ha.....hectare(s)

HDI.....Haudenosaunee Development Institute

HVA .....Highly Vulnerable Aquifer(s)

IEC .....Independent Environmental Consultants

IESO .....Independent Electricity System Operator

IRRP .....Integrated Regional Resource Plan

km .....kilometre(s)

kV.....kilovolt(s)

m .....metre(s)

MCFN.....Mississaugas of the Credit First Nation

MCM .....Ministry of Citizenship and Multiculturalism

MDS.....Minimum Distance Separation

MoE .....Ministry of Energy

MECP .....Ministry of the Environment, Conservation and Parks

MNR .....Ministry of Natural Resources

MTO .....Ministry of Transportation

MTS .....Municipal Transformer Station

MVA.....megavolt-amperes

NOP .....Niagara Official Plan

NPCA .....Niagara Peninsula Conservation Area

NPEI .....Niagara Peninsula Energy Inc.

PCA .....Potentially Contaminating Activity

PCC .....Point of Common Coupling

PHC .....Parslow Heritage Consultancy Inc.

PSW.....Provincially Significant Wetland

ROW.....Right of Way

SAR .....Species at Risk

SCC .....Species of Conservation Concern

SEL.....Schweitzer Engineering Laboratories

SNGR.....Six Nations of the Grand River

SPA.....Site Plan Approval

TF.....Transmission Facilities

TS .....Transmission System

1. Project Description

1.1 Project Overview

Niagara Peninsula Energy Inc. (NPEI) is proposing to construct a new transformer station connecting to existing transmission circuits in the Town of Lincoln, Niagara Region, Ontario. NPEI is one of the six local electricity distribution companies in the Niagara Region and is responsible for electrical distribution within the Town of Lincoln, Township of West Lincoln, part of Fonthill in the Town of Pelham and the City of Niagara Falls. The Spring Creek Municipal Transformer Station (MTS) project (the project) will be in the Town of Lincoln on Spring Creek Road between Mountain Road and Frost Road, adjacent to an existing Hydro One Networks Inc. (Hydro One) Right of Way (ROW) (Figure 1). The existing transmission circuits operate at 230 kilovolts (kV).

The project will involve the construction of a new Dual Element Spot Network MTS, consisting of two step-down (50/66.7/83.3 megavolt-amperes (MVA)) power transformers each supplied from different 230 kV transmission circuits. Construction is planned to take place in phases over a two-year period. The transformer station will be constructed on lands owned by NPEI, and the project site will occupy approximately 3.75 hectares (ha) of the NPEI property.

1.2 Need for the Project

In March 2024, the Ontario Independent Electrical System Operator (IESO) released its Annual Planning Outlook which identified a need for new power generation in the province (IESO, 2024). The IESO forecasts an increase in electricity demand of two percent per year from 2025 to 2050, driven predominantly by population and economic growth, and electrification of sectors such as resource extraction, manufacturing, transportation, and agriculture. Although the IESO has addressed some previously anticipated capacity shortfalls and the supply outlook for Ontario has improved, projections indicate that regular procurements and projects remain essential for maintaining Ontario's power supply. Ontario requires an additional 5,000 Megawatts and 15 Terawatts per hour of power supply to address the projected shortfall between 2030 and 2034.

In addition to province-wide capacity needs, the IESO has identified specific regions, including the Niagara Region, as having projected capacity needs. The IESO put out an Integrated Regional Resource Plan (IRRP) in December 2022 which identified the need for system expansions in the Niagara Region from 2022 to 2041 as stations reach their supply limits and demand grows. The IRRP recommended building a new 230 kV station in Niagara Region with a targeted in-service date of 2026 to 2027 (IESO, 2022). The 2023 Hydro One Niagara Regional Infrastructure Plan (RIP) also advised constructing a new 230/27.6 kV station in the Lincoln area, which was noted as exceeding supply capacity (Hydro One, 2023).

The project is proposed to provide additional operational flexibility in the Niagara Region and support future growth as recommended by the IRRP and RIP. NPEI will build, operate, and maintain the transformer station. The MTS will not be a pre-condition to a larger or more environmentally

significant project. The proposed station enhances NPEI's distribution assets and will improve operational flexibility and maintenance efficiencies. The new station will also improve system reliability and support operational measures that will help reduce power outages for residents.

1.3 Project Location

The project will be located adjacent to the existing Hydro One ROW on the south side of Spring Creek Road west of the unopened road allowance for Frost Road in the Town of Lincoln, Ontario. The existing farm laneway will be upgraded to create access to the project site, and the entrance will have a locked gate accessible only to those directly involved in the project or neighbours who have come to an agreement with NPEI. The project will be situated on private land owned by NPEI that is currently used for agricultural purposes and will not be open to the public. The lands to the north, east and west are also used for primarily agricultural purposes. The Hydro One ROW directly south of the study area includes both agricultural lands and the Lower Twenty Mile Creek Provincially Significant Wetland (PSW). Timber resources or wildlife habitat will not be removed as part of this project.

1.3.1 Site Selection

When identifying potential sites for a transformer station, primary considerations include transmission line availability, proximity to distribution system assets, and load growth. When a site is within two kilometres of a transmission circuit connection, this saves significant costs and improves system efficiency and reliability. Furthermore, a site with two different transmission circuits available for connection to any TS provides far more reliability of supply than only one circuit. The IRRP and RIP have both recommended connecting the new transmission station to sites with 230 kV transmission circuits rather than one 115 kV circuit.

Five potential options were considered to meet the outlined capacity needs: the expansion of the Beamsville Transformer Station; a new Transformer Station at Greenlane Road and Merritt Road (Beamsville); the expansion of the Vineland Distribution Station (DS); the expansion of the Niagara West Transformer Station; and a new Lincoln Transformer Station on Spring Creek Road. The first three options were rejected as they would be connected to only a single 115 kV transmission circuit and reduce reliability. The two remaining options, expanding the Niagara West MTS and building the Lincoln MTS, are located directly adjacent to the existing Hydro One transmission corridor and, therefore, require minimal construction to accommodate the 230 kV connection. This reduces potential environmental impact and costs for ratepayers.

In their evaluation of the two remaining options, NPEI needed to consider the forecasted electricity demand, as well as proximity to the three existing stations in West Niagara as all three are projected to have capacity strains. NPEI found in their evaluation that the Spring Creek Road option was the best choice due to its proximity to projected load growth, its proximity to the existing stations, and it's having the lowest overall cost to ratepayers

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1.4 Environmental Consulting Team

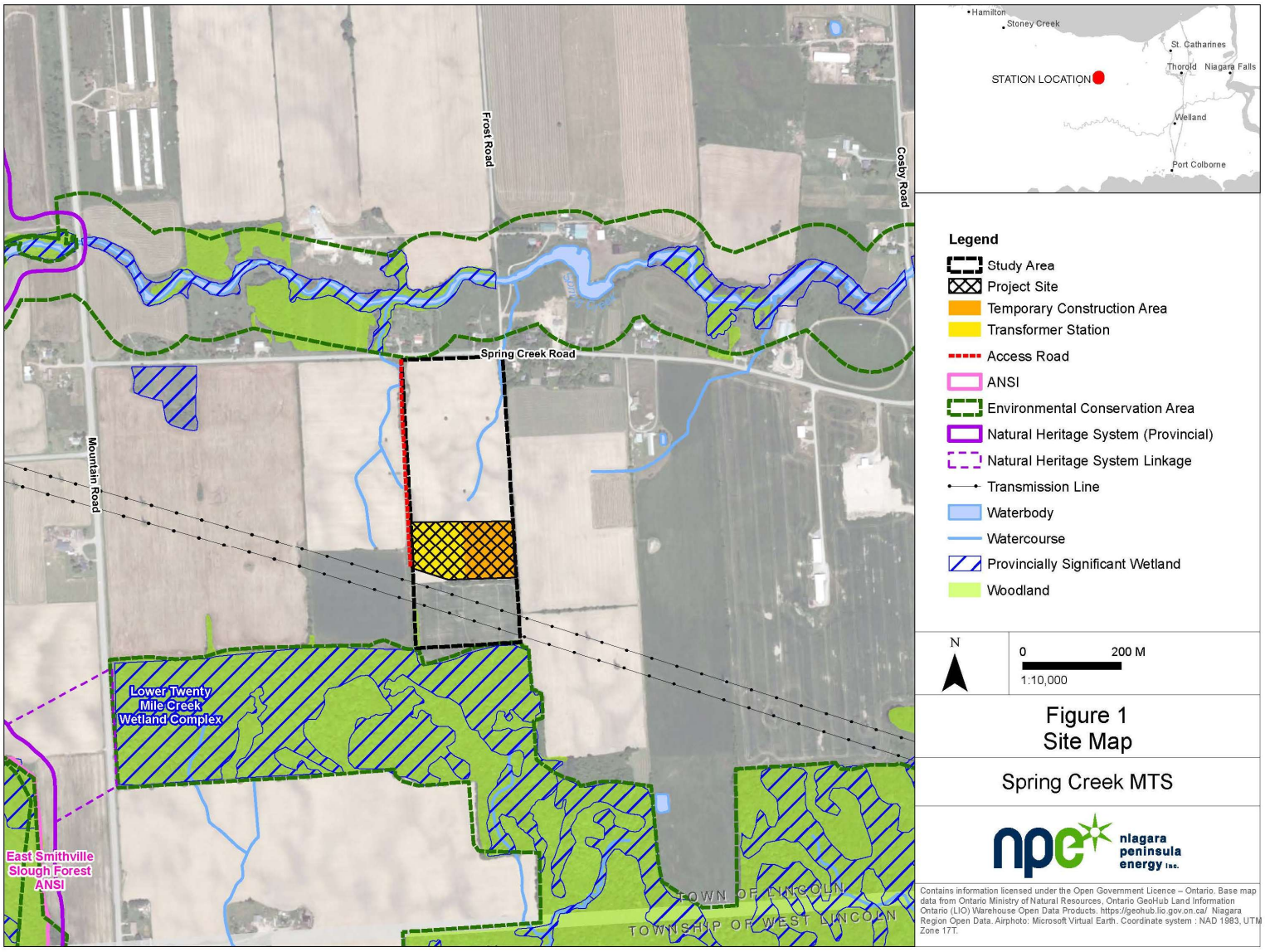
In order to complete the full Class EA, NPEI has engaged a number of specialist firms to gather the findings needed to address the required screening questions (see **Section 5**).

The leading consulting group to facilitate the EA process is Independent Environmental Consultants (IEC). IEC has been responsible for engaging the subconsultants and providing technical expertise in acoustic surveying. IEC performed a preliminary noise assessment per the directives of the Ministry of the Environment, Conservation and Parks (MECP). This noise assessment involved measuring sound levels at multiple spatial and temporal points at sensitive properties close to the project site to ensure compliance with regulatory guidelines.

Avaanz Ltd. (Avaanz) was engaged in drafting this Screening Report and undertaking the engagement program for the project. This has involved distributing the Notice of Commencement for the project, hosting public meetings, and facilitating ongoing engagement between NPEI and Indigenous Nations and communities, agencies, municipalities, and members of the public per the guidelines of the MECP.

