Niagara Region Environmental Impact Study

GUIDELINES

Niagara Region // March, 2024

Niagara Official Plan Environmental Impact Study Guidelines

The Niagara Official Plan (N.O.P.) is the Regional Municipality of Niagara's long-term land use planning framework for managing growth coming to Niagara. The N.O.P. includes land use policies for Niagara's natural environment system, agricultural system, climate change, resource needs, growth allocations, housing, transportation, urban design and employment lands, to list a few of the policy areas that guide land use planning and development.

This Environmental Impact Study (E.I.S.) Guideline is a guidance document to help inform, clarify and support the implementation of the N.O.P. policies. These Guidelines do not introduce additional policy requirements. In the even that there is a conflict between the E.I.S. Guidelines and the N.O.P., the N.O.P. shall prevail.

The overall purpose of this E.I.S. Guidelines is to facilitate the consistent application of regional and local environmental impact study related policy, which will contribute to a balanced approach to development and conservation across the Region.

These Guidelines identify E.I.S. requirements under the Greenbelt Plan, Provincial Policy Statement, Regional Official Plan, local Official Plans and By-laws and support the objectives of the Niagara Escarpment Plan and Niagara Peninsula Conservation Authority Policies and Regulations. These Guidelines can facilitate the review of E.I.S.'s by Niagara Region, Local Area Municipalities and the Conservation Authority.

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Introduction

These guidelines present best practices for the preparation of Environmental Impact Studies (E.I.S.) in Niagara Region. They provide a clear outline of what is expected through the E.I.S. process and requirements for approach for and content of an E.I.S. These guidelines will facilitate the consistent application of regional and local environmental impact study related policy, which will contribute to a balanced approach to development and conservation across the Region.

This E.I.S. Guideline intends to:

- Establish a standardized set of study guidelines specific to natural heritage features and key hydrologic features;
- Establish a standardized set of study guidelines specific to natural heritage features and key hydrologic features;
- Avoid conflicts between proposed development and natural heritage features and / or key hydrologic features through constraints analysis prior to establishing development layout;
- Provide a planning tool that can be used by the applicant to address environmental consideration throughout the development process;
- Ensure high quality, consistent studies and reporting methods; and
- Facilitate and expedite the environmental review process by Local Area Municipalities (or their designate) and / or the N.P.C.A.

How to Use the Guideline

The E.I.S. Guideline provides the following:

- **direction** to landowners considering development or site alteration in or adjacent to the Niagara Natural Environment System (N.E.S.);
- **direction** to E.I.S. Professionals to determine when an E.I.S. is required and the course of action to complete an E.I.S.;
- **direction** to agencies engaged in the E.I.S. process through a summary of the roles and responsibilities; and
- **tools & templates** to improving the process and consider options for E.I.S. avoidance or waiving, where appropriate.

The Guideline is divided into the following sections, which are briefly outlined below as a quick reference guide when using this document.

1. **Section 1 | E.I.S. Process:** This section provides an overview of the entire E.I.S. process (i.e., triggers to submission) and outlines the steps and tools used with each.

2. **Section 2 | E.I.S. Content:** This section provides direction on the technical content and approach to completing an E.I.S., including minimum submission requirements for a complete E.I.S.

Many technical terms are used through the guideline; Appendix 1 provides definitions for many of the commonly used terms. Where these terms are also in the N.O.P., the definitions are to be consistent; in the event of a discrepancy, it is the definition of the N.O.P. that shall prevail.

1.0 E.I.S Process

This section provides a step-by-step overview of the E.I.S. process to provide clarity and consistency for individuals participating in the E.I.S. process as a(n) Applicant, planner, (facilitating an E.I.S. process for a client, or as a reviewer), E.I.S. Professional, Conservation Authority representative.

The E.I.S. process consists of 5 major steps:

- **Step 1** | Project Screening
- **Step 2** | Scoping the E.I.S.
- **Step 3** | Information Gathering & Draft E.I.S. Preparation
- **Step 4** | Draft[1] E.I.S. Submission
- **Step 5** | Final[2] E.I.S. & Data Package Submission

The E.I.S. process is also represented in several figures, including:

- **Figure 1** E.I.S. Process and Schedule in Relation to Planning Act and Non-Planning Act Applications;
- **Figure 2** E.I.S. Process: Key Elements and Outcomes for the Five Major Steps
- **Appendix 2** E.I.S. Process Overview flow chart with decision points and outcomes.

[1] 'Draft' refers to E.I.S. submitted for review, but not yet accepted by the Approval Authority.
[2] 'Final' refers to E.I.S. that have been accepted by the Approval Authority.

As a means to make the E.I.S. process efficient for both the Applicant and the Approval Authority, several tools have been created, including:

- E.I.S. Project Screening Tool **(Appendix 3)**
- E.I.S. Waiving Assessment Tool **(Appendix 4)**
- E.I.S. Terms of Reference Checklist Tool **(Appendix 5)**
- E.I.S. Comment and Response Template Tool **(Appendix 6)**

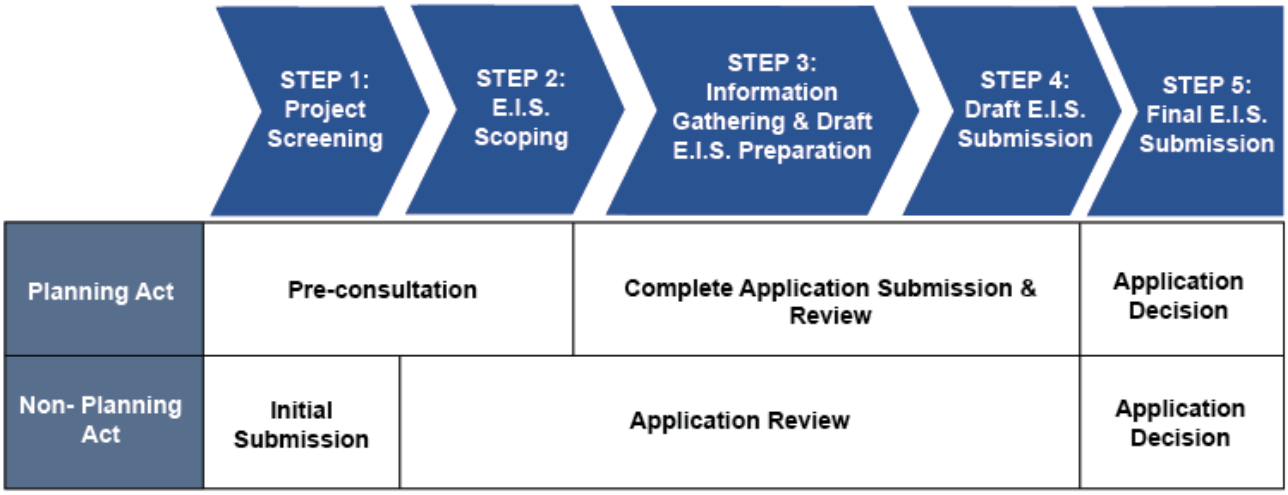

Figure 1. E.I.S. Process and Schedule in Relation to Planning Act and Non-Planning Act Applications

1.1 Roles & Responsibilities

The Approval Authority and other approval or commenting agencies have a responsibility to coordinate the requirements set out for the study. Similarly, each have specific roles / jurisdictions within the technical review and approval of an E.I.S. A general summary of roles in the E.I.S. process is provided below (Table 1.1).

Table 1.1. Roles and Responsibilities in the E.I.S. Process

Organization	Roles in the E.I.S. Process
The Approval Authority	The Approval Authority is the agency / municipality to whom a development or site alteration application which triggered the E.I.S. requirement is to be submitted for approval. Generally, this will be the local area municipality or Niagara Escarpment Commission (N.E.C.); in the case of a Regional Official Plan Amendment the Approval Authority is the Region. The Approval Authority (or its delegate) coordinates the One-Study process, engaging with other agencies, as applicable, and acts as the primary liaison with the Applicant through the E.I.S. Process (Section 1.0). Where appropriate, the Approval Authority may engage external agencies or consultants to support certain coordination and technical review roles and responsibilities relating to the E.I.S. process (e.g., Niagara Region, technical consultant(s) on retainer).
Local Area Municipality	Within settlement areas, the Local Area Municipality (L.A.M.) is responsible to ensure that: • An E.I.S. is prepared in accordance with an approved terms of reference (T.O.R.) and the policies of the Niagara Official Plan (N.O.P.) • The conclusions of the E.I.S. are considered through the development approval process and appropriate conditions are established to implement the recommendations of the study and/or evaluation. In carrying out this responsibility, the L.A.M. shall work in consultation with the Region and Conservation Authority. They are also responsible for liaising with the Applicant. Technical review requirements relating to pre-consultation, project screening, T.O.R., E.I.S. waiving, the protection of the N.E.S. through

Organization	Roles in the E.I.S. Process
	natural feature boundary delineation, review of inventory work, review of E.I.S', mitigation strategies, etc. may be delegated to others (e.g., to the Region of Niagara (e.g., through a memorandum of understanding) or an external consultant).
Niagara Region	Outside of settlement areas, regardless of who is the Approval Authority for an application, it is the responsibility of the Region to ensure that: • An E.I.S. is prepared in accordance with an approved terms of reference (T.O.R.) and the policies of the Niagara Official Plan (N.O.P.) • The conclusions of the E.I.S. are considered through the development approval process and appropriate conditions are established to implement the recommendations of the study and/or evaluation. In carrying out this responsibility, the Region shall work in consultation with the L.A.M. and Conservation Authority. For Regional Official Plan Amendments, the Region is the Approval Authority. The Region will also act as a commenting agency on Regional policy matters to ensure that Regional interests related to the identification and protection of the N.E.S. are addressed in accordance with applicable policy through the One-Study process. Where refinements to the boundaries of the N.E.S. are proposed through an E.I.S. they must be accepted by the Region. However, some decisions with respect to delineation of specific N.E.S. components, such as wetlands, watercourses, fish habitat, or endangered and threatened species habitat, will be made in consultation the responsible regulatory authority (e.g., C.A., M.E.C.P.), where appropriate.
Conservation Authority (C.A.)	Under Section 28 of the Conservation Authorities Act (C.A. Act), C.A.s regulate development or activities in or adjacent to river or stream valleys, shorelines, watercourses, hazardous lands (e.g., floodplains, steep slopes, karst), wetlands and other areas around wetlands.

Organization	Roles in the E.I.S. Process
	Where development, as defined under the C.A. Act, is proposed within a C.A. regulated area, and no municipal or N.E.C. approvals relating to development and site alteration are required under the Planning Act or Niagara Escarpment Planning and Development Control Act, the works would require C.A. approvals. C.A. regulatory policies identify specific study requirements for permit submissions. Where development or site alteration is located within a C.A. regulated area and requires municipal or N.E.C. approvals, the C.A. will administer their regulatory requirements through the E.I.S. approval process. The Approval Authority will coordinate with the C.A. to integrate requirements under their regulations, as appropriate to support the One-Study approach.
Niagara Escarpment Commission (N.E.C.)	The N.E.C. administers the Niagara Escarpment Plan (N.E.P. 2021). Projects within the N.E.P. area may require a Development Permit from the N.E.C. The N.E.P. contains policies that may trigger the requirement for a Natural Heritage Evaluation (N.H.E.) if deemed necessary by staff. Where an E.I.S. is also triggered under municipal policies, staff from the municipality and N.E.C. will work together to coordinate this process. The N.E.C. may act as a commenting agency for E.I.S.'s if / as appropriate. The N.E.C. may suggest additional study requirements relating to their N.H.E. for inclusion in an E.I.S. Terms of Reference (T.O.R.) in keeping with the One Study approach.
Ministry of Environment, Conservation and Parks (M.E.C.P.)	Where potential for the habitat of endangered species and threatened species is identified, M.E.C.P. shall be contacted by the applicant for technical advice and to delineate and confirm the presence of habitat. It is the responsibility of the Applicant to work directly with M.E.C.P. to determine that the E.S.A. has been, or will be, complied with as a condition of any permit received from the M.E.C.P. Assessment for and potential impacts to Species at Risk are to be considered through the E.I.S. to ensure a holistic / complete assessment.