Parslow Heritage Consultancy Inc. (PHC) was engaged to investigate archaeological resources associated with the study area. PHC conducted a Stage 1 and 2 archaeology assessment per the guidelines of the Ministry of Citizenship and Multiculturalism (MCM).

Beacon Environmental Ltd. (Beacon) was engaged to investigate natural heritage (ecology) within the study area. Using desktop assessment and field assessment methods, Beacon investigated potential environmental risks associated with the study area, especially regarding the presence of any Species at Risk (SAR) protected under the *Endangered Species Act (ESA)*.



Path: H:\AVAANZ\9751 - AVAANZ SpringCreekMTS\gis\mxd\Figure 1 Site Map.mxd Revised: September 13, 2024

Figure 1: Site Map

1.5 Project Components

Project components were sited to avoid impacts to the natural and agricultural environment within and adjacent to the study area. The presence of a hedgerow and the Lower Twenty Mile Creek PSW were key considerations in project component siting to ensure impacts to the features were avoided and/or minimized. A temporary construction area, roughly 1.19 ha, will be needed for staging and storage of material and equipment during construction (Figure 1). Most of the station will be constructed above ground; however, some grounding, foundations and cable ducts will be underground. However, no deep excavations are required, and no expected significant secondary effects to the environment are associated with the project design. The existing farm access road along the western edge of the study will be maintained and upgraded to accommodate year-round access for maintenance purposes.

The design of the substation will provide flexibility to supply all station loads from either 230 kV overhead line. It will include the option to share the loads on both step-down transformers with closed tie circuit breaker operation. Two parallel step-down supplies are controlled with dedicated protection and control relays independent of each other. The communication for critical protection functions will be performed over dedicated redundant channels. The design does not include redundancy for the 125 volts of direct current system, Supervisory Control and Data Acquisition, and station remote terminal unit as well as control building and auxiliaries. All equipment used in the station is approved for installation under Canadian regulations and commissioned prior to energization by licensed engineers. The technology used for the MTS is well established and has been used for decades in Canada to safely distribute electricity through the use of distribution infrastructure.

230 kV Overhead Supply and Point of Common Coupling (PCC)

The MTS will be supplied from the 230 kV 3-ended circuits Q23BM and Q25BM running from Beck Generating Station #2 to Middleport Transmission System (TS) and Burlington TS. The 230 kV will be brought inside the station over steel structures or steel poles with an inline loop opener. The PCC would be on the inline loop opener.

Steel Structures

Steel structures and poles inside the station perimeters will provide support to the 230 kV overhead supply cables, 230 kV disconnect switches, metering current and voltage transformers, protection and control voltage transformers, arresters, grounding resistors or reactors, and any other 230 kV equipment and connection supports. Steel poles or structures will also be required outside the new substation area in the existing Hydro One ROW to connect to both 230 kV circuits.

Lightning Protection and Grounding

The substation will be protected from lightning via shield wire on 230 kV towers. Additional shield wire within the station will be provided to protect all equipment from lightning. The lightning

protection equipment will be connected to a substation grounding grid that will be engineered and installed with at least two grounding grid inspection points.

230 kV Disconnect and Grounding Switch

Two circuit switchers with manually operated mechanically interlocked grounding switches on the load side of the switchers will be used in lieu of motor-operated disconnect switches. The grounding switches will be interlocked with the main switchgear incoming circuit breaker to prevent operation whenever the step-down transformer secondary winding is connected to a possible load. The circuit switcher will have the capacity to energize and de-energize the step-down transformer and will not be used to energize or de-energize the station egress feeder's loads.

The circuit switcher will not protect the transformer but will be used in the same capacity as a motorized disconnect.

Metering

Energy flowing through each 230 kV circuit will be measured by outdoor 230 kV primary metering units. The metering will be located downstream of the main disconnect switch.

Step Down Transformers T1 and T2

Two identical zigzag-wired transformers will be used. Each transformer will supply one side of the switchgear. The transformer foundation will be constructed inside an underground bathtub-style oil containment reservoir. All ducts and connections protruding through the concrete will be sealed to prevent oil leakage in case of a spill. Schweitzer Engineering Laboratories (SEL) and General Electric multifunction protection relays will be used for protection and control. For transformers and switchgear bus protection two relays from different manufacturers will be used.

Ancillary Components

A pre-existing access lane will be upgraded on the west side of the property for project use. The upgraded road will be approximately 450 metres (m) in length directly off Spring Creek Road. A temporary construction area, roughly 1.19 ha, will be needed for staging and storage of material and equipment during construction (Figure 1). Most of the station will be constructed above ground; however, some grounding, foundations and cable ducts will be underground at shallow depths no more than 2 m below the surface.

2. Environmental Assessment Process

The Class Environmental Assessment (EA) for Transmission Facilities (TF) (Hydro One, 2024) under the *Ontario EA Act* identifies that the proposed MTS is not required to undergo a Full Class EA. The construction and operation of a new transformer station ≥ 115 kV and ≤ 500 kV is classified as a Category B project and is eligible to undertake a Class EA Screening Process.

2.1 Class EA for TF Screening Process

The Class EA for TF is a streamlined EA Process for electricity transmission-related projects that are anticipated to have a predictable range of environmental effects that can be avoided, mitigated and/or managed. Under the Class EA for TF, there are two tiers of assessment: the Class EA Screening Process and the Full Class EA Process (Hydro One, 2024). The Class EA Screening Process is intended for projects that have minimal environmental effects and can satisfy the screening criteria. Following the successful completion of the Class EA Screening Process, the proposed project can proceed subject to applicable permits and approvals.

Transformer stations are explicitly identified as projects that should undertake the Class EA Screening Process. The scope of the project and nature of the undertaking has been evaluated against the screening criteria (Table 1) as outlined in Section 3.3.3 of the Class EA for TF. The screening criteria are used to determine if the project will result in significant effects on any of the environmental components included in the screening table. This determination is done by answering "Yes" or "No" to whether each screening criteria will cause a negative environmental effect. Where there is insufficient information to answer any of the screening questions, technical studies are undertaken to provide answers to the questions. To fully screen a project, the screening criteria questions must be answered "No" in their entirety. If any of the questions are answered "Yes", then the project would have to undergo the Full Class EA Process. To support the Class EA Screening, the project team:

- Completed technical studies to confirm the scope and extent of the potential environmental effects of the project, where the definition of "environment" is the same as that in the *EA Act*, and is broadly defined to include air, land, and water, as well as natural, cultural, social, and economic components.

- Engaged with directly affected Indigenous Nations and communities, municipal, provincial, and other potentially affected and interested persons, and interest groups to identify whether there were any potential environmental concerns.

- Applied the screening criteria to the project to identify whether all criteria were answered "No" or if any were found to be answered "Yes" meaning the project may have a potential effects on the environment or could potentially have, directly or indirectly at any stage in the project life cycle.

2.2 Class EA Process Milestones

The Class EA Screening Process commenced on May 9th, 2024, when NPEI issued the Notice of Commencement. To help understand potential interest and perspectives around the siting of the MTS in the area, an initial public meeting was held on Feb. 1, 2024, prior to the Notice of Commencement to provide info about siting and next steps before the approval process. A second public meeting was held on November 20, 2024, as part of the Class EA process. Further detail on engagement activities for the project is provided in **Section 3**. Figure 2 provides a summary of the key Class EA Process milestones.

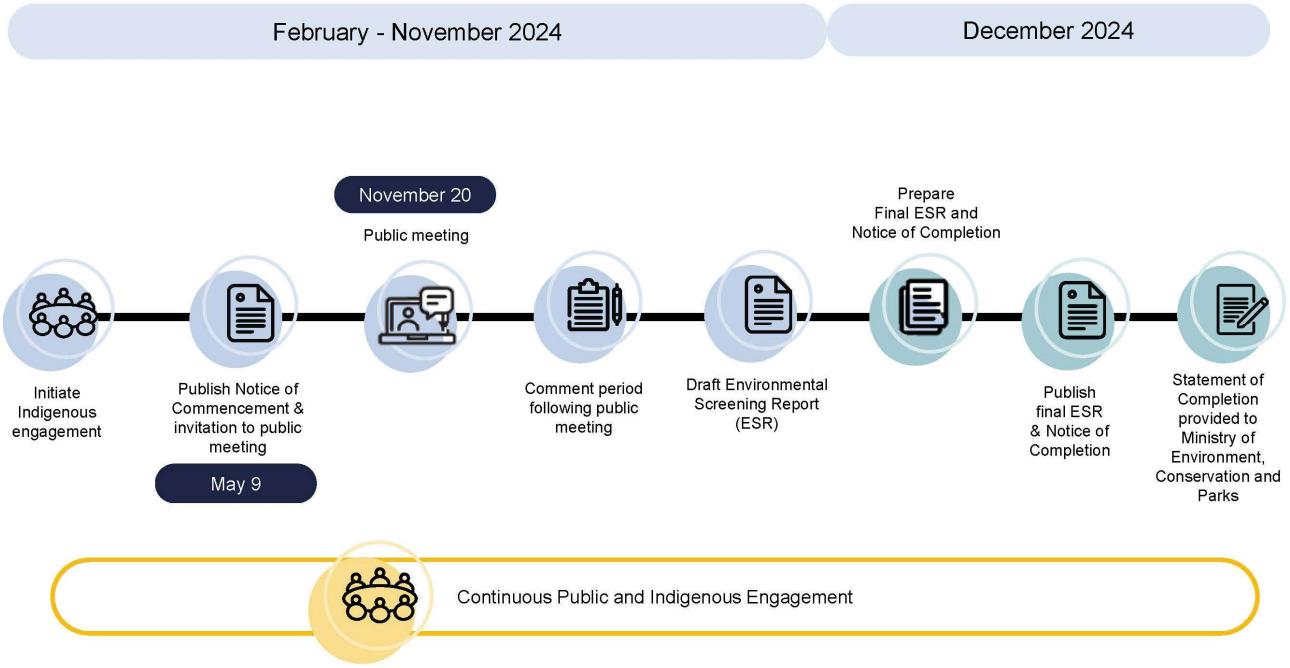


Figure 2: Key Project Milestones

2.3 Alternatives to the Undertaking

Section 3.2 of the Class EA for TF states that the recommendations of an independent agency (e.g., the IESO), as part of a previous planning process, will be accepted as a starting point for the Class EA Process and the alternatives considered and rejected by that agency's planning process will not be revisited (Hydro One, 2024). Therefore, the evaluation of alternatives to the undertaking, including the 'do nothing' approach, is not required for this Screening. As described above, the IESO has determined the need for a new transformation station within Niagara Region to support future electrical growth and improve operational flexibility.

2.4 Class EA Screening Information Sources

Completion of the Class EA Screening was based on publicly available open-source data and desktop resources including satellite imagery, field study results, technical reports, preliminary engineering, and other supporting information (see Reference List). These information sources were used to identify the known environmental features that may be affected by the project.