Organization	Roles in the E.I.S. Process
	Note: The M.E.C.P. is the regulatory agency for the provincial Endangered Species Act[3] (E.S.A. 2007) at the time of preparation of this guideline. In the event responsibility shifts to a different ministry, the above shall apply to the Provincial Ministry with jurisdiction.
Ministry of Natural Resources and Forestry (M.N.R.F.)	M.N.R.F. has prepared guidance documents applicable to many projects requiring an E.I.S. (e.g., Natural Heritage Resource Manual, Significant Wildlife Habitat Technical Guide and Ecoregion Criteria Schedules, Natural Environment Report Standards for Aggregate License Applications). The M.N.R.F. may be engaged as a commenting agency (e.g., advisory role) for implementation of guidance documents and may provide feedback to be considered by an Applicant in relation to the E.I.S. submission and approval process under the One Study Approach (e.g., fisheries timing windows). The M.N.R.F. may act as a commenting agency with respect to delineation of some natural heritage features and areas, as appropriate (e.g., Areas of Natural and Scientific Interest, Significant Wildlife Habitat).
Department of Fisheries and Oceans (D.F.O.)	The federal D.F.O. administers the Fisheries Act. Lands where fish habitat occurs must have regard for the Act. Consultation with and / or authorization from D.F.O. may be required based on proposed works.

[3] M.E.C.P. regulates other Acts and policies that may apply to *development* (e.g., water quality requirements for stormwater management). Only those that pertain specifically to natural heritage are provided here.

1.2 Step 1 | Project Screening

Projects may not be required to proceed past Step 1: Project Screening. It is through this initial step that E.I.S. triggers are assessed, and project exemptions or waiving are considered. All projects should proceed through initial screening using the E.I.S. Project Screening Tool (Appendix 3) to ensure that the potential for natural environment impacts is considered.

Project screening should occur through:

- **Pre-consultation – all Planning Act applications** should be screened through pre-consultation process(es) to ensure that comprehensive study requirements are identified early.

- **At the time of application** – this should only apply where **no formal pre-consultation is required** (i.e., non-Planning Act application(s)). Site alteration projects and development permit applications under the Niagara Escarpment Plan are examples of application processes which do not require mandatory pre-consultation.

If a Planning Act application is received without having proceeded through pre-consultation, the requirement for an E.I.S., and undertaking this and / or other necessary studies, should still be identified and be required; where missing, application(s) should be deemed incomplete.

Natural Heritage Evaluation (N.H.E.) vs. Environmental Impact Study (E.I.S.)

These two terms are often used interchangeably. The intent of both reports is to demonstrate that the proposed development or site alteration will protect the natural heritage features or the related functions of that feature.

- The Niagara Escarpment Plan (N.E.P.) uses the term N.H.E., which may be triggered for projects within the N.E.P. area, if deemed necessary by the Niagara Escarpment Commission (N.E.C.).

- The Niagara Official Plan (N.O.P.) uses the term E.I.S., which states the study is to be prepared in accordance with this Guideline.

- It is possible for both an E.I.S. and N.H.E. to be triggered. Staff from the municipality and N.E.C. will work together to coordinate the process. The N.E.C. may act as a commenting agency for E.I.S.s if / as appropriate. The N.E.C. may suggest additional study requirements relating to their N.H.E. for inclusion in an E.I.S. Terms of Reference (T.O.R.) in keeping with the One Study approach.

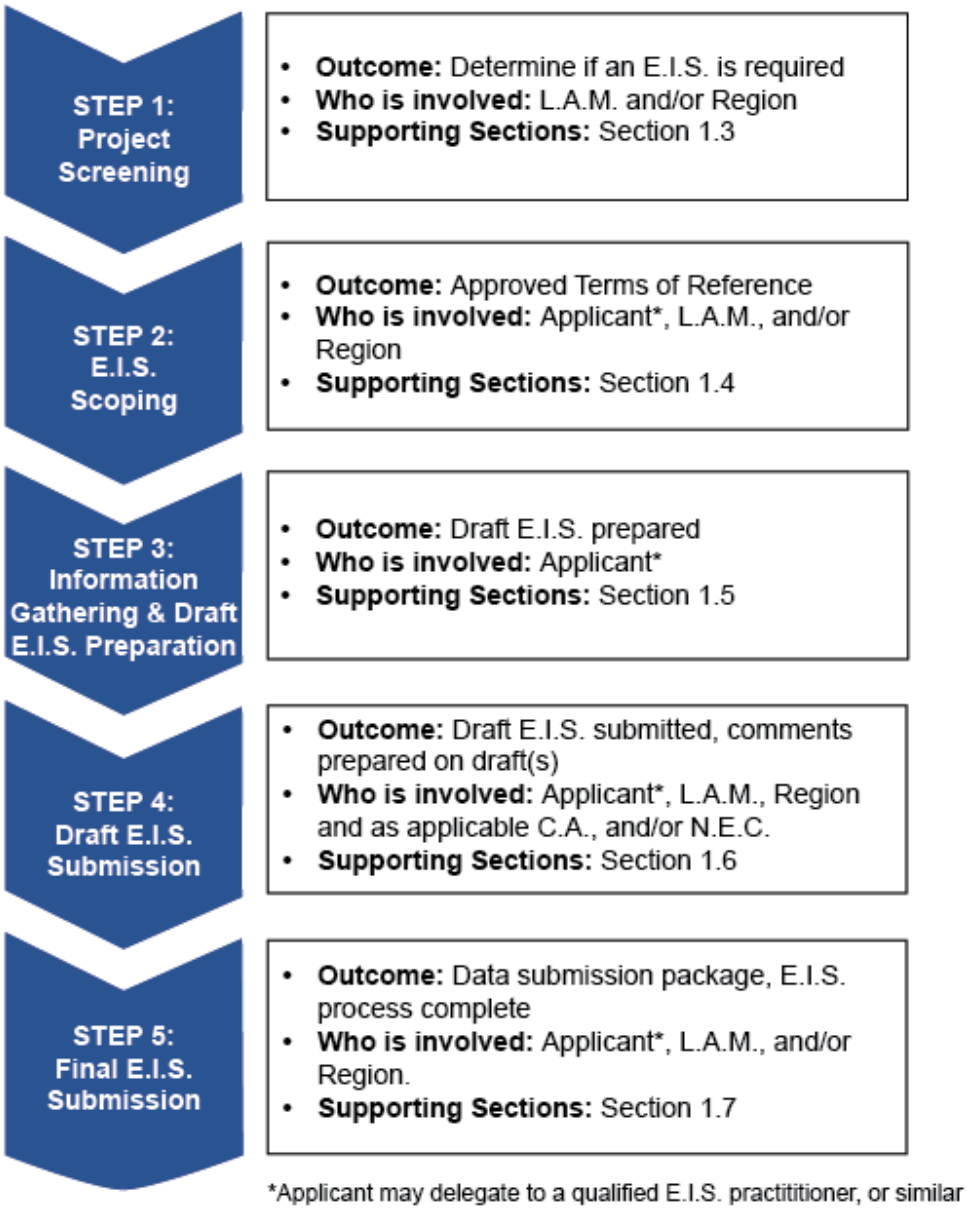

Figure 2. E.I.S. Process: Key Elements and Outcomes for the Five Major Steps

Project screening may require input from multiple agencies where they have natural heritage management and/or protection policies that apply to the project area or where an agency has been designated to provide technical review (e.g., on behalf of the Approval Authority). The Approval Authority (or their designate) shall coordinate input, as appropriate, to ensure all relevant policies and requirements are met and to avoid duplication or conflict. Similarly, where a development proposal involves two or more applications, only one E.I.S. will be required. For example, a proposed subdivision requiring a zoning by-law amendment and subdivision approval will require only one E.I.S. to be prepared which addresses all planning requirements.

Proceeding through the E.I.S. process does not indicate, imply, or guarantee that a project will be supported and / or approved. Projects with high risk of not being supported should be identified through Project Screening (Step 1) and discussed with the Applicant.

1.2.1 E.I.S. Triggers, Prohibitions and Exemptions

The Approval Authority screens the project against applicable natural environment policies to determine if an E.I.S. is triggered and, if triggered, whether the project is exempt from the E.I.S. requirement, or if the proposed activity (development or site alteration) is prohibited under Natural Environment policies.

Exemptions should be confirmed with all applicable planning agencies; this may include one or more of the following: Local Area Municipality, Niagara Region, the N.E.C., and Conservation Authority.

There may be situations where a proposed development or site alteration is prohibited under Natural Environment policies; these policy-conflicts are to be identified at the screening stage to ensure Applicants are notified early and potential to amend a proposed activity may be considered.

It is the responsibility of the Approval Authority to ensure all applicable planning agencies are consulted, as appropriate.

1.2.1.1 Triggers for the Environmental Impact Study Process

The E.I.S. process is triggered when development or site alteration is proposed wholly or partially within, or on adjacent lands (Table 2.1. provides summary of adjacent lands. Triggers are illustrated in Figure 3) to:

- Key hydrological feature(s) outside of settlement areas[1]
- Features and Components of the Region's Natural Environment System[6]
- Local Area Municipality N.H.S.', W.R.S' and/or N.E.S.' as identified / appropriate based on local area municipal policies.

Table 2.1. Adjacent Lands to Components of the N.E.S.

Feature / Component of the N.E.S.	Adjacent Lands – Provincial (m)	Adjacent Lands – Niagara N.O.P. (m)
Provincially Significant Wetland	120	120
Significant Coastal Wetland	120	120
Significant Woodland	120	120
Other Woodland	n/a	50
Significant Valleyland	120	50
Significant Wildlife Habitat	120	50
Habitat for END/THR Species	120	50
Life Science A.N.S.I.	120	50

Not all features of the N.E.S. are mapped through Official Plan schedules (e.g., s. 3.1.3 of the Niagara Official Plan) or through other sources. Screening for triggers is to be done using several tools / resources including, but not limited to:

- Regional Official Plan schedules and any associated online mapping
- Local Official Plan schedules and any associated online mapping

[6] S. 3.1.2, Schedule L of the N.O.P., s. 3.1.1.2, S 3.1.9

- Watershed Plan(s) and/or Subwatershed Plans
- Ortho / aerial / satellite imagery of the project area (to screen for unmapped and potential features of the N.E.S. or features potentially triggering the E.I.S. process)
- Conservation Authority mapping, as available
- Land Information Ontario mapping, as available

Through review of these materials, consideration is to be given to potential features and areas that require assessment through an E.I.S., including a visual review of the Subject Lands or Study Area using available imagery (e.g., satellite imagery).

1.2.1.2 Prohibitions

Development and site alteration are prohibited from occurring in certain components of the N.E.S. Some exceptions exist for infrastructure and some prescribed or permitted activities. Planning documents applicable to the project area will contain policies and should be considered when screening an application (e.g., Growth Plan, N.E.P., Official Plan(s)).

Generally, development or site alteration shall not be permitted in:

- Key natural heritage feature(s) of the Greenbelt Area.
- Key hydrologic features outside of settlement areas[5]
- Vegetation Protection Zones within the Greenbelt Area or key hydrologic features outside of settlement areas.[8]
- Minimum buffers to natural heritage features and areas outside of settlement areas9
- Provincially Significant Wetlands
- Significant Coastal Wetlands
- Fish Habitat[10], except in accordance with Provincial and Federal requirements
- Habitat for Endangered and Threatened Species[11], except in accordance with Provincial and Federal requirements
- Lands Outside of the N.E.P.A.[12]
- Significant Woodlands (where associated Niagara Region policies apply)

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[8] Exceptions are provided in N.O.P. s. 3.1.5.7.3
[9] Exceptions are provided in N.O.P. s. 3.1.9.9.3. Minimum buffers are prescribed in N.O.P. Table 3-2
[10] Exception provided in N.O.P. s. 3.1.12.1
[11] Exception provided in N.O.P. s. 3.1.13.1
[12] Permitted uses: s. 3.1.9.5.3

Exceptions to these prohibitions are provided for in the policies and listed in the footnotes to this section. If a conflict occurs between policy documents, it is the most restrictive that shall apply. Where a proposed activity is prohibited in policy, there may be opportunity to modify a proposal to address the prohibition (i.e., through modifying the proposal to avoid an area, alter the activity, etc.). Applicants may choose to re-submit with a revised plan which addresses the prohibition, where appropriate.

1.2.1.3 Exemptions

There are some limited circumstances where a project or activity is exempt from the requirement to complete an E.I.S. Generally, this will occur where:

- The activity has been authorized under an environmental assessment process, including a Class Environmental Assessment, carried out in accordance with provincial or federal legislation.
- The only natural heritage feature is habitat for Endangered or Threatened species, and the activity has been approved / authorized through provincial and/or federal legislation.
- The only natural heritage feature is fish habitat, and the activity has been approved / authorized through provincial and/or federal legislation.
- A study that meets or exceeds the requirements of an E.I.S. has been completed within 5 years of the proposed activity occurring or within the timeframe of the project approval set out in that study (e.g., comprehensive subwatershed study).
- The activity is associated with the continuation of existing agricultural uses and some agricultural buildings and diversified uses where certain conditions are met.

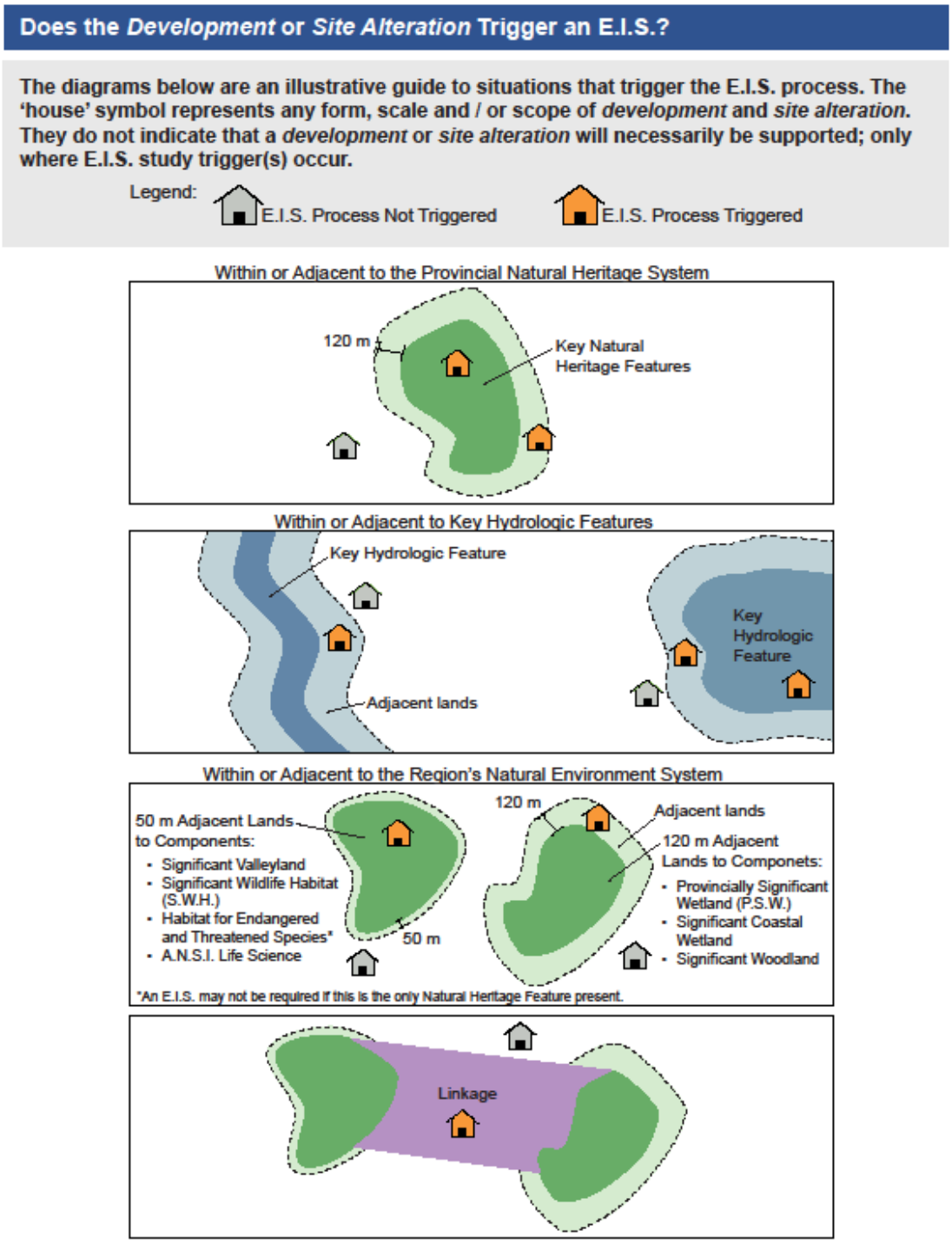


Figure 2. E.I.S. Process: Key Elements and Outcomes for the Five Major Steps

1.2.2 Avoiding or Waiving the E.I.S. Requirement

If an E.I.S. is triggered, the proposed activity is not prohibited, and the project is not exempt from requirement for an E.I.S. then opportunities to avoid or waive the requirement for a standard E.I.S. shall be considered.

An E.I.S. **may be avoided** if an Applicant modifies their proposal to avoid triggers for the E.I.S. process (per Section1.3.1).

The need for a standard E.I.S. may be waived if it is determined that there is no, or a very low risk of impacts from a proposed activity and that they can be identified and addressed through implementing a combination of standard best management practices, mitigation measures and conditions of approval without the need to undertake an E.I.S. Not all projects are considered eligible for waiving.

A development or site alteration must conform to all applicable policies of provincial, regional, and local planning documents and any applicable legislation and regulations. Avoiding or waiving the requirement for a standard E.I.S. (per above) does not remove or replace the requirement for policy conformity, and other permits or approvals as may be applicable to the proposed development or site alteration (e.g., Conservation Authority permit).

Should the project not be exempt, and avoidance or waiving is not possible, the requirement for a standard E.I.S. is confirmed; these projects then proceed to Step 2 of the E.I.S. process.

1.2.2.1 Waiving

Determination of whether a project can have the requirement for a standard E.I.S. waived is made using the Waiving Assessment Tool (Appendix 4). Waiving assessments may be completed by the Approval Authority (or their designate), or a qualified individual on behalf of an Applicant. Where a Waiving Assessment is completed by a representative for the Applicant, it must be completed to the satisfaction of the Approval Authority. Waiving Assessment(s) may be subject to revision or may not be accepted by the Approval Authority. Not all projects are eligible for consideration of waiving the requirement for a standard E.I.S.

The Waiving Assessment Tool (Appendix 4) is, in effect, a streamlined E.I.S. It is a standardized, very scoped review of features and functions, proposed development or site alteration, potential impacts, and mitigation measures to ensure applicable policies are met. Where there is confidence that the project meets policy requirements for the natural features and areas within the Subject Lands or Study Area and that the proposed project presents no, or

very low risk of impact, it may have the requirement for a more detailed, standard E.I.S. waived. Conditions may be applied to waiving; these conditions must be implemented for the waiving to be approved / valid. Conditions may include specific provisions to avoid or minimize environmental impacts, such as modifications to the project (e.g., site plan or design) and / or mitigation measures (e.g., tree protection fencing, buffers, etc.).

Where, through the assessment tool, the risks not confirmed to be low or no-risk, or additional information is required to inform the assessment, the requirement for a standard E.I.S. is not waived.
If a standard E.I.S. has been waived and changes are then made to the proposal, the project must be re-screened to ensure that it continues to meet the waiving requirements for a standard E.I.S.
Changes which would require re-review include, but are not limited to, one or more of the following:

- Footprint of building(s) including main and accessory buildings;
- Drainage including the direction water moves / drains, changes an outlet, increases, or decreases drainage, etc.;
- Limits of impact / development footprint (e.g., any changes that will increase the area of disturbance, removal of vegetation, etc.); or
- Affect the ability for waiving conditions to be implemented.

Changes to a site plan / project / activity may result in a project no longer being suitable for waiving and thus require a standard E.I.S.

Streamlined vs. Standard E.I.S.

Two forms of E.I.S.' are used in Niagara. A standard E.I.S. is a typical study scoped to the conditions of a site and scale of development and completed by an E.I.S. practitioner (E.I.S. process described herein). A streamlined E.I.S. is completed through a waiving assessment. The streamlined E.I.S. is only applied to small scale projects where the risk to the N.E.S. is considered very low.

1.3 Step 2 | Scoping the E.I.S.

The need for a standard E.I.S. is confirmed through pre-consultation with the Approval Authority after screening through exemptions, and opportunities to avoid or waive the requirement for a standard E.I.S. (Step 1 | Project Screening).

Scoping of the E.I.S. ensures that studies focus on works that will inform key issues relevant to the land use planning decision-making process, thus making efficient use of time and resources. The scope of an E.I.S. will be adjusted based on consideration of the following:

- Pertinent legislative, regulatory and policy requirements;
- Existing information and relevant previous studies and plans;
- The scale and nature of the development proposal;
- The significance and character of the features or components of the N.E.S.;
- Potential linkages among surface water features, groundwater features, hydrologic functions and natural heritage features and ecological functions;
- The specific attributes and rationale for the type of natural heritage designation;
- The setting and the site's relationship to the surrounding landscape;
- The availability of previous plans and technical studies providing planning guidelines or technical information needed to assess the proposal (e.g., watershed studies, secondary plans, inventories and other planning studies);
- The need for site specific natural heritage and hydrological information; and
- Reliance on other studies to be submitted with the application (e.g., stormwater management, noise, etc.)

The scope of an E.I.S. is confirmed through the preparation of a Terms of Reference (T.O.R.).

1.3.1 Terms of Reference

A T.O.R. is used to establish the field investigations required to inform an assessment and analysis of existing conditions, site sensitivities, features and functions (e.g., for significance, linkages), inform preparation of an impact assessment and support identification of appropriate mitigation measures for the proposed project / activity.

A Terms of Reference (T.O.R.) for an E.I.S. in Niagara is prepared using the T.O.R. Checklist (Appendix 5). The form provides a streamlined, standardized approach to scoping and the preparation of T.O.R.

Applicants (or a consultant on their behalf) fill out the T.O.R. Checklist and submit it for review and approval by the Approval Authority. The Approval Authority will review the T.O.R. with other involved agencies, as appropriate, and identify any modifications required. Iterative submission(s) may be necessary to achieve a T.O.R. that is acceptable to all parties. Once approved, the completed form is the accepted T.O.R. for the E.I.S. A site visit may be required to facilitate scoping of the E.I.S.

Preparation of the T.O.R. Checklist requires collection and detailed review of available background and secondary source information to inform the scope of the E.I.S. Preliminary Species at Risk and Significant Wildlife Habitat Screening assessments are to be appended to the T.O.R. Checklist.

During the completion of the E.I.S., features and / or functions unanticipated during the scoping exercise may be identified. If this occurs, the Applicant shall contact the Approval Authority and review agency as soon as possible to discuss policy implications and determine if additional studies may be required.

1.4 Step 3 | Information Gathering & E.I.S. Preparation

Through this step, qualified E.I.S. Professionals execute the approved T.O.R. This includes:

- Additional collection and review of background and secondary source information sources (if / as available)
- Undertaking the field program (per the T.O.R.) to establish existing conditions
- Identification and evaluation of significance for features and functions (e.g., S.W.H., significant woodlands, etc.)
- Review and integration of information from other studies (e.g., stormwater management plan, hydrogeological, site plan, etc.) to inform an assessment of potential impacts associated with the proposed development or site alteration
- Identification of and providing recommendations for appropriate avoidance and mitigation measures to meet policy requirements (e.g., no negative impact) for the N.E.S.
- Identify and recommend opportunities for enhancement or restoration to improve the N.E.S.

Detailed guidance for the preparation of an E.I.S. is provided Section 2.0 E.I.S. Content of this Guideline.

1.5 Step 4 | Draft E.I.S. Submission

The Approval Authority will confirm that the E.I.S. meets submission requirements and has been prepared in accordance with an approved T.O.R. If the submitted draft E.I.S. does not meet the submission standards or was not prepared in accordance with the approved T.O.R., the Approval Authority may return the submission to the Applicant.

The Approval Authority will coordinate review of, and comments on, the E.I.S. and will liaise with the Applicant. Commenting agencies, in conjunction with the Approval Authority, if applicable, will consider how the E.I.S. demonstrates compliance with applicable Federal, Provincial and Municipal policy and legislation related to environmental protection and/or management.