In addition, specific analysis and field studies were carried out for the NPEI site. These include:

- Independent Environmental Consultants [IEC]. (2024). *Technical Memorandum: Noise Assessment for NPEI Transformer Station – Spring Creek*.
- Parslow Heritage Consultancy Inc. [PHC]. (2024). *Stage 1 and 2 Archaeological Assessments – Part of Lot 17, Concession 9, and Part of Lot 17, Concession 10, Geographic Township of Clinton, former County of Lincoln, now Town of Lincoln, Regional Municipality of Niagara, Ontario.*
- Beacon Environmental Ltd. [Beacon]. (2024). *Niagara Peninsula Energy Inc. Lincoln Site Preliminary Natural Heritage Review and Risk Assessment Technical Memo*.

The information relied upon for the Class EA Screening was then supplemented with the results of the consultation and engagement program, including the receipt of input from Indigenous Nations and communities, MECP, the Ministry of Transportation (MTO), the MCM, the Town of Lincoln, the Niagara Peninsula Conservation Area (NPCA), The Region of Niagara and local residents.

Confirmation of detailed requirements and studies required to support future permits and approvals also informed the Screening. Where a potential environmental effect will be addressed under a future regulatory approval process, the Screening considers that design and mitigation details will be developed as part of that process to the standards required by the applicable legislation, and therefore need not be subjected to detailed analysis and resolution under the Class EA Screening Process. These environmental permits and approvals include:

- Environmental Activity and Sector Registry (EASR) (Noise)
- MCM clearance
- Municipal Approvals (various approvals and technical requirements under the *Planning Act*)
- NPCA permit(s)

2.5 Assessment Boundaries

For this Class EA Screening, spatial boundaries were determined via examination of a series of geographic boundaries applied to the NPEI site (Figure 1):

- Project Site: The general area under study for the identification of potential environmental effects from the project (3.75 ha) including:
    - Project components: new transformer station to be built (2.35 ha);
    - Temporary construction area to the east of project components (1.19 ha); and

  - Pre-existing access road, approximately 420 m long and 5 m wide (0.21 ha)
- Project Property: NPEI-owned property on which the project will be sited (approx. 9.5 ha).
- Study Area: NPEI-owned property on which the project will be as well as additional environmental features and receptors generally located within 250 m of the project site. The study area for technical assessments did vary and was adjusted based on the requirements of relevant standards and legislation. The study area includes, but is not limited to, the following:
  - Residents located along Spring Creek Road to the west and east of the project site;
  - Land to be used for agricultural proposes north of the project site (approx. 8 ha);
  - The Lower Twenty Mile Creek Wetland Complex located south of the study area and Spring Creek (as well as riparian areas) located to the north; and,
  - Hedgerow on the southeast end of the property and small patch of land to the south of the hedgerow.
- Temporal boundaries include the construction, operation and decommissioning phases:
  - Construction is planned to take place in phases over a two-year period and will generally include site preparation, foundation and laneway construction, component delivery and installation, and post-construction site restoration.
  - The operations phase is expected to be a period of approximately 50 years. The duration of the decommissioning phase is unknown. However, it is assumed that the decommissioning phase, if needed, will generally be considered a short-term undertaking (i.e., measured in months).

3. Summary of Engagement

Engagement with Indigenous Nations and communities, agencies, municipalities, and the public was a central component to the Screening Process and has been a key consideration throughout the design of this project. NPEI is committed to meaningful engagement and has undertaken engagement activities to ensure that interested Indigenous Nations and communities, regulators and the public are well-informed about the project and have had every opportunity to share questions or comments. As part of NPEI's commitment to transparency, consultation records have been collected through a comment tracking system to demonstrate how comments were received and responded to. The location of consultation records is noted in **Appendix C**.

3.1 Engagement Program

The MECP requires that the Class EA Screening Process begins with the distribution of a Notice of Commencement to share information about the project and project contacts. Proponents are required to engage with Indigenous Nations and communities, agencies, municipalities, and members of the public who might have an interest in or be affected by the project. The guidance specifies that engagement should include:

- Identifying relevant Indigenous Nations and communities, agencies, municipalities, and the public;
- Providing relevant and timely information to all concerned parties;
- Identifying concerns about the project raised during engagement and determining how any concerns can be avoided, resolved, or mitigated;
- Encouraging anyone affected to submit requests for information and analysis early in the engagement process;
- Providing documentation of engagement to the MECP (Hydro One, 2024).

The following sections demonstrate how NPEI has gone beyond these requirements through the engagement activities undertaken.

3.2 Summary of Indigenous Engagement

In demonstrating their commitment to meaningful engagement with Indigenous Nations and communities, NPEI began early dialogue with the Ministry of Energy (MoE) as the required initial point of contact with Indigenous Nations. Early engagement began November 2023, when NPEI requested a list from the MoE of Indigenous Nations and communities to be involved. The MoE issued a formal delegation letter on November 9, 2023. The three communities listed in the formal delegation letter are Six Nations of the Grand River (SNGR), Mississaugas of the Credit First Nation (MCFN) and Haudenosaunee Development Institute (HDI).

NPEI has engaged with these three communities through virtual and in-person meetings, sharing project information, discussing the Class EA for TF process, seeking input on project activities,

discussing environmental and judicial considerations such as significance to traditional territory, and sharing screening results. This engagement has demonstrated a commitment to respectful and mutually beneficial relationships between NPEI and Indigenous Nations and communities, as well as ongoing collaboration and partnership. Through discussions with an opportunity to rehabilitate a section of land adjacent to a nearby woodlot at the back of the NPEI property was identified and will continue to be explored moving forward.

3.2.1 Six Nations of the Grand River

NPEI and SNGR have been engaging in a series of communications and meetings as part of ongoing discussions about the project. NPEI and SNGR had virtual meetings, in-person meetings, site visits, email correspondence, and communications via mail.

On April 26, 2024, NPEI met with SNGR to discuss the history and background of SNGR and to introduce the need for and scope of the project.

On May 5, 2024, NPEI sent the Notice of Commencement for the project to SNGR.

On May 24, 2024, the consultant in charge of archaeological fieldwork reached out to SNGR to extend an invitation and further details about the May 28, 2024, plan for a Stage 2 archaeological survey. A representative of SNGR attended the Stage 2 fieldwork on May 28, 2024. The draft Stage 1 and 2 archaeological assessment report was provided to SNGR for review.

On October 18th, the draft Screening Report was provided to SNGR for review and NPEI offered to meet to discuss the results. In November, confirmation was received from SNGR indicating that they have no comments or concerns about the project.

3.2.2 Mississaugas of the Credit First Nation

NPEI engaged MCFN in a series of communications and meetings to open the door to discussions surrounding the NPEI project. NPEI and MCFN had virtual meetings, an in-person meeting and site visit, email correspondence, some mail communications, and participation in the archaeology assessment.

On March 4, 2024, NPEI met with MCFN to discuss the history and background of MCFN and to introduce the need for and scope of the project.

On May 5, 2024, NPEI sent the Notice of Commencement for the project to MCFN.

On May 24, 2024, the consultant in charge of archaeological fieldwork reached out to MCFN to extend an invitation and further details about the May 28, 2024, plan for a Stage 2 archaeological survey. MCFN coordinated with the fieldwork crew to participate in monitoring efforts, however the MCFN representative was unable to attend the fieldwork. The draft Stage 1 and 2 archaeological assessment report was provided to MCFN for review.

On October 18th, the draft Screening Report was provided to MCFN for review and NPEI offered to meet to discuss the results. In November, confirmation was received from MCFN indicating that they have no comments or concerns about the project.

3.2.3 Haudenosaunee Development Institute

NPEI engaged HDI in a series of communications and meetings to have discussions surrounding the NPEI project. NPEI and HDI had an in-person meeting and several email communications as well as some communications via mail.

HDI has raised concerns regarding the potential impacts on Haudenosaunee rights and interests with respect to NPEI's operations and land claims. HDI expressed opposition to the project and their inability to provide meaningful comment without additional financial support.

On April 11, 2024, NPEI had a meeting with HDI to discuss interests and concerns. These concerns centered around the lack of engagement from IESO, the province and municipalities, as well as cumulative impacts to treaty lands. HDI noted that they appreciated NPEI's efforts to engage early before the project officially commenced and an engagement agreement was discussed between NPEI and HDI.

On May 5, 2024, NPEI sent the Notice of Commencement for the project to HDI. On May 21, 2024, NPEI followed up to determine if HDI wanted to participate in the upcoming archaeological and environmental monitoring, and on May 22, 2024, HDI replied noting that due to previous issues mentioned they did not support the project or required fieldwork.

On May 24, 2024, the consultant for archaeological fieldwork reached out to HDI to extend an invitation and further details about the May 28, 2024, plan for a Stage 2 archaeological survey. No representatives from HDI attended the fieldwork. The draft Stage 1 and 2 archaeological assessment report was provided to HDI for review.

On October 18th, the draft Screening Report was provided to HDI for review. No response was received.

3.3 Summary of Engagement with Local Residents, Agencies, and the General Public

3.3.1 Notice of Commencement

The project officially began with a Notice of Commencement distributed on May 9, 2024, to formally announce that the project would be undergoing the Class EA Screening Process. The notice was published in *NewsNow*, a local online newspaper serving the Lincoln area. The notice contained project information including project details, need for the project, the Screening Process, as well as the project webpage, contact information, and notice of the upcoming public meeting. Recipients

were invited to reach out with questions or comments through the project webpage or project email address.

A contact list was developed to identify the appropriate recipients of the Notice of Commencement based on proximity to the project site and Class EA for TF guidelines. The Notice of Commencement and covering letter explaining the engagement process was emailed and hand-delivered to relevant agencies, regional and municipal governments, elected officials, and members of the public including businesses, interest groups, and local residents living along Spring Creek Road, from number 4850 to 5179, within a 1-kilometre (km) of the project along Spring Creek Road.

3.3.2 Engagement with the Public

To ensure communication efforts and transparency in the project process, NPEI engaged with members of the public as a part of its ongoing engagement efforts.

On April 18, 2024, prior to the distribution of the Notice of Commencement, NPEI hand-delivered a letter to neighbours of the project site to provide details on the project and to provide notification about upcoming fieldwork that was to be undertaken. There were also two properties that the letter was mailed to when residents could not be reached in person. During the hand-delivery, one resident suggested a gate at the end of the station driveway to prevent illegal dumping/trespassing, and a second resident noted their opposition to the project being in their neighbourhood.

NPEI created a project webpage (https://www.npei.ca/info-resources/capital-projects/spring-creek-transformer-station) and a project email (springcreek@npei.ca) to provide details and allow for people of interest to ask questions or make comments about the project.

In addition to questions and comments raised during the public meetings, members of the public were able to submit questions and comments through the project email address for the duration of the project. One comment was received via email expressing concern about potential unauthorized access into the fields and woodlots on neighbours' and NPEI property once the laneway is developed. NPEI representatives responded explaining that they will be installing a gate and will consider options for potentially continuing to share the laneway. The location of correspondence with the public is noted in **Appendix C**.