Draft and Final E.I.S. – Terminology

'Draft' refers to E.I.S. submitted for review, but not yet accepted by the Approval Authority. 'Final' refers to E.I.S. that have been accepted by the Approval Authority.

Review of the E.I.S. is often an iterative process. Based on the nature and extent of comments, a re-submission(s) of the E.I.S., addenda, or alterations to the site plan may be required to address key issues and comments identified by the approval and commenting agencies (as appropriate). Providing a complete and high-quality draft E.I.S. will assist in reducing the total review process timeline. The Applicant may elect to request a meeting with the Approval Authority to discuss preliminary findings and proposed mitigation prior to submitting an E.I.S. to reduce potential comments or issues identified through review.

1.5.1 Comment and Response Matrix Template

A Comment and Response Matrix is provided in **Appendix 6.** Approval, review agencies and Applicants are encouraged to use this, or a similar comment matrix, to manage the review process. Applicants are required to provide a cover letter documenting how agency comments on the E.I.S. have been addressed. The Comment and Response Matrix, or a comparable comment response matrix, is to be used to track comment responses. The use of Track Changes, a built-in feature in Microsoft Word, is also encouraged for ease of review for re-submissions.

1.6 Step 5 | Final E.I.S. & Data Package Submission

The E.I.S. is considered final when all substantive comments have been addressed to the satisfaction of the appropriate approval authority. The Approval Authority, in consultation with the other relevant agencies, will provide approval of the E.I.S. to the Applicant.

The Approval Authority will consider the final E.I.S. in preparing comments on the development or site alteration proposal. Applicants should note that while an approved E.I.S. is a pre-condition for development or site alteration approval, an approved E.I.S. does not secure or guarantee the approval of a development or site alteration application. It should also be noted that entering the E.I.S. process does not imply or guarantee that an E.I.S. will be approved, or a project supported.

The Applicant is required to submit a data package upon approval of the E.I.S., which includes:

- The approved E.I.S. report with any associated addenda;
- A finalized development or site alteration proposal (if required) and/or table that identifies how the final E.I.S. recommendations will be implemented;
- G.I.S. data package (ESRI compatible format);
- Survey results tables (.xls or compatible format); and
- Survey Datasheets.

The Final E.I.S. Submission Package Checklist (Appendix 7) outlines the requirements of the final E.I.S. and data package to be submitted by Applicants. A complete data package must be provided for the final submission of the E.I.S. to be considered complete.

2.0 E.I.S. Content

The following sections outline the structure and content of a typical E.I.S. This outline shall be interpreted as the minimum standard for content in an E.I.S. The actual fieldwork, supporting studies and content required for an E.I.S. will be determined on a case-by-case basis through scoping and confirmed through the approval of the T.O.R. for the E.I.S.

2.1 Introduction

The introduction to the E.I.S. shall:

a) Briefly describe the site location, existing land uses on the site and surrounding area;
b) Briefly describe the proposed development or site alteration;
c) Define and differentiate the selected terminology used to describe the Study Area, the Subject Lands, the project footprint, etc. The following terminology and definitions are often used:
    a. Subject Lands – the land area being considered for development or site alteration and subject to approvals;
    b. Study Area – the land area which must be considered to inform the assessment of features, functions and impacts;
d) Identify why an E.I.S. is required for the proposed development or site alteration (i.e., the Regional and/or Local Municipality policy requirement, N.E.P.A. requirement (where applicable), Greenbelt Plan requirement (where applicable), N.P.C.A. regulated areas requirement (where applicable) and the portion of the N.E.S. triggering the E.I.S.); and
e) Describe the scoped issues and tasks required for the E.I.S. based on the approved T.O.R. and if applicable, a description of any previous pre-consultation meetings, agency meetings or site visits (the approved T.O.R. shall be included as an appendix to the E.I.S.).

2.2 Planning Context

Briefly describe the natural heritage planning context for the proposed project, if applicable:

a) Clearly identify applicable and current Federal and Provincial legislations, regulations, plans and policies which apply to the Study Area, such as, but not limited to:
    - Provincial Planning Statement (2024);

- Niagara Escarpment Plan (2021);
- Greenbelt Plan (2017) and Technical Paper (2012);
- Regional Official Plan policies;
- Official Plan policies of local area municipalities;
- Conservation authority regulations and policies;
- Provincial Endangered Species Act (2007) and associated regulations recovery strategies and government response statements;
- Federal Fisheries Act (1985) and associated regulations;
- Federal Migratory Birds Convention Act (1994) and associated regulations; and
- Federal Species at Risk Act (2002) and associated regulations and recovery documents.

b) Identify the current land use designation(s) and zoning;
c) Identify the proposed land use designation and zoning to support proposed development or site alteration.
d) List consultation undertaken as part of the project:
    - Agencies (e.g., M.E.C.P., M.N.R.F., D.F.O., Conservation authority); and
    - Public or stakeholder groups (if any) (record of consultation shall be included as an appendix to the E.I.S.).

2.3 Methods

Describe the process through which information about the existing conditions of the Subject Lands and Study Area was obtained. This shall include:

a) All relevant background and secondary sources used to prepare the E.I.S. For example:
    - Review and include all relevant natural heritage secondary sources (e.g., species atlases, Land Information Ontario database, citizen science databases, provincial species at risk screening) (see Appendix 8 l List of Background Sources, for a list of suggested background sources);
    - List relevant existing studies, plans, etc.; and
    - Identify data gaps.
b) All relevant field survey investigations, protocols and results in accordance with an approved T.O.R. (Appendix 5). For example:
    - Confirm survey protocol methods approved through the T.O.R. were used to complete E.I.S. field investigations.

- If methods other than those approved through the T.O.R. are used, details shall be included explaining why a different method was applied and how the method was applied;
- Collected data shall also include the number of survey station(s), area(s) location(s), dates/times and weather conditions; and
- Results should be included in table format for each survey method and each survey station or area.

c) All relevant guidelines and technical documents used to inform the assessment of results. For example:
   - Natural Heritage Reference Manual Second Edition (Ministry of Natural Resources and Forestry, O.M.N.R. 2010);
   - Significant Wildlife Habitat Technical Guide (O.M.N.R. 2000);
   - Significant Wildlife Habitat Mitigation Support Tool (2014);
   - Significant Wildlife Habitat Criteria Schedules for Ecoregion 7E (M.N.R.F. 2015);
   - Conservation Authority guidelines;
   - Official Plan definitions and criteria for components of the Region's natural environment system (Schedule L, Table 4-1)

It is recognized that methods and practices may change over time, and methods other than those presented in the E.I.S. Terms of Reference Checklist (**Appendix 5**) may be recommended by a qualified E.I.S. Professional with supporting rationale and justification; alternate methods must be included and approved through the T.O.R. as outlined **Section 1.3.1**. The level of effort and extent of field surveys shall be determined and detailed through scoping with the Approval Authority and any other relevant agencies in the approved T.O.R.

2.4 Existing Conditions

This section of an E.I.S. documents and describes the features, functions, and relationships (i.e., interactions, dependencies, and functional relationships) within a Study Area as they are on the landscape 'right now' (i.e., the existing condition). It presents results without policy-based interpretation(s) applied.

Existing conditions will be informed by both background information and field investigation results. Schedule L of the Niagara Official Plan provides a list of components of the Region's integrated N.E.S. that should be used when describing existing conditions.
The existing conditions section(s) shall include, but not necessarily be limited to:

a) Survey details: type, date(s), start / finish time, weather conditions (as applicable), surveyors (personnel involved in undertaking field work)[13]
b) Physiography (topography, soils, bedrock)
c) Survey results (e.g., E.L.C. communities present, fauna diversity / community, etc.)
d) Identification and delineation of all natural heritage features, areas and functions present on the Subject Lands, adjacent lands and / or within areas as defined by the agreed upon boundary of the Study Area as determined through the T.O.R. Secondary vs primary data sources (i.e., data from agencies and previous studies vs data collected in the field) should be clearly indicated.
e) Identification and description of relationships, interactions and/or functional relationships between features and their functions on the Subject Lands and to features and areas on adjacent lands and/or within areas as defined by the agreed upon boundary of the Study Area as determined through the T.O.R. (e.g., wildlife movement, habitat needs, hydrologic interactions, etc.) to inform potential linkages.
f) Identification and mapping of known existing designations (e.g., A.N.S.I., P.S.W., etc.)
g) Report figure(s) that clearly and accurately show the location of natural features and, where possible, natural functions, overlaid on recent aerial photography (or satellite imagery) of the Study Area. Appendix 8 lists sources for some of the natural heritage features and other information that should be illustrated on report figures.
h) Consultation with agencies (e.g., D.F.O., M.E.C.P., M.N.R.F., the Conservation Authority) as it relates to existing conditions should be discussed here, and a record of consultation shall be provided as an appendix to the E.I.S.
a) Integration of relevant data from other studies (e.g., geotechnical, geomorphological, hydrogeological, etc.), as appropriate to inform and support the description of existing conditions.

Note: Data tables in excel format and Esri compatible G.I.S. files are to be submitted as part of the final E.I.S. submission package. Refer to the Final E.I.S. Submission Checklist (Appendix 6) for submission requirements. Provision of this information may be a condition of approval.

2.4.1 Species at Risk (S.A.R.)

The E.I.S. forms a comprehensive impact assessment process and is to include Species at Risk (S.A.R.). Survey methods, observations, habitat, impacts, and any required mitigation and/or authorization associated with S.A.R. are to be documented in the E.I.S.

[13] This may be included as a table within the main document body or included as an appendix with general text and a reference to the appropriate appendix in the main document body.

As part of the E.I.S., a Species of Risk Screening Assessment is to be completed (Appendix 10).

Consultation with M.E.C.P. may be required with respect to survey methods, species presence / absence determinations, habitat delineation, potential impacts and any resultant mitigation, registration, authorization or permitting under the E.S.A. (2007) and its amendments or successor legislation. Any applicable correspondence with M.E.C.P. shall be appended to the E.I.S.

Decisions with respect to the E.S.A. (2007) reside with M.E.C.P. The Approval Authority's role is to ensure that development or site alteration is in compliance with applicable policy, which includes consideration of the habitat of endangered and threatened species. In this capacity, the Approval Authority shall ensure that compliance with the E.S.A. (2007) is demonstrated in the E.I.S. (e.g., demonstration of absence, and / or include outcome of consultation with M.E.C.P. and / or method of authorization) and may require that the Applicant provide record of consultation with M.E.C.P.

Note: Where project reports will become part of the public record, a separate report which removes or generalizes sensitive information with respect to S.A.R. may be required. This may include complete removal of location references, generalization of locations to the Natural Heritage Information Centre's 1 km^2 grid mapping open polygons, etc. Decisions with respect to data sensitivity will be made on a case-by-case basis in consultation with M.E.C.P. and/or in accordance with standards of practice.

2.5 Evaluation of Features and Functions

Through this section, the E.I.S. evaluates all features, functions, and relationships present within the Study Area (documented through Existing Conditions) within the context of applicable policies to identify / confirm natural environment policy-based status and inform management of the N.E.S. (Section 2.6).

The evaluation of features and functions shall, at a minimum:

a) Assess the significance of all features identified on the Subject Lands and within the Study Area. Assessment of significance is to be done in accordance with applicable provincial guidance documents, regional and/or local Official Plan policies and other relevant policies, guidelines, or guidance documents, as applicable.

- For Significant Wildlife Habitat, the E.I.S. is to include a Screening Assessment. A template is provided in Appendix 9.

b) Identify and delineate the precise boundaries of the components of the N.E.S. features and areas, as defined in Table 4-1, Schedule L.
c) Identify and delineate locations where linkages will be required for the N.E.S. on the Subject Lands and within the Study Area (Schedule L).
d) Prepare figure(s) showing constraints to development or site alteration based on the results of this evaluation. These figures must establish the boundary of the features and N.E.S. and identify other areas, should they be identified, for protection and restoration that collectively provide long term protection of natural habitats and native biodiversity.
e) Outcomes from consultation(s) and/or processes with agencies (e.g., D.F.O., M.E.C.P., M.N.R.F., the Conservation Authority) should be discussed here as they pertain to defining constraints to development, and a record of consultation shall be provided as an appendix to the E.I.S.