3.3.3 Public Meetings

Before the Notice of Commencement and the official start to the project, NPEI invited neighbours and other interested public to a public meeting to learn more about the project. A letter outlining the project and an invitation to the public meeting was distributed on January 23, 2024, to neighbours of the project.

The first public meeting took place on February 1, 2024, at the West Lincoln Community Centre from 7:00 to 9:00 PM EST. Styled as an open house, the meeting was an informal information session to introduce the Spring Creek MTS project to neighbouring property owners. There were preliminary drawings and site plans available, as well as photos of similar stations. NPEI explained that they

would begin the process for a Class EA for TF and that once this process started official notice would be provided, and that further public information meetings would be held as an opportunity to engage the public.

There were several concerns raised by neighbours during this initial public meeting, such as:

- Buying land from neighbours and concern about the location and why different spots were not considered
- The cost and size of the land
- Zoning changes and if their property value would decline
- The location and type of laneway that would be created to support the project
- Increase to local traffic due to construction
- The historic nature of nearby land and its need for protection
- The level of noise from operations
- The number of pole lines to be constructed, if there would be any future expansion of the new transformer, and the size of the transformer
- How neighbours would be kept informed about updates and changes
- Issues concerning drainage on the property
- Monitoring of the station
- Process for stopping the project from commencing

Further engagement with local residents, agencies, and municipalities included an additional public meeting. The second public meeting took place on Wednesday November 20, 2024, at Fleming Memorial Arena on 5020 Serena Dr. in Beamsville, Ontario, from 2 PM to 4 PM EST, and was attended by seven neighbours living along Spring Creek. This meeting was also structured as an open house with nine display boards containing project information, sign-in sheets, and comment forms. Information shared during the meeting included an overview of the project and some of the results from the screening process, such as natural environment, visual and aesthetics, noise, land use, and surface and groundwater findings. Project team members were available for discussions with attendees, and attendees were invited to peruse project material at their own pace. The meeting also involved a presentation, which took place at 2:30 PM, in which attendees were invited to ask questions or share comments on the project during a Question-and-Answer period. Questions and comments shared during the meeting included themes such as:

- Project lifespan
- Project expansion
- Noise impacts
- The site selection process and whether other sites were considered
- The transparency of the land purchasing process
- Location of distribution lines, specifically, requests that any future distribution line builds are run along Mountain Road rather than Frost Road
- Security and safety of the site, including limiting road access to the facility while allowing neighbours to continue sharing the laneway
- Plans for upgrading the access road along the west side of the project property

- Family history in the area

In light of comments around safety and security, NPEI is exploring design options that restrict access to the laneway adjacent to the project site while continuing to allow access for neighbours. Additionally, NPEI has committed to consider the viability of ensuring future distribution lines are located along Mountain Road rather than Frost Road per neighbours' requests. As site selection emerged as a frequent theme during the meeting, new text has been added to this Screening Report since the public meeting to share the rationale behind the site selection process (see **Section 1.3.1**).

The location of engagement materials is noted in **Appendix C**.

3.3.4 Engagement with Agencies

Throughout the course of the project, NPEI has been in dialogue with various agencies at the regional and provincial level, receiving comments from MECP, MoE, MCM, and NPCA.

On May 14, 2024, NPEI sent MECP the Notice of Commencement with an attached letter to outline the Spring Creek Transformer project and note their contact information should MECP have any questions. On May 16, 2024, MECP responded with a letter and an attached "Areas of Interest" document for NPEI to use for guidance regarding the ministry's interests throughout the Class EA Process. MECP asked for a copy of the Notice of Completion when finished and a copy of the draft Screening Report.

On May 7, 2024, NPEI sent the MoE the Notice of Commencement with an attached letter to outline the Spring Creek Transformer project. MoE responded and passed on the message to the Transmission Policy group.

On May 7, 2024, NPEI mailed the MCM the Notice of Commencement with an attached letter to outline the Spring Creek Transformer project. On May 8, 2024, MCM emailed NPEI and thanked them for sending the notice by mail. Their letter outlined requirements for the EA Process in relation to MCM, noting that screening should be completed to determine whether the EA may impact known or potential built heritage resources and/or cultural heritage landscapes. The letter also asked for any notices, reports or documentation to continue to be sent via email.

On May 7, 2024, NPEI sent the Ministry of Natural Resources (MNR) the Notice of Commencement with an attached letter to outline the Spring Creek Transformer project. On May 13, 2024, MNR responded and thanked NPEI for circulating the notice and attached a letter with their initial thoughts. Their letter provided information to guide NPEI in identifying and assessing natural features and resources as required by applicable policies and legislation.

On August 1, 2024, NPEI had a virtual pre-consultation meeting with NPCA. NPEI provided an overview of the project and NPCA asked for more information regarding the proposed driveway from the site plan drawings. NPCA noted that their only concern would be the drainage feature on the west side of the property (identified as "NPCA Approximate Regulation Land" on the NPCA's mapping system. A site meeting was suggested between NPCA and NPEI to confirm if the feature is regulated

by NPCA and discuss any required permitting. Information on erosion and sediment would be required and noted on the permit application and its accompanying drawing. On August 9, 2024, NPEI met with NPCA on site to investigate the drainage feature on the site plan.

On Nov. 14, 2024, MECP wrote to NPEI recommending direct engagement with Indigenous communities to address any concerns they may have, working collaboratively to mitigate any identified impacts and ensuring that consultations are thorough and meaningful. NPEI responded sharing the summary of Indigenous engagement from the draft Screening Report (see **Section 3.2**) demonstrating meaningful engagement and indicating that there are no unresolved comments from Indigenous communities. As indicated in **Section 3.2**, SNGR and MCFN have indicated that they had no outstanding concerns about the project, and HDI was offered several opportunities for meetings and discussions.

The location of engagement records with agencies is noted in **Appendix C**.

3.3.5 Engagement with Municipalities and Elected Officials

NPEI has worked to develop a strong relationship with the Town of Lincoln and Niagara Region. Meetings with town council and regional representatives began on May 6, 2024, and communication between the project team and local representatives has been ongoing and open. Topics of discussion have included Site Plan application process steps and any requirements that the Town may have as well as general updates to the Town of Lincoln on the project progress. The location of correspondence records with the Municipality and Elected Officials is noted in **Appendix C**.

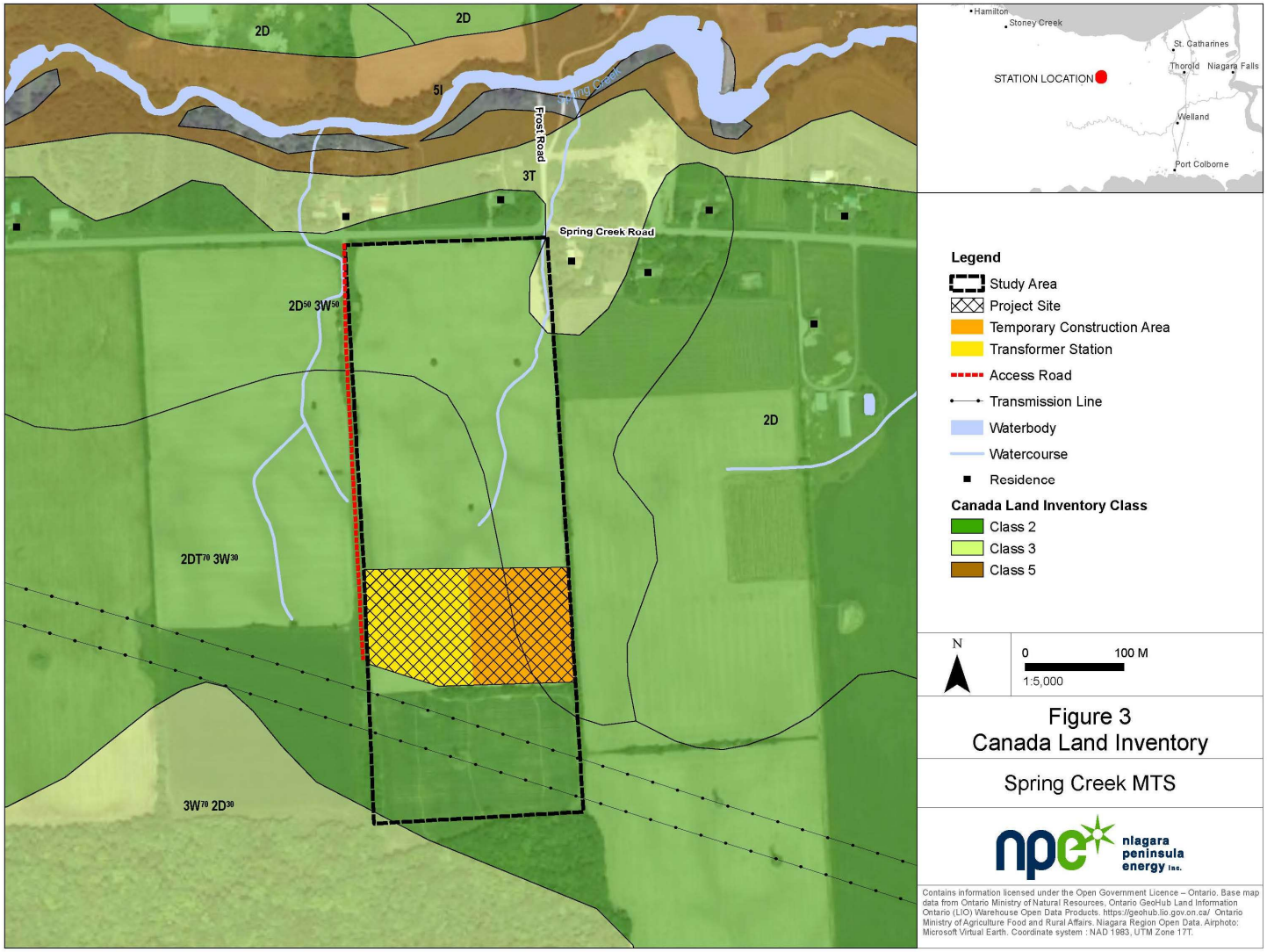
4. Existing Environmental Conditions

4.1 Socioeconomic Resources

4.1.1 Agriculture

The study area is located in a zone designated as Class 2 agricultural land under the Canada Land Inventory (Figure 3), which means that the land capacity for agricultural production is one of Moderate Limitations, requiring moderate conservation practices (Government of Canada, 2021). The Provincial Policy Statement, "A Place to Grow: Growth Plan for the Greater Golden Horseshoe" (Growth Plan) (Government of Ontario, 2020), and the Niagara Official Plan (NOP) (Niagara Region, 2022) designate the study area as Prime Agricultural Area. The Growth Plan and NOP indicate that lands within a Prime Agricultural Area must be protected for long-term use for agriculture, which includes permitted uses such as agriculture-related and on-farm diversified uses. Limited non-agricultural uses are also permitted if the lands do not comprise a Specialty Crop Area and the use complies with the Minimum Distance Separation (MDS) formulae. Additionally, limited non-agricultural use is permitted where no alternative locations that avoid Prime Agricultural Areas are available. In these instances, any effect on surrounding agricultural operations and lands must be mitigated to the extent feasible.