Regional definitions for individual components of the N.E.S., as well as criteria for the identification of features are provided in Table 4-1 of Schedule L in the Official Plan. Section. 3.1.18 and 3.1.19 of the N.O.P. address natural features which have been disturbed, and cultural and regenerating woodlands, respectively. These policies may have bearing on some applications.

2.5.1 Delineation and Refinement of Components of the N.E.S.

Features and components of the N.E.S. are to be precisely delineated and confirmed in consultation with Niagara Region and other regulatory agencies. Features requiring delineation and / or review in-field with appropriate agencies or a site visit to review the staked feature limits may include:

- Woodland(s);
- Wetland(s); and/or
- Stable or physical top of bank.

Generally, feature limits will be flagged or staked and confirmed in the field and surveyed to a sub-meter level of accuracy. This accuracy requirement may be waived for small projects on a case-by-case basis, allowing for alternative methods of delineation, as appropriate; waiving of the requirement must be confirmed with the Approval Authority and/or the agency responsible for the feature being delineated. Digital dataset(s) (i.e., georeferenced C.A.D. or G.I.S. dataset(s), NAD83, UTM Zone 17N) of the confirmed feature limits are to be provided to the

Approval Authority and / or other agencies, as appropriate, as part of the final E.I.S. submission package.

Delineation and refinement of features and components of the N.E.S. is to be completed using accepted standard protocols and methodologies (e.g., Ontario Wetland Evaluation System [O.W.E.S.]) and in consideration of applicable definitions, plans, policies, and guidelines for the feature type to ensure the appropriate criteria are applied. Criteria may apply to defining the limit of a feature and / or definitions of significance (Table 4-1 of Schedule L). Significance criteria met or satisfied will vary based on planning context and site-specific conditions and shall also be considered, as appropriate, through this analysis.

2.5.2 Supporting Features and Areas

Supporting features and areas include existing features or areas on the landscape that **do not** meet the definition(s) or criteria to be considered natural heritage features but **do** support or contribute to the biodiversity and ecological function(s) of the N.E.S. Supporting features can include grasslands, cultural meadows, wooded areas, cultural thickets, small valleys, wildlife habitat, enhancement areas and restored areas.

The E.I.S., therefore, must identify and describe the ecological contribution of these components to the N.E.S. Supporting features and areas should be delineated and their size calculated.

2.6 System Management

Existing conditions (Section 2.4) described what is present on the landscape. The evaluation of features & functions (Section 2.5) assesses / categorized those features, areas, and functions through a policy lens to determine their status under applicable policies, regulations, and legislation. This section (system management) of the E.I.S. considers how the system will be managed within the changing land use.

System management encompasses both policy conformity and a more holistic, system-based system management which includes consideration for supporting or enhancing resilience and biodiversity of the N.E.S. through the land use planning process.

It is mandatory for an E.I.S. to screen for, identify and assess supporting features and areas. Where supporting features and areas occur, the E.I.S. must provide an analysis of these features and areas and management recommendations for them based on the ecological and

hydrological function(s) provided by the feature(s) and the relationship, interactions and supportive role(s) provided to nearby features.

Specifically, through this section the E.I.S. will:

- Set out recommendations for feature management (natural heritage features and areas, supporting features & areas, and (as applicable) features that have been disturbed[14] and/or cultural and regenerating woodlands[15])
- Confirm and define system linkages (location(s), width(s) and design target(s))
- Recommend ecological buffers and vegetation protection zone(s)
- Identify potential opportunities for enhancement of the N.E.S.

Recommendations made through this section of the E.I.S. are not commitments to implement. They represent ecologically-based recommendations to assist in prioritizing and considering these opportunities through development planning.

2.6.1 Features

2.6.1.1 Natural Heritage Features and Functions

Clearly identify how each natural heritage feature is to be managed. As a priority, natural heritage features are to be protected in-situ. The policy 'test' for each feature should be clearly identified (e.g., prohibition, no negative impact). If / where exceptions may apply, such as opportunities to relocate (e.g., a watercourse) or remove a feature (e.g., destruction of habitat for endangered or threatened habitat) with appropriate provincial or federal authorization(s) obtained, these features and the requirements for the exemption should be clearly identified.

2.6.1.2 Supporting Features and Areas

Supporting features and areas are defined as lands that have been restored or have the potential of being restored. Supporting features and areas include grasslands, meadows, and thickets (defined in accordance with Ecological Land Classification for Southern Ontario); other valleylands; and other wildlife habitat; and enhancement areas where they are determined to contribute to the biodiversity and ecological function of the natural environment system. Opportunities to maintain the functions and benefits to the N.E.S. provided by these areas are to

[14] Per s. 3.1.18 of the N.O.P.
[15] Per s. 3.1.19 of the N.O.P.

be considered. Generally, recommendations for feature management of supporting features and areas may be generally classified as:

- **Protect:** Feature(s) provide a strong benefit to Natural Heritage Features and / or their functions. It is recommended that consideration be given to protecting these feature(s) wholly or partially, in-situ to maintain the existing function(s). Generally, this may include supporting features and areas contiguous to Natural Heritage Features and providing a direct beneficial relationship such as foraging, habitat diversity, hydrologic, etc. Mechanisms for protection can include encompassing all or portions of the feature(s) within buffers, extending the proposed limit of the N.E.S. to include the feature(s), protecting important portion(s) of the feature to protect / maintain the primary feature(s) or function(s) which provide the benefit to the N.E.S.

- **Conserve:** Feature(s) provide a benefit to Natural Heritage Features and / or their functions. It is recommended that consideration be given to conserving the form (i.e., the feature type) or function(s) (e.g., meadow foraging habitat) on the landscape, however there are opportunities to replicate the feature / function within the subject lands to a) provide a greater system benefit (e.g., where the feature(s) is not contiguous to a Natural Heritage Feature), or b) to accommodate land use planning & design.

- **Mitigation:** This category is generally applicable to supporting features and areas which provide a primarily hydrologic benefit. Opportunities to mitigate for this function are recommended to be explored through planning and design.

- **No Management:** Where it is determined that a supporting feature provides minimal benefit to the N.E.S., it may be recommended that no management is required. These features and their functions receive no further consideration.

It is recommended that the management recommendations be ranked or prioritized to assist land use planning (e.g., high priority, moderate priority, low priority). Additionally, supporting rationale and potential mechanisms or opportunities to achieve the recommendation should be identified (e.g., retain all / portion in-situ, enhance / widen buffer, opportunity to integrate into park(s), etc.).

2.6.2 Linkages

Building upon the assessment of existing conditions and evaluation of features and functions which identified known and inferred functional relationships between features and areas of the N.E.S., this section of the E.I.S., must identify the linkages for the N.E.S. in accordance with s. 3.1.17 and Schedule L of the N.O.P. Linkages are to be considered at local and regional scales and include both linkages occurring within and to areas outside of the Subject Lands and Study Area.

Linkages are grouped into three size categories, with defining criteria provided for each in Table 4-1, Schedule L:

1. Large linkages (outside settlement areas)
2. Medium linkages (outside settlement areas)
3. Small linkages (both inside and outside of settlement areas)

Schedule C2 of the N.O.P. maps some linkages of the N.E.S. Opportunities for additional, ecologically appropriate linkages are to be identified through the E.I.S.

Linkages are to be identified between natural heritage features and areas, key natural heritage features and key hydrologic features. They provide and maintain ecological connectivity and support a range of community and ecosystem processes. Linkages enable the movement of plants and wildlife, in some cases over multiple generations, supporting the long-term sustainability of the larger N.E.S.

Recommendation(s) for management of lands within a linkage are to be provided. Generally, linkages are to be planted and left as natural self-sustaining vegetation or remain in agricultural use. Policies of the N.O.P. s. 3.1.17 provide exceptions and compatible uses which may be permitted in linkages.

2.6.3 Buffers

In all cases, the E.I.S. must identify appropriate buffers and / or vegetation protection zones (V.P.Z.) to protect components of the N.E.S. Within Niagara Region, buffers and V.P.Z.'s can be placed in one of the following types:

Vegetation Protection Zones (V.P.Z.) are prescribed through provincial plan policies for the Greenbelt Plan. V.P.Z.'s apply within the Greenbelt Plan Area and to any key hydrologic feature outside of a settlement area in Niagara. The width of V.P.Z.'s are prescribed through policy. Refer to the N.O.P. and provincial plan policies for specific details applicable to a proposed project and Subject Lands. V.P.Z.'s are a prescribed minimum buffer (i.e., they may be determined to be larger in order to protect a feature or function) and are included as part of the integrated N.E.S.

Minimum prescribed buffers are applied outside of settlement areas in accordance with Table 3-2 of the N.O.P. Where minimum prescribed buffers apply, the buffer shall not be less than the required minimum stated in the applicable policies. It may be determined that a buffer larger than the minimum is required to mitigate potential impacts through an environmental impact study, hydrologic evaluation, or subwatershed study.

Mandatory buffers are applied where the presence of a buffer is required but minimum buffers are not prescribed through Policy (within settlement areas). The width of the buffer is determined through an environmental impact study and / or hydrologic evaluation at the time an application for development is made. Establishing recommended buffer widths through an E.I.S. is split into two parts. **Preliminary buffer recommendations** based on ecological form and function are provided as ranges to inform the development design (this section). These are then refined or confirmed into **proposed N.E.S. buffers** (**Section 2.8.2.3**) based on opportunities to address some impacts through other mechanisms (e.g., LIDs) and informed by the proposed development design or site alteration.

The term **Vegetation Protection Zone** (V.P.Z) applies to key natural heritage features within the Greenbelt Area and to any key hydrologic feature outside of a settlement area. Elsewhere in the region the term **buffer** is used.

Buffer: An area of land located adjacent to natural heritage features and areas, other wetlands, and watercourses and usually bordering lands that are subject to development or site alteration. The purpose of a buffer is to protect the features and areas and their ecological functions by mitigating impacts of the proposed development or site alteration. Buffers shall consist of natural self-sustaining vegetation as a condition of development (except where certain agricultural uses are exempt from the requirement of a buffer).

Vegetation Protection Zone (V.P.Z): A vegetated buffer area surrounding a key natural heritage feature or key hydrologic feature (Greenbelt Plan, 2017).

2.6.3.1 Preliminary Buffer Recommendations

Buffers are an important component of constraints and opportunities identification as input to land use planning and design. This section of the E.I.S. is intended as input to that process, supporting early integration and consideration of the N.E.S.

Establishing Buffer Requirement(s)

Buffers are required for woodlands, wetlands and watercourses and some headwater drainage features retained as of the N.E.S. The width of an ecologically appropriate buffer is to be determined through the E.I.S. The width of the buffer is to be based on the sensitivity of the ecological functions from the proposed development or site alteration, and the potential for impacts to the feature and ecological functions as a result of the proposed change in land use.

The E.I.S. is to identify which features require or warrant buffers. Supporting rationale is to be clearly documented. Consideration should be given to both Natural Heritage Features and Supporting Features and Areas, as appropriate. The status of the feature (i.e., Natural Heritage Feature vs. Supporting Feature or Area) may also inform recommendations.

Buffer Width

Buffer width(s) are to be informed by sensitivities and functions of the natural heritage feature and its contribution to the long-term ecological functions of the N.E.S., the type of development and its potential impacts. Where minimum buffers / ‘s are stipulated in policy, these must be met and may be exceeded based on the outcomes of the buffer assessment process, where ecological drivers justify an increased buffer. The status of the feature (i.e., Natural Heritage Feature vs. Supporting Feature or Area) may also inform recommendations.

Features, even within a similar type (e.g., wetlands, woodlands) will vary in their form and function. As a result, their sensitivity to different types of pressures resulting from development will similarly vary. Additionally, position on the landscape and other factors can influence overall sensitivity of a feature or complex of features to changes on adjacent lands and the broader landscape. These considerations are to be used to support planning of buffer widths.

At a minimum, it is expected that an E.I.S. will apply the following functional elements to inform the range of recommended buffer width(s):

1. **Feature Hydrology** – is the feature supported by groundwater, surface water or a combination of both? What are the sources of water which support the existing form and function of the feature (catchment, inputs, outlets, etc.)? Are there species or wildlife functions which rely on a specific range of hydrologic conditions (e.g., vernal pools, seeps

& springs). How sensitive or vulnerable is the feature and its functions to changes in hydrologic conditions?