The project site will be located at the south end of the study area and the remainder of the study area will continue to be used for agricultural purposes (i.e., row cropping). Correspondence with Niagara Region indicates that the study area is not located in a Specialty Crop Area. However, any additional requirements for assessing the potential impacts on local agriculture will be confirmed and completed under the direction of the municipalities during the Site Plan Approval (SPA) process. This will occur during the site planning process following the completion of the Screening Process.



Path: H:\AVAANZ\9751 - AVAANZ SpringCreekMTS\gis\mxd\Figure 3 Canada Land Inventory.mxd Revised: September 13, 2024

Figure 3: Spring Creek MTS Canada Land Inventory

4.1.2 Land Use

4.1.2.1 Adjacent Properties

Based on Google Earth imagery, multiple residences are located near the project site. Immediately adjacent to the project property, there is farmland to the north between the project site and Spring Creek Road, an access road to the west, a hydro corridor and hedgerow to the south, and Frost Road to the east. Adjacent to the project property are four residences: two across Spring Creek Road to the north and two to the northeast on the other side of Frost Road (see Figure 3).

In addition to these adjacent properties, six additional residences are located within 600 m of the project site along Spring Creek Road: four residences are within 350 m to the east of the study area and two residences are approximately 550 m west of the study area. The nearest local business, Field Well Drilling Inc., is 1.6 km east of the project site along Spring Creek Road.

4.1.2.2 Municipal Land Use

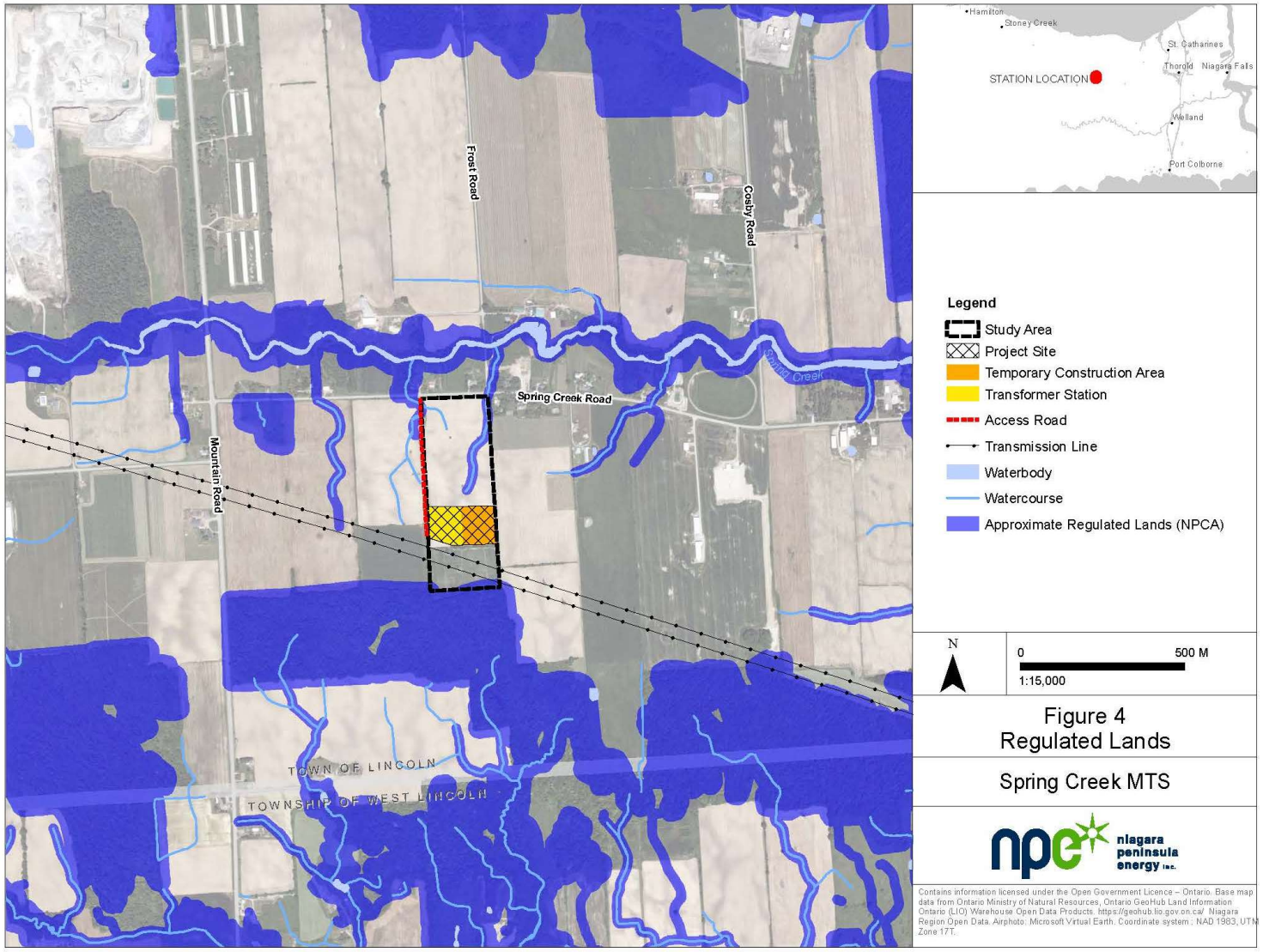
The study area is in lands zoned as Prime Agricultural Area under the Town of Lincoln Official Plan (2018) (Figure 4). The Official Plan indicates that non-agricultural land uses in the area are not permitted, as enacted by the Town of Lincoln Zoning By-Law (Town of Lincoln, 2022). Consequently, NPEI may need to pursue a Zoning By-Law amendment.

Since the study area does not fall within a Specialty Crop Area, the MDS requirements outlined in the Zoning By-Law do not apply. Although the Zoning By-Law provides setback regulations for railway and pipeline ROWs, no stipulation is indicated for an electrical ROW. However, Hydro One stipulates that any structure built near a Hydro One electrical line requires a minimum setback of 4.8 m.

The project is subject to a SPA by the Town of Lincoln, ensuring that all requirements of Town departments are satisfied. The SPA will cover site access, which will be restricted to only those involved in the project. Although a pre-existing access road will be upgraded, the entrance will have a locked gate.

4.1.2.3 Conservation Authority Regulated Land

Field investigation confirmed no permanent water course exists within the study area. The project site is located within the jurisdiction of the NPCA. Figure 4 depicts the portions of the study area under regulation (NPCA, 2024b). The project property contains one regulated area surrounding a small headwater feature in the north section of the property. The transformer station is located outside of the regulated lands to the south. Therefore, a permit under O.Reg. 41/24 Prohibited Activities, Exemptions, and Permits under subsection 28(1) of the *Conservations Authorities Act* is required for the entrance to the access road prior to construction.



Path: H:\AVAANZ\9751 - AVAANZ SpringCreekMTS\gis\mxd\Figure 4 Regulated Lands NPCA.mxd Revised: September 13, 2024

Figure 4: NPCA Map of Project Site

4.1.2.4 Local Utilities and Infrastructure

The project site is on agricultural land, so local utilities and infrastructure are limited. There is no stormwater or wastewater infrastructure connected to the project site. Local residences north of the project site are connected to independent water and wastewater management systems and NPEI electrical distribution infrastructure. Local distribution and transmission infrastructure is located on and immediately adjacent to the project site.

4.1.2.5 Contaminated Sites

No contaminated sites are identified within the study area (Treasury Board of Canada Secretariat, n.d.). A Phase 1 Environment Site Assessment was completed in April 2023 and found one potentially contaminating activity (PCA) on-site and one PCA off-site, resulting in one area of potential environmental concern related to pesticide (organochlorine) use in the past. Pesticide use is considered a PCA under O.Reg. 153/04 Table 2: *Item Number 30 – Pesticides.* A Phase 2 Environmental Site Assessment would be required to assess the Area of Potential Environmental Concern for soil contamination; however, it is unnecessary for this project (Oakhill Environmental Inc., 2023).

4.1.2.6 Waste Facilities

The Niagara Road 12 Waste Management Facility is approximately 9 km west of the project (Government of Ontario, 2022). This landfill is capable of accommodating waste from construction activities.

4.1.2.7 Recreation

As the property is rural and surrounded by agricultural land, no designated recreation infrastructure is near the project site. A hedgerow lines the southeastern portion of the study area, but it is unlikely that this would invite recreational activity. Spring Creek is north of the study area and is separated by residential housing and Spring Creek Road. Spring Creek might be accessed for non-motorized boating and fishing, and local cyclists might recreationally use Spring Creek Road. NPCA includes sites designated as conservation areas for recreational users, but the nearest conservation area, Cave Springs, is over 9 km from the site.

4.1.3 Visual and Aesthetic

The study area is located in a rural environment consisting of farmland and small wooded areas, including the hedgerow to the south, roads, residences, existing NPEI distribution lines, and Hydro One transmission lines. There is limited to no industrial development.

4.1.4 Noise

The existing sound environment is primarily vehicular traffic on Spring Creek Road, agricultural land use, and sounds of nature (e.g., wind, birdsongs).

4.2 Natural Environmental Resources

4.2.1 Terrestrial Environment

A review of aerial imagery and publicly available mapping indicates that the project site is used primarily for agricultural activities (i.e., row cropping) and does not contain woodland, wetlands, or natural areas. Tree cover in the study area is limited to a small hedgerow south of the temporary construction area that joins another north-south-oriented hedgerow on the eastern edge of the study area. No provincial parks, conservation reserves, Areas of Natural and Scientific Interest (ANSIs), or other known natural areas occur within the study area (Ministry of Natural Resources [MNR], 2023).

4.2.1.1 Wetlands

The Lower Twenty Mile Creek Wetland Complex, designated as a PSW, is located at the edge of the agricultural area in the southern extent of the study area to the south of the Hydro One ROW. The Town of Lincoln Official Plan designated PSWs as Environmental Conservation Areas and allows development within 120 m of the PSW if it is demonstrated that there are no adverse effects on the natural features or their ecological functions. The wetland within the study area is comprised of deciduous swamp and shallow marsh that extends into the Lower Twenty Mile Creek Wetland Complex. The small pocket of shallow marsh occurs on the north side of the deciduous swamp. The NPCA regulates the wetlands on and adjacent to the study area and are a part of the Natural Heritage System as outlined in Schedule C2 of the NOP. There are no PSWs on the project site.

4.2.1.2 Species At Risk and Species of Conservation Concern

Desktop review and field investigation was conducted at the study area to confirm the presence or absence of Species at Risk (SAR) and Species of Conservation Concern (SCC). SAR and their habitat are protected by the *Endangered Species Act* (*ESA*) 2007. SCC are rare or sensitive species that have no regulatory protection under the *ESA* but are recognized for being at risk of becoming endangered, extinct, or extirpated in the future. SCC habitat is considered Significant Wildlife Habitat under the Provincial Policy Statement and must be considered in the Class EA Screening criteria.

The small hedgerow south of the temporary construction area joins another north-south oriented hedgerow on the eastern edge of the study area, as well as a small pocket of deciduous swamp at the southern extent of the study area, with the potential to provide habitat for SAR. Nine SAR were identified as potentially occurring in the study area (two trees: Butternut (*Juglans cinerea*) and Black Ash (*Fraxinus nigra*); two birds: Red-headed Woodpecker (*Melanerpes Erythrocephalus*) and Eastern Wood-Peewee (*Contopus virens*); and four bat: Little Brown Myotis (*Myotis lucifugus*); Northern Myotis (*Myotis septentrionalis*); Tri-coloured Bat (*Perimyotis subflavus*), and Eastern Small-footed Myotis (*Myotis leibii*)).

A breeding bird study was completed at the study area and revealed that no species of breeding birds with protections under the *ESA* were present in the study area. All breeding birds witnessed during the survey are considered either S4 (Apparently Secure) or S5 (Secure).

Appendix B lists all the SAR and SCC that were identified as having records within the vicinity of the project site.

4.2.2 Water Quality

4.2.2.1 Surface Water

Spring Creek is located approximately 500 m north of the project site. It flows approximately 6.5 km northeast before merging with Twenty Mile Creek, which drains into Lake Ontario.

The project site is not within a designated floodplain and does not directly border any wetland allowances, as per the NPCA guidelines (NPCA, 2024). However, the entrance to the access road is located within the regulated area. The water quality grade in the project site area is classified as poor (NPCA, 2024).

MNR mapping identifies a permanent watercourse in the northeast corner of the study area. However, field observations confirmed there is no permanent water course or aquatic habitat in the study area; rather several drainage features (i.e. swales) associated with agricultural lands exists. In periods of high rainfall, the drainage features converge into one drainage channel that flows northeast into Spring Creek. A small section of the study area drains south into the PSW. Based on the updated *Conservation Authorities Act,* headwater drainage features without a defined bed and bank are no longer regulated by the Conservation Authority, and therefore are unlikely to be regulated for this project.

4.2.2.2 Groundwater

The study area is located within the Niagara Peninsula Source Water Protection Area. According to Ontario Well Records there are several wells in the study area located along Spring Creek Road (MECP, 2024a).

The study area is located in an area with a highly vulnerable aquifer. According to MECP mapping, there is an intermittent Highly Vulnerable Aquifer (HVA) located northeast of the study area at the corner of Frost Road and Spring Creek Road (MECP, 2024b).

4.2.3 Air Quality and Climate Change

The study area is used primarily for agricultural purposes and air emissions are limited to Greenhouse Gas (GHG) emissions from farm equipment and dust created from the landscape. Air emissions surrounding the study area are primarily from GHG emissions from local traffic along Spring Creek Road.

4.3 Cultural Resources

4.3.1 Archaeological Resources

The objectives of the Stage 1 archaeological assessment were to gather information about the project location's geography, history, current land conditions, as well as any previous archaeological research and listed archaeological sites on or within the vicinity. Methods to achieve these objectives included:

- Review of relevant historic and environmental literature pertaining to the study area,
- Review of an updated listing of archaeological sites within 1 km from the MCM Archaeological Sites Database,
- Review of all archaeological assessments within 300 m of the study area,
- Consultation with individuals knowledgeable about the study area, and
- Review of historic maps of the study area.

A Stage 1 and 2 archaeological assessment was undertaken to determine whether archaeological resources are present within the study area (PHC, 2024).

The Stage 2 assessment identified 11 Indigenous findspots. Findspots 1 through 11 each represent the identification and recovery of a single undiagnostic lithic artifact. Despite the intensification of survey intervals, no further artifacts were identified at any of the findspots. Findspots 1 through 11 are considered to each have low cultural heritage value or interest.

Based on the results of the Stage 1 and 2 archaeological assessments, no further archaeological assessment has been recommended for these findspots, and the study area is considered free of archaeological concern.

The draft Stage 1 and 2 archaeological assessment report has been provided to SNGR, HDI and MCFN for review. Additionally, the report will be entered into the Ontario Public Register of Archaeological Reports, as provided for in Section 65.1 of the *Ontario Heritage Act*.

4.3.2 Cultural Heritage Resources

A desktop review was conducted to evaluate potential cultural heritage resources near the study area. The search included several registries to determine whether any cultural or heritage significance resource is located near the project. A search of the Directory of Federal Heritage Designations revealed no sites of historical or cultural interest in Lincoln or the surrounding areas of West Lincoln, Smithville, Jordan, or Beamsville (Government of Canada, n.d.). The nearest cemetery to the study area is the Eden Cemetery, 450 m east between Frost Road and Cosby Road. The *Ontario Heritage Act* Register revealed no easement properties, plaques or Ontario Heritage Trust-owned properties near the study area. The Ontario Heritage Trust (2024) identified no Designated Heritage Properties near the study area, with the closest site of historical significance being the

Library/Lodge Building located on 62 Mountain Street, Beamsville, approximately 5.6 km north of the study area.

The Town of Lincoln (2024) recognizes a number of heritage properties near the Town of Lincoln. The nearest Heritage Property is Tufford Easton House located on 5031 Philp Road, Beamsville, approximately 3.5 km north of the study area.

The Town of Lincoln (2024) also recognizes non-designated properties of Cultural or Heritage Value or Interest under Section 27 (3) of the *Ontario Heritage Act*. Properties in this category are listed under the Town of Lincoln Heritage Register, and owners of the listed properties are required to give notice to the Town of Lincoln 60 days before any planned demolition or building removal so the town can decide whether to seek long-term protection of the property through the formal designation process. One of these non-designated properties is at 4925 Spring Creek Road (300 m east of the project site); another is at 5049 Spring Creek Road, which is within the study area located across the road from the project site.

5. Screening Results

The existing environmental conditions outlined in **Section 4** were used to assess the project's potential impacts on the environment. The screening questions, results and rationale are provided in Table 1.

Table 1: Screening Results

Screening Criteria	Yes	No	Rationale
Will the proposed undertaking…			
a) Conflict with written environmental goals, objectives, plans, standards, policy statements or guidelines approved or adopted by the Province of Ontario; municipal government or local body within an unorganized territory as defined in the Municipal Act, 2001 where the project is to be located?		**No**	**Land Use** • The project will align with the environmental goals outlined in the Official Plan for the Town of Lincoln by undertaking the necessary application processes for non-agricultural land uses. • The project will not conflict with provincial or municipal environmental goals, objectives, standards, policy statements or approved guidelines as defined in the *Municipal Act*, 2001. According to Section 97.1, the *Municipal Act* authorizes local municipalities to pass a by-Law respecting the protection or conservation of the environment, and this project will be following the Zoning By-Law as outlined by the Town of Lincoln. • The project will be situated at the south end of the study area to ensure it is far away from residences as well as Spring Creek and the associated riparian area to minimize potential disturbance to wildlife in and near the creek. • The project has been designed with consideration to the subwatershed, regulation wetlands, and approximate regulation lands in which the study area is located (**Section 4.1**) and will build within the regulation limit subject to permit requirements as prescribed by the *Conservation Authorities Act*. • The project will not involve any development or site alteration within PSWs, fish habitats, or near SAR.

Screening Criteria	Yes	No	Rationale
Will the proposed undertaking…			
			• The project will seek mitigation measures to ensure that the hedgerow directly south of the study area and any wildlife contained within is left undisturbed. Ecological studies have ensured that the wildlife occupying or living near the hedgerow is accounted for and considered. • The project Environmental Management Plan (EMP) will include management practices, mitigation measures, and contingency measures to be implemented throughout the project to prevent any effects on the seasonal fish habitat in Spring Creek, which is approximately 150 m north of the project property. • There will be no interference with any wildlife potentially associated with the woodland and PSW south of the property because of the project. The woodland and PSW are outside of the property, and the EMP will be designed to consider this area and ensure that any associated wildlife will be undisturbed by construction activities. • Negative effects will be controlled by implementing standard management practices and mitigation measures for the natural features or functions of the hedgerow at the project site. • Before construction, the appropriate permits or approvals will be obtained, with mitigation designed and incorporated as needed to align with municipal and provincial requirements (see **Section 4.1.2**).
			Air Quality and Climate Change • The provincial guideline "Considering Climate Change in the EA Process, 2017" has been reviewed and considered in the context of this project, as well as throughout the design and execution of the EMP. • During regular operations the project will not introduce sources of GHG emissions. • The project components procured by NPEI will be certified to meet recognized codes and standards in Ontario and Canada.

Screening Criteria	Yes	No	Rationale
Will the proposed undertaking…			
			Based on these engineering design measures, the project and its components are considered to have a high adaptive capacity to the potential effects of climate hazards (see **Section 4.2.3**).
b) Have significant effects on persons or property, including lands zoned to permit residential or other sensitive land uses?		**No**	**Land Use** • The project property is adjacent to four residential properties along Spring Creek Road. However: o NPEI will be following the Town of Lincoln's parameters as outlined in the Official Plan concerning building near residential properties. o Although the property is adjacent to residences, the project site itself will be situated at the south end of the property to ensure visual screening. • Since the property does not fall within a Specialty Crop Area, it will not need to pursue the Minimum Distance Separation requirements outlined in the Zoning By-Law. • Prior to construction, the appropriate permits or approvals will be obtained, with mitigation designed and incorporated as needed to align with municipal and provincial requirements, including SPA in accordance with the *Planning Act* and EASR for Noise in accordance with O.Reg. 1/17 (see **Section 4.1.2**). • NPEI has committed to considering maintaining shared access to the laneway entering the project site with adjacent neighbours.
c) Necessitate the irreversible commitment of any significant amount of non-renewable resources, including Prime Agricultural Lands, which includes Specialty Crop Areas (as defined in the Provincial Policy Statement under the *Planning Act*) and/or Canada Land Inventory Classes 1, 2 and 3 lands)?		**No**	**Agriculture** • The project site is located on Class 2 lands identified as Prime Agricultural Land, requiring permitting to construct a project that follows non-agricultural land uses (Figure 3). However, o Upon completion of construction, land used for staging and storing will be available for agricultural use.