2. **Habitat requirements** – consider the species present within the feature(s) under existing conditions to identify / inform habitat requirements of the species residing in or utilizing the feature (or complex of features). Species with specialist habitat requirements (e.g., narrow range of habitat preferences, specific host plant(s)) will generally be more sensitive to changes in habitat conditions and thus may warrant wider buffers.
3. **Species behavior** – behavioral traits can influence a species' sensitivity or tolerance to human activities. Changes in types or level of activity in adjacent lands and the landscape may affect behaviors important to the continued presence or success of species in a given area. For example, communication, altered patterns of movement (aversion or attraction to certain areas), subsidization of predators (e.g., raccoons), nest abandonment, etc.
4. **Fragmentation** – consider the influence of existing and potential fragmentation of the landscape. As natural heritage features and areas become more fragmented, sensitivity to new pressures and impacts increases.

In assessing the above, it is expected that changes to impervious cover, reductions to landscape permeability (i.e., to movement) and occupancy-associated impacts typical of the proposed development type (i.e., residential, employment) are considered. Buffer widths may vary to respond to feature type and sensitivities, feature status (i.e., Natural Heritage Features and Areas vs. Support Features and Areas) and the functional element of concern.

Buffer width ranges resulting from the above are based on potential impacts. Opportunities to avoid, minimize or mitigate some or all of a given impact through design and management within the proposed development or site alteration will inform the proposed N.E.S. buffers (see Section 2.8.2).

Refinement Opportunities

Buffer width range(s) are based on potential design outcomes such as adjacent land use and development design, stormwater management / water balance, buffer design, etc. The E.I.S. should identify potential opportunities available to reduce buffer widths, where appropriate.

NOTE: Buffer minimum sizes and refinement opportunities must be ecologically sound and based on a level of confidence that the feature(s) form and function(s) will be protected in accordance with applicable policies.

2.6.4 Enhancement Opportunities

Enhancement opportunities can include both enhancement areas as defined in Table 4-1, Schedule L and per s. 3.1.16 of the N.O.P. and other opportunities to enhance the N.E.S. as may be identified through site specific study.

Enhancement areas are intended to consist of natural self-sustaining vegetation with the objective of increasing the ecological resilience and function of individual key natural heritage features, key hydrologic features and/or natural features and areas or groups of such features. This can include enhancement to existing features or creating new or restoring impacted areas. Generally, enhancement areas will include opportunities to:

- Increase the size of an existing feature or area.
- Connect features and/or areas to create larger, contiguous natural areas.
- Improve the shape to create or increase interior habitat conditions.
- Include critical function zones and important catchment areas for sustaining ecological functions.

This section of the E.I.S. is to identify potential opportunities and actions to enhance the N.E.S. that are realistic and implementable on a given site in the context of the planned land use. Section 3.1.16.3 or the N.O.P. sets expectations for the identification and consideration of enhancement areas through an E.I.S. and other studies.

Listing potential opportunities and actions is **not** a commitment to implementation. Policy directs that land use planning 'improve where possible' the natural environment and system(s). As such, identification of potential opportunities ensures that consideration is given to integrating enhancement opportunities within the land use planning and design process, where possible. Opportunities to integrate / implement enhancements are refined through Section 2.8.3.

2.7 Description of the Proposed Development or Site Alteration

An adequate description of the proposed development or site alteration is important to facilitate review of the impact assessment and decision making on the outcomes of the E.I.S. by approval and review agencies.

In the context of the Study Area, a description of the proposed development or site alteration, shall be provided including:

a) The proposed site plan, drawn to scale, accurately overlaid (i.e., georeferenced, NAD 83, Zone 17N) on the constraints map, applying recent aerial photography (orthoimagery) of the subject lands. This should show (as applicable to the project):
    a. Precise location of the Subject Lands and Study Area boundaries / property limit;
    b. Development or site alteration footprint including:
        i. Development limit and site preparation footprints;
        ii. Precise location of proposed lots (lot lines / fabric);
        iii. Locations of buildings and other structures
        iv. Locations of amenity areas;
        v. Roads and parking areas;
        vi. Other transportation facilities (i.e., transit; trails, etc.);
        vii. Grading;
        viii. Servicing;
        ix. Stormwater management and drainage facilities, including outfall locations;
        x. Proposed water takings;
        xi. Associated site alteration works, such as work on stream banks, watercourse alterations, additional tree and vegetation removal, earth moving, grade changes, etc.;
    c. The N.E.S. and its individual components, including:
        i. Staked / surveyed features, including agencies present and dates;
        ii. V.P.Z.s and buffers, linkages and / or supporting features and / or enhancement areas[16]; and
        iii. Setbacks (e.g., from top of bank).
b) Phasing and timing / schedule of the development or site alteration (e.g., site preparation, construction and completion, occupation and operation of the proposed use);
c) Current land use designations and zoning; and
d) Relevant information integrated from other studies (i.e., hydrogeological, geotechnical, stormwater engineering, etc.) in describing the proposed development or site alteration, as appropriate.

2.8 Impact Assessment

The impact assessment is to consider Key Natural Heritage Features, Key Hydrologic Features, Natural Heritage Features and Areas and Supporting Features & Areas and components of the N.E.S. to inform the cumulative impact to the N.E.S. and its functions.

[16] Buffer and linkage widths (in meters) and area of Supporting Features and Areas, including Enhancement Areas (in hectares) should be indicated on the site plan.

The impact assessment may be presented in table or text format. Figure(s) are to be provided that show the proposed N.E.S., the proposed development and illustrate the methods to avoid, minimize and mitigate to support the documentation of the impact assessment. The sections below outline expected content and provide some guidance on opportunities for avoiding, minimizing, and mitigating impacts.

2.8.1 Types of Impacts

Generally, impacts may be categorized under Wildlife (Avifauna, Herpetofauna, Insects, Mammals), Vegetation (vegetation communities [including wetlands], plant species), Connectivity / Fragmentation, Fish and Fish Habitat. Species at Risk and Significant Wildlife Habitat may be addressed under these categories / headings or may be considered as separate categories / headings. Potential impacts from the proposed development or site alteration on the N.E.S. must be determined through the impact assessment. The E.I.S. must include direct, indirect and cumulative impacts that may result from the proposed development or site alteration.

Impacts are to be quantified wherever possible (e.g., area(s) of vegetation removed by vegetation type and / or feature). This may include integration of data and analyses from other reports to inform the assessment of ecological / environmental impacts (e.g., pre- and post-feature-based water balances). All conclusions (impact or 'no impact') shall be science-based and defensible and include evidence to support the conclusion (e.g., empirical evidence, references, etc.). Not only should the impact assessment address impacts to the N.E.S. on the Subject Lands specifically, but also on the Study Area, adjacent lands and broader landscape.

The impact assessment is to address the following minimum requirements:

a) Identify all components of the N.E.S. and assess for direct, indirect and cumulative impact(s);

b) Identify all aspects of the proposed development or site alteration that could result in direct, indirect and cumulative impacts. Examples may include:
    - Earth works, grading and stockpiling;
    - Equipment storage, maintenance and refueling;
    - Servicing (linear infrastructure alignments, features crossings, maintenance, etc.);
    - Stormwater management, including pond locations, thermal impacts, outlets and maintenance;

- Roads and transportation, including temporary construction access and watercourse crossings and permanent infrastructure, maintenance and use impacts;
- Form, type and density of proposed development including lot limits and layouts, trails and recreation, parks, open space.

c) Identify all direct impacts, which may include:
   - Encroachment, fragmentation or removal of habitat;
   - Reduction or removal of corridors or linkages;
   - Changes to the quantity, quality, timing or direction of flow of surface or groundwater;
   - Changes to the water table or soil moisture;
   - Changes to stream forms or shorelines;
   - Mortality or removal of vegetation;
   - Soil erosion or compaction;
   - Deposition of sediment;
   - Slope failure;
   - Creation of a harmful alteration, disruption or destruction of fish habitat pursuant to the Canada Fisheries Act.

d) Identify all indirect impacts, which may include:
   - Impacts due to occupancy (i.e., increased disturbance, increased access, pets, lighting, garden escapes, etc.);
   - Increased potential for the introduction or spread of non-native and / or invasive species;
   - Reductions in the population or reproductive capacity of plant and wildlife species;
   - Disruption of communication and other life processes due to increased noise levels.

e) Identify and discuss cumulative impacts. Cumulative impacts refer to a combined or incremental effect of individual impacts that could result from a combination of different types of impacts, from incremental effects of a series of impacts over time or from the combined effects of existing and planned impacts over time. Therefore, impacts should be assessed in the context of existing and planned development in the surrounding areas and that consideration must be given to how different types of impacts may combine and interact.

2.8.2 Applying the Mitigation Hierarchy

The mitigation hierarchy is a sequential approach to planning and decision-making with respect to potential or known negative impacts associated with an activity. Emphasis is placed on avoidance as a priority, followed by minimization and mitigation to achieve policy thresholds / requirements (e.g., prohibitions against development or site alteration, no negative impact, etc.). Where supporting features and areas provide an important role in the form or function of a Natural Heritage Feature, the impact assessment is to consider the feature(s) in this context in the assessment.

The mitigation hierarchy is to be reflected in the impact assessment of an E.I.S. through presentation of mechanisms associated with, or actions taken within each category (avoid, minimize, mitigate).

2.8.2.1 Avoid

Typically, avoidance is the first step in the mitigation hierarchy, which is to avoid, minimize then mitigate. Proposed development or site alteration should consider how best to avoid negatively impacting the N.E.S., and if that is not feasible, then the proposed impacts should be minimized and finally mitigated, ultimately achieving a no negative impact.

Avoidance is often incorporated into a proposed development or site alteration application in the earlier days of the planning process. Avoidance of known natural heritage features and areas, identified through secondary sources in the background review, often occurs at the outset. As the existing conditions data is collected and evaluated, additional significant features are also to be avoided.

The E.I.S. should identify / summarize where and how avoidance measures were incorporated in relation to the proposed development or site alteration and its effects on the N.E.S. as identified, confirmed, and evaluated through data collection and evaluation.

Proceeding sections of the impact assessment are to focus on what impacts are anticipated after avoidance measures have been applied and how the anticipated impacts will be minimized or mitigated.

2.8.2.2 Minimize

Minimization of impacts is the second priority in the mitigation hierarchy. This can be achieved through a variety of potential mechanisms including, but not limited to:

- Reconfiguring the layout of a proposed development or site alteration to reduce the potential impact(s);
- Selection of locations of the N.E.S. (e.g., by roads or other linear infrastructure) at narrow points, or points of reduced impact to form / function(s);
- Narrowing infrastructure corridors where they are adjacent to / crossing the N.E.S.;
- Designing to retain portions / larger portions of supporting features and areas;
- Placement of higher-impact land uses or activities away from sensitive features / functions;
- Placement of lower-impact or complimentary land uses (e.g., parks) adjacent to features of the N.E.S.;
- Using land use planning / design to minimize the need for mitigation measure(s) or reduce reliance on more complex or intensive mitigation (e.g., planning parks in areas where infiltration of groundwater is critical to maintaining form and/or function rather than relying on a series of infiltration measures which could clog or become less effective over time).

The E.I.S. should identify and describe in detail how negative impacts from the proposed development or site alteration on the N.E.S. have been minimized, as applicable.

2.8.2.3 Mitigate

The application of mitigation measures is the third priority in the mitigation hierarchy. A list of potential mitigation measures is provided in Appendix 11. The list is not to be considered exhaustive or prescriptive; mitigation measures other than those included in the table can be presented for consideration.

The E.I.S. should identify and describe in detail how negative impacts from the proposed development or site alteration on the N.E.S. have been mitigated and/or proposed mitigation measures to be implemented through detailed design (e.g., bird strike avoidance measures).

Buffers

The impact assessment must provide supporting rationale for the recommended buffers incorporated into the proposed development or site alteration. Recommendations and supporting rationale should include reference back to preliminary recommendations and how the development or site alteration integrated any ‘opportunities for refinement’ to support the proposed buffer width, as applicable.

Recommendations for buffer design should also be provided. Buffer design is to consider physical and biological elements that will support mitigation efforts and opportunities to support the N.E.S. Some design considerations are listed below; these do not represent an exhaustive

list. Best practices, new and innovative ideas, and current research available at the time of the proposed development should be considered, as appropriate.

- Topographic variability to reflect a more natural condition, such as:
    - Microtopographic elements (hummocks / rises, small depressions)
    - Physical methods to support water retention or other specific mitigation or enhancements being implemented (e.g., support infiltration, wetlands)
    - Use of topography to increase mitigation efficacy (e.g., light, noise) in some instances (e.g., a berm, slopes, etc.).
- Consider integration or use of diverse habitat types or selection of habitat types that will provide the greatest benefit to site-level features or the N.E.S. in the Study Area.
- Implementation planning should consider the potential need or benefit of using a cover crop, or other restoration support methods to facilitate establishment of target vegetation.
- Provide recommendations for seed mixes, including read-made mixes which may be more readily available for a range of habitat types (e.g., meadow, wet meadow, riparian) and may be suitable for application in restoration and buffer plantings.

2.8.2.4 Residual Impacts

Residual impacts represent those impacts that cannot be fully addressed through the implementation of the proposed minimization and mitigation measures. Despite the applied avoidance, minimization and mitigation measures, residual impacts may still occur. Generally, residual impacts may include some occupancy-related impacts, introduction of invasive species, etc. The scope, scale and magnitude of residual impacts should be discussed and wherever possible, should include quantitative measures.

2.8.3 System Enhancements

Opportunities to enhance the N.E.S. should be incorporated where possible. Through this section of the E.I.S., proposed system enhancements are identified. These may include one or several of the potential opportunities identified in Section 2.6.4.

System enhancements are not mitigation measures; these components go beyond mitigating impacts, contributing to the long-term protection, resiliency and ecological integrity of the N.E.S. They are to be presented and considered after demonstration of policy conformity (per Section 2.6.2).

Location(s) for proposed enhancements, as well as other relevant information (e.g., size, composition, design, etc.) should be described and represented in a figure(s).

2.9 Delineation and Refinement of System Boundaries

The E.I.S. should include a summary of recommendations for delineation or refinement of system boundaries based on the outcomes of works presented in the E.I.S., as appropriate to the applicable plans and policies for the Subject Lands.

2.9.1. Natural Environment System Boundary

The N.E.S. boundary shown on Schedules C1, C2 and C3 of the N.O.P. is based on geospatial data available for the individual components of the N.E.S. at the time of plan preparation. As additional features are identified and / or mapping becomes available for previously unmapped features, refinements to the boundary may be possible. More precise delineation of the N.E.S. boundary for the Subject Lands of an E.I.S. will be required based on field investigations. Delineation of the N.E.S. boundary includes incorporation of all N.E.S. components (Table 4-1, Schedule L).

2.9.2 Greenbelt Natural Heritage System Boundary

Refinements to the boundaries of the Greenbelt Natural Heritage System (G.B.N.H.S.) are not permitted unless as a result of amendments to the Greenbelt Plan.

2.10 Policy Assessment

Based on the preceding sections of the E.I.S. Guidelines, assess, and provide an opinion as to the ability of the proposed development or site alteration to conform to the applicable legislation, plans, policies and guidelines identified in Section 2.2.

This section includes an assessment of the proposed development or site alteration against any prohibitions (i.e., development and site alteration shall not be permitted in provincially significant wetlands; significant coastal wetlands (O.P. 2020; P.P.S. 2024); and significant woodlands (O.P. 2020) and restrictive policies (i.e., development and site alteration shall not be permitted in certain natural heritage features and areas unless it has been demonstrated through the preparation of an E.I.S. that there will be no negative impacts on the natural features or their

ecological functions (O.P. 2020; P.P.S. 2020) as informed by the current and applicable plans, policies, legislation and regulations.

2.11 Monitoring Plan

A monitoring plan, where required, is intended to assess the implementation and efficacy of the proposed mitigation measures. The E.I.S. should outline a monitoring plan, including:

- Whether it is phased (i.e., monitoring requirements during pre-construction (i.e., pre-development), during construction and post construction)[17];
- Specific targets or thresholds;
- Reporting schedule and protocols;
- Adaptive management plan, should targets/thresholds not be met; and
- Details on the person / people responsible for completing the monitoring plan.

Requirement(s) for monitoring are to be confirmed with the Approval Authority.

2.12 Conclusions

The key findings of the report including existing conditions, assessment of impacts and opportunities for environmental enhancements shall be summarized. A summary table documenting all commitments, mitigation measures, enhancement opportunities, and monitoring requirements to be implemented through the proposed development and site alteration and detailing the timing for their implementation should be included. Where details are to be addressed / resolved through later planning / design stages (e.g., at detailed design), recommended conditions of approval to ensure successful implementation should be identified.

The conclusions should include a final recommendation to support / not support the development or site alteration proposal based on the results of the study and identify mechanisms that the recommendations of the E.I.S. will be implemented to achieve policy conformity for the Subject Lands.

[17] Typically, post-construction monitoring is considered to be initiated at 90% build-out or 90% completion of the construction activities.

2.13 References

A list of all relevant references, background information sources, etc. used in the preparation of the E.I.S. shall be included in the report.

2.14 Appendices & Supporting Material Requirements

The E.I.S. will include numerous appendices and some supporting materials will be required as part of the submission. Below is a list of the minimum requirements:

- All submissions (i.e., initial through to final):
  - Approved Terms of Reference (T.O.R.)
  - Record of Consultation
  - Data Tables (field surveys / existing conditions)
  - Figures[18]
  - Supporting Materials (as appropriate)
- Final Submission
  - Esri compatible G.I.S. files (NAD 83, UTM Zone 17T) of all relevant natural heritage data (e.g., Significant Wildlife Habitat, features boundaries, significant species locations, etc.); and
  - Digital copies of data tables (i.e., inventory results) in .xls or .csv format.

Note that items other than those listed may be included as appendices to streamline the main body text, where appropriate. For example, an impact assessment, mitigation and residual impact table may be included in the body of the report, or as an appendix.
Appendices and supporting materials required as part of a submission package for the approved and completed E.I.S. in the E.I.S. Final Submission Checklist (Appendix 7).

[18] These may be provided as an appendix or nested in appropriate sections of the report.

Appendix 1 | Definitions

Alvars
Means naturally open areas of thin or no soil over essentially flat limestone, dolostone or marble rock, supporting a sparse vegetation cover of mostly shrubs and herbs (Greenbelt Plan, 2017).
Areas of Natural and Scientific Interest (A.N.S.I.)

Areas of land and water containing natural landscapes or features that have been identified as having life science or earth science values related to protection, scientific study or education (P.P.S., 2024).

Life Science A.N.S.I. means an area identified as being high quality example(s) of ecological form and function in each Ecodistrict in the province (provincially significant) and the region (regionally significant) and are generally defined by natural heritage features (e.g., a woodland, valley top of bank, etc.) and generally exclude anthropogenic land uses (e.g., residential areas / properties). Life Science A.N.S.I.'s include areas identified as provincially significant and regionally significant by the Ontario Ministry of Natural Resources and Forestry using evaluation procedures established by the Province, as amended from time to time.

Earth Science A.N.S.I. means an area that represent the best examples of geologic and geomorphic landforms and areas (e.g., a moraine) in each Ecodistrict in the province (provincially significant) and the region (regionally significant). They may encompass a single feature or a group of related features (e.g., a drumlin field). As geologic / geomorphic landforms, the overlying land use may include a composite of natural and anthropogenic uses (e.g., woodland, agricultural, rural residential, etc.). Earth Science A.N.S.I.'s include areas identified as provincially significant and regionally significant by the Ontario Ministry of Natural Resources and Forestry using evaluation procedures established by the Province, as amended from time to time.

Buffer
An area of land located adjacent to natural heritage features and areas, other wetlands, and watercourses and usually bordering lands that are subject to development or site alteration. The purpose of a buffer is to protect the features and areas and their ecological functions by mitigating impacts of the proposed development or site alteration. Buffers shall consist of natural self-sustaining vegetation as a condition of development (except where certain agricultural uses are exempt from the requirement of a buffer).

Coastal Wetland

a) Any wetland that is located on one of the Great Lakes or their connecting channels (Lake St. Clair, and the St. Marys, St. Clair, Detroit, Niagara, and St. Lawrence Rivers); or

b) any other wetland that is on a tributary to any of the above-specified water bodies and lies, either wholly or in part, downstream of a line located 2 km upstream of the 1:100 year floodline (plus wave run-up) of the large water body to which the tributary is connected (P.P.S., 2024).

Connectivity
The degree to which key natural heritage features, natural heritage features and areas and/or key hydrologic features are connected to one another by links such as plant and animal movement corridors, hydrologic and nutrient cycling, genetic transfer and energy flow through food webs.

Core Areas
An individual natural features and areas, or a group of features and areas in close proximity to each other (i.e., less than or equal to 30 m distance in settlement areas, less than or equal to 60 m distance outside of settlement areas) that have functional ecological connectivity (i.e., their proximity to each other supports ecological functions, such as wildlife habitat, exchange of genetic material, etc.).

Cultural and Regenerating Woodland
Woodlands where the ecological functions of the site are substantially compromised as a result of prior land use activity and would be difficult to restore and/or manage as a native woodland and which provide limited ecological function and ecosystem services.

Development
The creation of a new lot, a change in land use, or the construction of buildings and structures requiring approval under the Planning Act but does not include:

a) activities that create or maintain infrastructure authorized under an environmental assessment process or identified in provincial standards; or,

b) works subject to the Drainage Act

(Based on P.P.S., 2024).

Ecological Function
The natural processes, products or services that living and non-living environments provide or perform within or between species, ecosystems and landscapes. These may include biological, physical and socio-economic interactions (P.P.S., 2024).

Ecological Integrity
Includes hydrological integrity, and means a condition that is determined to be characteristic of its natural region and likely to persist, including abiotic components and the composition and abundance of native species and biological communities, rates of change and supporting processes.

Endangered Species
A species that is classified as “Endangered Species” on the Species at Risk in Ontario List, as updated and amended from time to time.

Enhancement Areas
Ecologically supporting areas adjacent to natural heritage features and areas, key natural heritage features, key hydrologic features. Enhancement areas can also be measured internal to features that increase the ecological resilience and function of individual features or groups of natural features and areas. Enhancements areas are identified where they:

- connect natural features and areas to create larger contiguous natural areas;
- Reduce edge habitat and increase proportion of interior conditions (> 100 m from edge); and
- Include critical function zones and important catchment areas critical to sustaining ecological functions.

Environmental Impact Study
A science-based study of ecological features and functions, and impacts to those features and functions resulting from development and/or site alteration, prepared in accordance with the Region’s environmental impact study guidelines.
The purpose of an environmental impact study is to:

- collect and evaluate the appropriate information in order to have a complete understanding of the boundaries, attributes, and functions of components of the Natural Environment System;
- determine whether there are any additional components;
- undertake a comprehensive impact analysis;
- propose appropriate mitigation measures;
- clearly articulate any impacts that cannot be avoided or mitigated;
- where appropriate, recommend monitoring provisions;
- consider climate change, cumulative and/or watershed impacts where possible; and
- demonstrate that ecological enhancement to the Natural Environment System is achieved.

Fish
As defined in the Fisheries Act, includes fish, shellfish, crustaceans, and marine animals, at all stages of their life cycles.

Fish Habitat
As defined in the Fisheries Act, means spawning grounds and any other areas, including nursery, rearing, food supply, and migration areas on which 'fish' depend directly or indirectly in order to carry out their life processes (P.P.S., 2024).

Flooding Hazards
The inundation, under the conditions specified below, of areas adjacent to a shoreline or a river or stream system and not ordinarily covered by water:

a) along the shorelines of the Great Lakes - St. Lawrence River System and large inland lakes, the flooding hazard limit is based on the one hundred year flood level plus an allowance for wave uprush and other water related hazards;

b) along river, stream and small inland lake systems, the flooding hazard limit is the greater of:

    1. the flood resulting from the rainfall actually experienced during a major storm such as the Hurricane Hazel storm (1954) or the Timmins storm (1961), transposed over a specific watershed and combined with the local conditions, where evidence suggests that the storm event could have potentially occurred over watersheds in the general area;
    2. the one hundred year flood; and
    3. a flood which is greater than 1. or 2. which was actually experienced in a particular watershed or portion thereof as a result of ice jams and which has been approved as the standard for that specific area by the Minister of Natural Resources and Forestry;

except where the use of the one hundred year flood or the actually experienced event has been approved by the Minister of Natural Resources and Forestry as the standard for a specific watershed (where the past history of flooding supports the lowering of the standard) (P.P.S., 2024).