Screening Criteria	Yes	No	Rationale
Will the proposed undertaking…			
			○ The project design and construction will consider the protection of the surrounding land for agricultural use throughout construction and operation. ○ The project will be designed in such a way that the project site is capable of being restored to agricultural uses at the end of its lifespan. • The project is not a Specialty Crop Area according to the municipality (see **Section 4.1.1**).
d) Pre-empt the use, or potential use, of a significant natural resource for any other purpose?		**No**	**Terrestrial Environment** • The project does not pre-empt the use, or potential use, of a significant natural resource. The project site is surrounded by agricultural land. Project activities will not involve using or disrupting natural resources during the construction, operation, maintenance, or decommission phases (see **Section 4.2.1**).
e) Result in a significant detrimental effect on air or water quality or on ambient noise levels for adjacent areas?		**No**	**Air Quality and Climate Change** • Project operations will not result in air emissions. • Project construction will generate temporary, localized air emissions (i.e., GHG and dust). Temporary air emissions are associated with the delivery of equipment and facility construction and will be minimized by implementing standard management practices related to dust control and avoiding unnecessary equipment idling (see **Section 4.2.3**).
		No	**Water Quality** • Existing surface drainage patterns will be maintained. The project site contains two intermittent, unregulated drainage features that flow north into Spring Creek and the associated PSW, namely the Lower Twenty Mile Creek Wetland Complex. • Field investigations confirmed no permanent or regulated water courses are located in the study area. • Due to the addition of a small impervious surface at the project site, there is a potential for increased surface water flow and

Screening Criteria	Yes	No	Rationale
Will the proposed undertaking…			
			sedimentation into the drainage features. Stormwater management will be carefully considered during the planning and design phases of the project and no effects to surface hydrology are anticipated as a result of the project. • Construction activities are required to be managed so that there will be no detrimental effects on surface water quality. The project will be designed to minimize disturbance to the headwater drainage features, will avoid any permanent or regulated water courses, and implement any necessary mitigation measures to control erosion and sedimentation. • Site construction will require shallow excavation that is not anticipated to disturb the water table. The project site is not located in an area with a highly vulnerable aquifer and no groundwater wells are located on the project site. The project site is located at southern portion of the study area, roughly 375 m from an HVA. As such, there no anticipated effects to groundwater from the project (see **Section 4.2.2**).
		No	**Noise** • The MECP provides guidelines for ensuring that facility operations fall within acceptable noise levels as defined by Section 9 of the Ontario *Environmental Protection Act*. According to these guidelines, rural areas such as the study area are considered Class 3, and noise levels cannot exceed 40 A-weighted decibels (dBA) (MECP, 2013). • Noise modelling found that the sound levels from operations at the facility are predicted to comply with the MECP Class 3 limits at all receptors in the vicinity. The project site was modelled with both transformers operating at their maximum output, 24-hr a day. The maximum predicted sound level during the maximum predictable worst-case one-hour period was 35.5 dBA, which was predicted in the rear yard of one of the houses adjacent to the study area (IEC, 2024). Community

Screening Criteria	Yes	No	Rationale
Will the proposed undertaking…			
			engagement activities have included discussing and sharing these noise modelling results with community members. • Construction activities will generate noise for a temporary period; however, the project installation will be completed in accordance with the local noise by-law. These effects will be temporary, localized, and mitigated through planning activities. • Vehicles, equipment, and road quality will be maintained and kept in good condition to ensure that activities conform to typical noise parameters. The access road will be upgraded in such a way as to facilitate quiet travel for work vehicles. • On-site vehicle and heavy equipment idling will be restricted to only when necessary to mitigate idling. Construction work methods and scheduling will consider noise effects (see **Section 4.1.4**).
f) Cause significant interference with the movement of any resident or migratory fish, wildlife species, species at risk, or their respective habitats?		**No**	**Terrestrial Environment** *Species At Risk and Species of Conservation Concern* • Desktop review and field investigation was conducted at the study area to confirm the presence or absence of SAR and SCC. Potential presence of nine species is listed in **Section 4.2.1.2**. • No interference with the movement of wildlife is anticipated as a result of the project. • The only vegetation clearing will occur along the roadway on the western side of the project where no significant habitat was identified. As such, the likelihood of SAR to be present on site is considered either not likely or possible for all species except the Eastern Wood-Peewee which is considered very likely. In addition, considering the proximity of the project site to the hedgerow, the magnitude of the effect of the project on all bird and bats species is considered low. • At the project site, the hedgerow was identified as potential SAR habitat (Beacon, 2024). The project will not result in the

Screening Criteria	Yes	No	Rationale
Will the proposed undertaking…			
			removal of any trees from the hedgerow. However, if necessary, pruning of branches will occur outside of the breeding bird season to avoid disturbance and is unlikely to change the level of risk. • No species considered Critically Impaired through Vulnerable using the provincial ranks were recorded during breeding bird surveys at the site. No species with protections under the *ESA* were recorded during these surveys. • In collaboration with Indigenous Nations and communities, NPEI is exploring the possibility of restoring a small area of land north of the Hydro One transmission line with native plant species to provide additional habitat for bird, bat, and wildlife species in the study area (see **Section 4.2.1.2**). *Wetlands* • The Town of Lincoln Official Plan designated PSWs as Environmental Conservation Areas and permits development within 120 m of the PSW if it is demonstrated that there are no negative effects on the natural features or their ecological functions. The project site is not within 120 m of the PSW and is separated by a Hydro One ROW. Multiple intermittent drainage features associated with the agricultural lands were identified within the study area, a small portion of which drains south into the PSW. It is unlikely that these features contribute to the function of the PSW and there are no anticipated effects to the form and function of the study area hydrology. Therefore, the project does not require further studies and no effects to the PSW are anticipated (see **Section 4.2.1.1**).
		No	**Water Quality** • Several unregulated drainage features originate in the study area. These features do not provide significant habitat to resident or migratory fish. The headwater features converge into one main drainage feature in the northeastern portion of the study area. The feature flows north into Spring Creek and

Screening Criteria	Yes	No	Rationale
Will the proposed undertaking…			
			associated PSW the Twenty Mile Creek Wetland Complex. Field investigations revealed no permanent water courses in the study area. Surveys of the headwater drainage features revealed no changes to the form and function of the site's hydrology as a result of the project, and subsequently, no downstream changes to aquatic environments or PSW are anticipated. The project site is located 500 m south of Spring Creek and 120 m north of the PSW and is not anticipated to cause any significant risk to residents or migratory fish (see **Section 4.2.2**).
g) Establish a precedent or involve a new technology, either of which is likely to have significant environmental effects now or in the future?		**No**	**Project Components** • The project does not establish a precedent or involve new technology that would have significant environmental effects now or in the future. • Municipal Transformer Stations have been used for decades across Canada and the world. This technology builds upon pre-existing infrastructure to safely distribute electricity in a well-established process that does not present new or unforeseen risks (see **Section 1.5**).
h) Be a pre-condition to the implementation of another larger and more environmentally significant project that is subject to an Individual Environmental Assessment or Renewable Energy Approval that has not yet been approved at the issuance of the Notice of Commencement of the undertaking?		**No**	**Need for the Project** • The project is proposed to connect to existing 230 kV transmission circuits, and it is not a pre-condition of another larger or more environmentally significant project subject to an Individual EA (see **Section 1.2**).
i) Likely generate significant secondary effects, directly caused by the proponent's activities, which will adversely affect the environment?		**No**	**Project Components** • The project construction activities involve well-known construction methods and standard mitigation and impact management practices. The project operation phase consists of monitoring of the system and maintenance activities. There are

Screening Criteria	Yes	No	Rationale
Will the proposed undertaking…			
			no expected significant secondary effects associated with the project that will adversely affect the environment. • EMP(s) will be prepared prior to construction to include air, noise, and soil management and monitoring (see **Section 1.5**).

Screening Criteria	Yes	No	Rationale
Will the proposed undertaking…			
j) Block pleasing views or significantly affect the aesthetic image of the surrounding area?		**No**	**Visual and Aesthetic** • The project will be situated in the southwestern end of the property, set back from the road and far from nearby. residences. Given the presence of the Hydro One line south of the project site, the proposed project is intended to blend into the aesthetic landscape of the area and has been designed to minimize visual disruption. • NPEI is planning to plant a vegetation buffer around the project to further facilitate the project's integration into the aesthetic landscape and mitigate any potential for visual disruption. • Lighting will be designed to meet nighttime-friendly guidelines that promote maintaining a dark sky environment. Permits will be obtained to determine appropriate lighting levels during construction and operation (see **Section 4.1.3**).
k) Significantly change the social structure or demographic characteristics of the surrounding neighbourhood or community?		**No**	**Land Use** • The project would not alter the surrounding community's social structure or demographic characteristics. • The project is situated on property already owned by NPEI. While 3.75 ha of land is anticipated to be used for construction activities, the remainder of the property will be used for agriculture, consistent with the surrounding land use (see **Section 4.1.2**).
l) Overtax existing community services or facilities (e.g., transportation, water supply, sanitary and storm sewers, solid waste disposal system, schools, parks and/or care facilities)?		**No**	**Land Use** • No changes to local community services or facilities within the Town of Lincoln are expected. The project does not propose any new connections to Town water supplies or sewers. The project is subject to SPA by the Town of Lincoln, which will address the requirements of all town departments. • A pre-existing access road will be upgraded on the west side of the property for project use. The upgraded road will be approximately 450 m in length directly off Spring Creek Road.

Screening Criteria	Yes	No	Rationale
Will the proposed undertaking…			
			Access will be controlled via a locked gate. Site access from Spring Creek Road is subject to Town of Lincoln SPA (see **Section 4.1.2**).
m) Result in undesired or inappropriate access to previously inaccessible areas?		**No**	**Project Location** • The project site is privately owned and not open to the public. • The project will upgrade an existing access point to the project property and will not create new access to previously inaccessible areas. • NPEI will build a locked gate at the entrance of the access point along Spring Creek Road to ensure that inappropriate access is not granted to parties beyond those directly involved in the project (see **Section 1.3**). While inaccessible to the general public, NPEI is considering designs for the access road such that adjacent neighbours can maintain access to their property.
n) Create the removal of a significant amount of timber resources?		**No**	**Project Location** • The project will not involve the removal of timber resources (see **Section 1.3**).
o) Result in significant effects to natural heritage resources?			**Terrestrial Environment** • The project site does not contain any ANSIs or PSWs and is not located within a forest resource area. The Lower Twenty Mile Creek Wetland Complex is a PSW located outside the southern extent of the project site. It is anticipated that the implementation of standard management practices and mitigation measures will result in no negative effects to the natural heritage function of this feature. • The project will not affect forestry resources, fisheries, or game. The project site is located on private property that is used for agricultural purposes and is not used for hunting or fishing (see **Section 4.2.1**).
		No	**Cultural Heritage Resources**

Screening Criteria	Yes	No	Rationale
Will the proposed undertaking…			
p) Result in significant effects to cultural heritage resources (which may include built heritage resources, cultural heritage landscapes, and/or archaeological resources)? Significant effects to cultural heritage resources are to be determined based on technical, cultural heritage studies prepared by qualified persons.			• A desktop review of any potential cultural heritage resources near the project site found no easement properties, plaques, Ontario Heritage Trust-owned properties, Federal Heritage Designations, or Heritage Properties identified by the Town of Lincoln and Ontario Heritage Trust adjacent to the project site. • A cemetery was identified 450 m east of the project property, and the Town of Lincoln's municipal register identified two non-designated heritage properties near the project site. One is 300 m east of the property, and the other is adjacent to the property on the northwest corner of the property. • Evaluations of these features determined that there are no effects to the identified cultural heritage resources. As no effects were identified, no alternative development options or mitigation measures are warranted (see **Section 4.3.2**).
		No	**Archaeological Resources** • A Stage 1 and 2 archaeological assessment was undertaken to assess whether any archaeological resources were present in the study area. The Stage 1 assessment found 11 Indigenous findspots, each containing a single undiagnostic lithic artifact. These findings prompting the undertaking of the Stage 2 assessment, which found these artifacts to be of low cultural heritage value or interest. • Due to the low cultural heritage value or interest of these findings, no further assessment is recommended, and the study area is considered free of archaeological concern (PHC, 2024). The draft Stage 1 and 2 archaeological assessments will be entered into the Ontario Public Register of Archaeological Reports per the *Ontario Heritage Act* following consultation with Indigenous Nations and communities (see **Section 4.3.1**).

Each of the 16 screening questions has been answered as "No" in its entirety based on a review of available information, the technical studies completed to support this project, the commitments that will be implemented during construction and operation, and future permitting requirements that will further refine the project design and mitigation measures to reduce the potential for environmental effects.

6. Conclusion

This report has reviewed the Spring Creek Municipal Transformer Station project, proposed for construction in the Town of Lincoln on Spring Creek Road, between Mountain Road and Frost Road. Since the existing transmission circuits operate at 230 kV, the project is subject to the Screening Process (Hydro One, 2024).

The Screening Process involved consultation with Indigenous Nations and communities, stakeholders, and the public to assess the project's potential environmental impacts. Technical specialists with expertise in environmental assessment, noise, air quality, terrestrial and aquatic ecology, cultural heritage, and archaeology were also engaged to evaluate these impacts against the screening criteria outlined in the Class EA (Hydro One, 2024). The screening process concluded that all questions could be answered "No," indicating no net residual environmental effects from the project. Therefore, the project meets the screening requirements of the Class EA.

NPEI remains committed to ongoing engagement and relationship-building with Indigenous Nations, local communities, and stakeholders throughout the final permitting and construction phases of the project.

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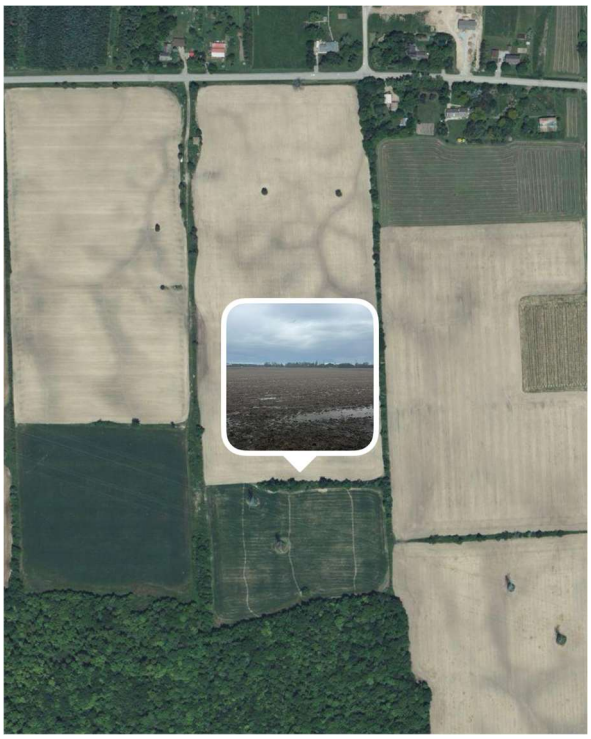
Appendix A

SITE PHOTOS

Photo 1: Southern Portion of Study Area– Directly North of Hedgerow (April 19, 2024)

Coordinates: 43.09977 N, 79.47351 W

Photo Location

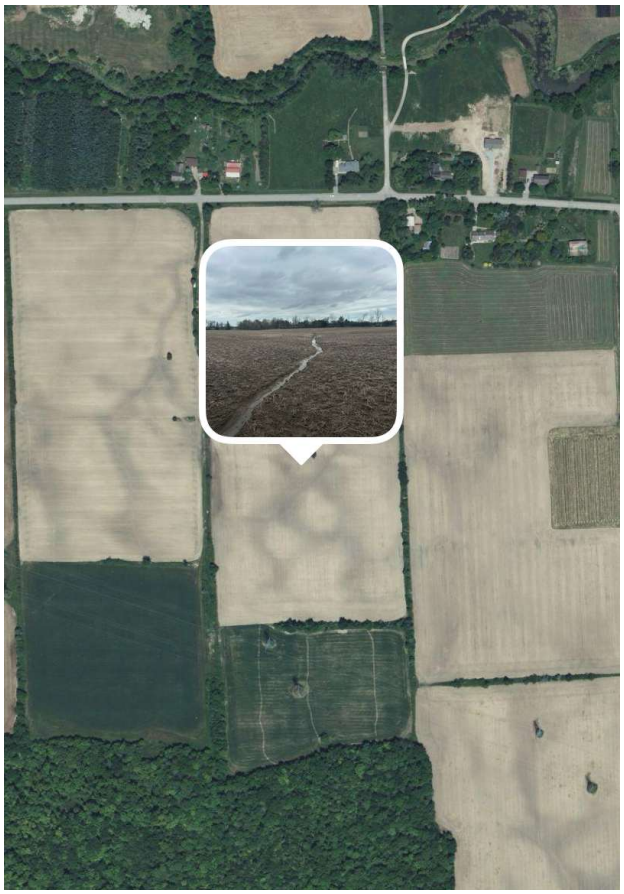


Northeast View of Study Area

Photo 2 and 3: Central Portion of Study Area: Drainage Features (April 19, 2024)

Coordinates: 43.10120°N, 79.47375°W

Photo Location



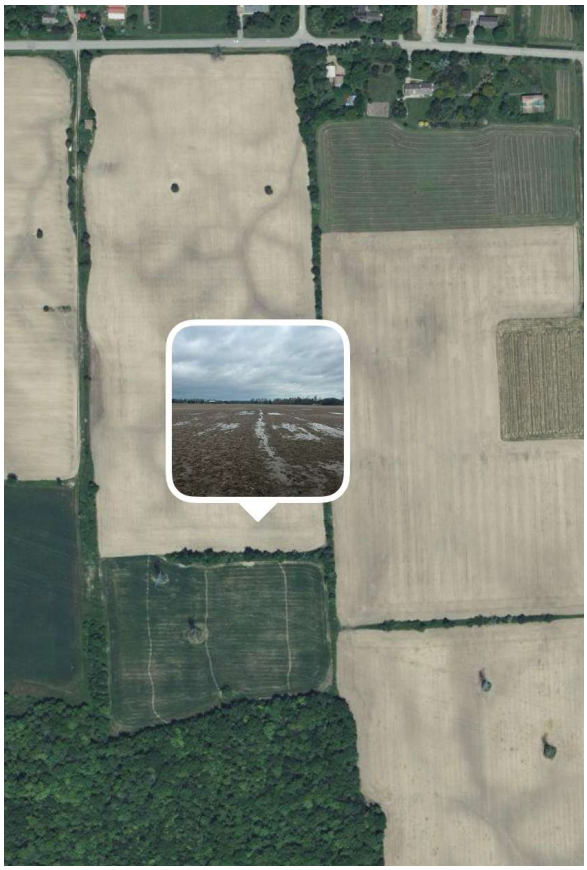
Northwest View of Study Area

Northeast View of Study Area

Photo 4: Southeastern Portion of Study Area (April 19, 2024)

Coordinates: 43.09993°N, 79.47309°W

Photo Location

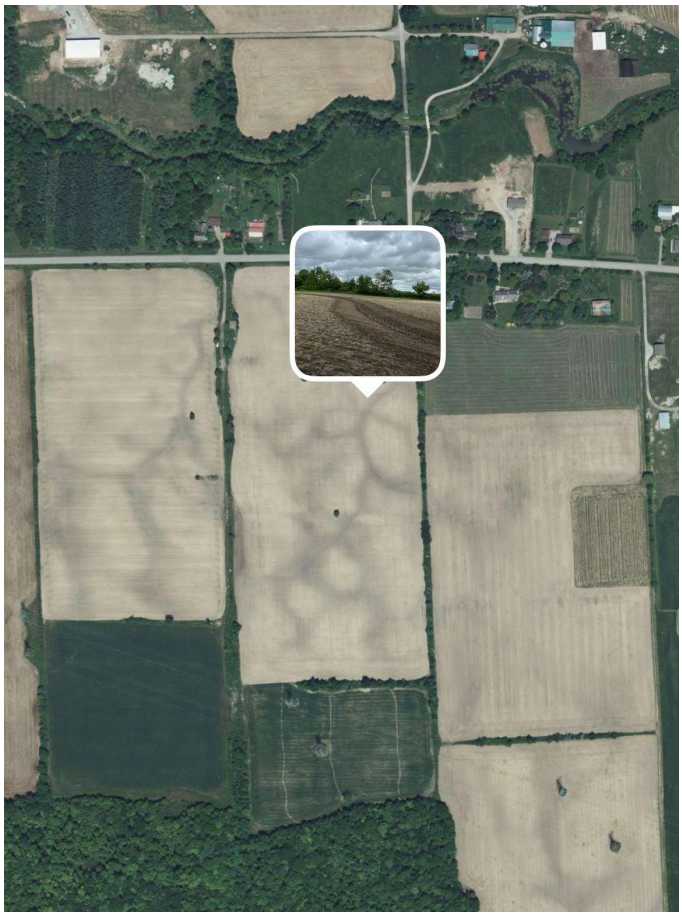


North View of Study Area

Photo 5 and 6: Northeastern Portion of Study Area: Drainage Features (May 28, 2024)

Coordinates: 43.10246°N, 79.47316°W

Photo Location



Southern View of Study Area Toward Hedgerow and Project Site

Eastern View of Study Area

Appendix B

SUMMARY OF SPECIES AT RISK AND SPECIES OF CONSERVATION CONCERN RECORDS

Scientific Name	Common Name	S-Rank	SARO Status	COSEWIC
Mammals				
Myotis lucifugus	Little Brown Myotis	S3	END	END
Myotis septentrionalis	Northern Myotis	S2	END	END
Perimyotis subflavus	Tri-colored Bat	S1	END	END
Myotis leibii	Eastern Small-footed Myotis	S2	END	SC
Birds				
Melanerpes erythrocephalus	Red-headed Woodpecker	S4	END	SC
Contopus virens	Eastern Wood-Pewee	S4	SC	SC
Trees				
Juglans cinerea	Butternut	S3	END	END
Fraxinus nigra	Black Ash	S4	END	THR

Notes:

Provincial Rank (S-Rank)
S1: Critically Imperilled
S2: Imperilled
S3: Vulnerable
S4: Apparently Secure
SH: Historic

SARO and COSEWIC Status
END: Endangered
THR: Threatened
SC: Special Concern
DD: Data Deficient

Appendix C

RECORD OF ENGAGEMENT