Floodplains
For river, stream and small inland lake systems, means the area, usually low lands adjoining a watercourse, which has been or may be subject to flooding hazards (P.P.S., 2024).

Floodway
For river, stream and small inland lake systems, means the portion of the flood plain where development and site alteration would cause a danger to public health and safety or property damage. Where the one zone concept is applied, the floodway is the entire contiguous flood plain. Where the two zone concept is applied, the floodway is the contiguous inner portion of the flood plain, representing that area required for the safe passage of flood flow and/or that area where flood depths and/or velocities are considered to be such that they pose a potential threat to life and/or property damage. Where the two zone concept applies, the outer portion of the flood plain is called the flood fringe (P.P.S., 2024).

Greenbelt Plan Natural Heritage System
The natural heritage system mapped and issued by the Province in accordance with the Greenbelt Plan.

Habitat of Endangered Species and Threatened Species
Habitat within the meaning of Section 2 of the Endangered Species Act, 2007 (P.P.S., 2024).

Hazardous Lands
Means property or lands that could be unsafe for development due to naturally occurring processes. Along the shorelines of the Great Lakes – St. Lawrence River System, this means the land, including that covered by water, between the international boundary, where applicable, and the furthest landward limit of the flooding hazard, erosion hazard or dynamic beach hazard limits. Along the shorelines or large inland lakes, this means the land, including that covered by water, between a defined offshore distance or depth and the furthest landward limit of the flooding hazard, erosion hazard or dynamic beach hazard limits. Along river, stream and small inland lake systems, this means the land, including that covered by water, to the furthest landward limit of the flooding hazard or erosion hazard limits (P.P.S., 2024).

Hazardous Sites
Property or lands that could be unsafe for development and site alteration due to naturally occurring hazards. These may include unstable soils (sensitive marine clays [leda], organic soils) or unstable bedrock (karst topography).

Highly Vulnerable Aquifers
Aquifers, including lands above the aquifers, on which external sources have or are likely to have a significant adverse effect (Greenbelt Plan, 2017).

Hydrologic Evaluation

A science-based study of hydrologic features and areas, and impacts to those features and hydrologic functions resulting from development and/or site alteration.

The purpose of a hydrologic evaluation is to:

- collect and evaluate the appropriate information in order to have a complete understanding of the boundaries, attributes of permanent and intermittent streams, inland lakes and their littoral zones, seepage areas and springs, wetlands, groundwater features, surface water features, floodplains, flooding hazards, floodways,shoreline areas, and related hydrologic functions;
- determine whether there are any additional hydrologic features and areas;
- assess the significance and sensitivity of hydrologic features and their hydrologic functions;
- undertake a comprehensive impact analysis;
- propose appropriate mitigation measures;
- identify planning, design and construction practices that will maintain and, where possible, enhance or restore the health, diversity and size of the hydrologic feature and functions and its connectivity with other hydrologic features, natural heritage features and areas and key natural heritage features;
- clearly articulate any impacts that cannot be avoided or mitigated;
- where appropriate, recommend monitoring provisions to evaluate the long-term effectiveness of the identified mitigation measures; and
- consider climate change, cumulative and/or watershed impacts where possible.

Hydrologic Functions

The functions of the hydrological cycle that include the occurrence, circulation, distribution and chemical and physical properties of water on the surface of the land, in the soil and underlying rocks, and in the atmosphere, and water's interaction with the environment including its relation to living things (P.P.S., 2024).

Infrastructure

Physical structures (facilities and corridors) that form the foundation for development. Infrastructure includes: sewage and water systems, septage treatment systems, stormwater management systems, waste management systems, electricity generation facilities, electricity transmission and distribution systems, communications/telecommunications, transit and transportation corridors and facilities, oil and gas pipelines and associated facilities.

Inland Lakes and their Littoral Zones
Any inland body of permanently standing water larger than a pool or pond or a body of water filling a depression in the earth's surface, where their water levels and hydrologic functions are not directly influenced by either Lake Erie or Lake Ontario.

Inland lakes do not include storm water management ponds, ponds constructed for irrigation purposes, such as those on a golf course or used for agriculture, lakes that have been constructed and managed with the sole purpose of supporting essential infrastructure, and where their ecological function is not a consideration in their management.

Intermittent Stream
Stream-related watercourses that contain water or are dry at times of the year that are more or less predictable, generally flowing during wet seasons of the year but not the entire year, and where the water table is above the stream bottom during parts of the year (Greenbelt Plan, 2017).

Key Hydrologic Area
Significant groundwater recharge areas, highly vulnerable aquifers, and significant surface water contribution areas that are necessary for the ecological and hydrologic integrity of a watershed.

Key Hydrologic Features
Permanent streams, intermittent streams, inland lakes and their littoral zones, seepage areas and springs, and wetlands.

Key Natural Heritage Features
Habitat of endangered species and threatened species; fish habitat; wetlands; life science areas of natural and scientific interest (A.N.S.I.'s), significant valleylands, significant woodlands; significant wildlife habitat (including habitat of special concern species); sand barrens, savannahs, and tallgrass prairies; and alvars (Greenbelt 2017).

Lake
Any inland body of standing water, usually fresh water, larger than a pool or pond or a body of water filling a depression in the earth's surface.

Landform Features
Distinctive physical attributes of land such as slope, shape, elevation and relief.

Large Inland Lakes
Those waterbodies having a surface area of equal to or greater than 100 square kilometres where there is not a measurable or predictable response to a single runoff event.

Linkages
An area, that may or may not be associated with the presence of existing natural features and areas, that provides and maintains ecological connectivity between core areas consisting of natural features and areas, and supports a range of community and ecosystem processes enabling plants and animals to move among natural heritage features, in some cases over multiple generations, thereby supporting the long-term sustainability of the overall natural environment system.

Municipal Comprehensive Review
A new official plan, or an official plan amendment, initiated by the Region under Section 26 of the Planning Act, 1990 that comprehensively applies Provincial policies and plans and the applicable policies of this Plan.

Natural Environment System
An ecologically integrated system made up of the Provincial natural heritage systems, natural heritage features and areas, other wetlands, key natural heritage features, key hydrologic features, key hydrologic areas, shoreline areas, hydrologic functions, supporting features and areas, hazardous lands, and linkages intended to provide connectivity and support natural processes which are necessary to maintain biological and hydrological diversity, ecological functions, ecosystem services, viable populations of indigenous species, and ecosystems.

Natural Heritage Features and Areas
Features and areas, including significant wetlands, significant coastal wetlands, other coastal wetlands, fish habitat, significant woodlands, significant valleylands, habitat of endangered species and threatened species, significant wildlife habitat, and significant areas of natural and scientific interest, which are important for their environmental and social values as a legacy of the natural landscapes of an area (modified from P.P.S., 2024). For the purposes of this definition, natural heritage features and areas includes other woodlands, earth science areas of natural and scientific interest (provincial and regional), and life science areas of natural and scientific interest (provincial and regional).

Natural Heritage System

A system made up of natural heritage features and areas, wetlands, and linkages intended to provide connectivity (at the regional or site level) and support natural processes which are necessary to maintain biological and geological diversity, natural functions, viable populations of indigenous species, and ecosystems. These systems can include key natural heritage features, key hydrologic features, federal and provincial parks and conservation reserves, other natural heritage features and areas, lands that have been restored or have the potential to be restored to a natural state, associated areas that support hydrologic functions, and working landscapes that enable ecological functions to continue.

Negative impacts

a) In regard to water, degradation to the quality or quantity of surface or groundwater, key hydrologic features or vulnerable areas and their related hydrologic functions, due to single, multiple or successive development or site alteration activities;

b) In regard to fish habitat, any permanent alteration to, or destruction of fish habitat, except where, in conjunction with the appropriate authorities, it has been authorized under the Fisheries Act; and

c) In regard to other natural heritage features and areas, degradation that threatens the health and integrity of the natural features or ecological functions for which an area is identified due to single, multiple or successive development or site alteration activities (Greenbelt Plan, 2017).

One Hundred Year Flood

For river, stream and small inland lake systems, means that flood, based on an analysis of precipitation, snow melt, or a combination thereof, having a return period of 100 years on average, or having a 1% chance of occurring or being exceeded in any given year.

One Hundred Year Flood Level

a) For the shorelines of the Great Lakes, the peak instantaneous still water level, resulting from combinations of mean monthly lake levels and wind setups, which has a 1% chance of being equalled or exceeded in any given year;
b) In the connecting channels (St. Mary's, St. Clair, Detroit, Niagara and St. Lawrence Rivers), the peak instantaneous still water level which has a 1% chance of being equalled or exceeded in any given year; and
c) For large inland lakes, lake levels and wind setups that have a 1% chance of being equalled or exceeded in any given year, except that, where sufficient water level records do not exist, the one hundred year flood level is based on the highest known water level and wind setups.

Other Water-Related Hazards

Water-associated phenomena other than flooding hazards and wave uprush which act on shorelines. This includes, but is not limited to ship-generated waves, ice piling and ice jamming.

Other Wetlands

Lands that meet the definition of a wetland, and which have not been evaluated as a provincially significant wetland.

Other Woodlands
Woodlands determined to be ecologically important in terms of features, functions, representation, or amount, and contributing to the quality and diversity of an identifiable geographic area or natural heritage system. Other woodlands include all terrestrial treed vegetation communities where the percent tree cover is >25%. Other woodlands would not include woodlands meeting the criteria as significant woodlands.

Permanent Streams
Watercourses that contain water during all times of the year.

Provincial and Federal Requirements

a) In regard to Section 3.1.12 of this Plan, legislation and policies administered by the federal or provincial governments for the purpose of fisheries protection (including fish and fish habitat), and related, scientifically established standards such as water quality criteria for protecting lake trout populations; and
b) In regard to Section 3.1.13 of this Plan, legislation and policies administered by the provincial government or federal government, where applicable, for the purpose of protecting species at risk and their habitat.

Provincially Significant Wetlands
Those wetlands identified as provincially significant by the Ontario Ministry of Natural Resources and Forestry using evaluation procedures established by the Province, as amended from time to time (P.P.S., 2024).

River, Stream and Small Inland Lake Systems
All watercourses, rivers, streams, and small inland lakes or waterbodies that have a measurable or predictable response to a single runoff event.

Rural Areas
A system of lands within local municipalities that may include rural settlements, rural lands, prime agricultural areas, natural heritage features and areas, and resource areas (P.P.S., 2024).

Rural Settlements
Communities located in rural areas, as delineated on Schedule B of the Niagara Official Plan, that are serviced by individual private on-site water and/or private wastewater systems, contain a limited amount of undeveloped lands that are designated for development, and are to accommodate limited growth. All settlement areas that are identified as hamlets in the Greenbelt

Plan, or as minor urban centres in the Niagara Escarpment Plan are considered rural settlements for the purposes of this Plan, including those that would not otherwise meet this definition.

Sand Barren
Land (not including land that is being used for agricultural purposes or no longer exhibits sand barren characteristics) that:

a) has sparse or patchy vegetation that is dominated by plants that are:
    i. adapted to severe drought and low nutrient levels; and
    ii. maintained by severe environmental limitations such as drought, low nutrient levels, and periodic disturbances such as fire;
b) has less than 25 per cent tree cover;
c) has sandy soils (other than shorelines) exposed by natural erosion, depositional process, or both; and
d) has been further identified, by the Ministry of Natural Resources and Forestry or by any other person, according to evaluation procedures established by the Ministry of Natural Resources and Forestry, as amended from time to time (Greenbelt Plan, 2017).

Savannah
Means land (not including land that is being used for agricultural purposes or no longer exhibits savannah characteristics) that:

a) has vegetation with a significant component of non-woody plants, including tallgrass prairie species that are maintained by seasonal drought, periodic disturbances such as fire, or both;
b) has from 25 per cent to 60 per cent tree cover;
c) has mineral soils; and
d) has been further identified, by the Ministry of Natural Resources and Forestry or by any other person, according to evaluation procedures established by the Ministry of Natural Resources and Forestry, as amended from time to time (Greenbelt Plan, 2017).

Seepage Areas and Springs
Sites of emergence of groundwater where the water table is present at the ground surface (Greenbelt Plan, 2017).

Setback
A physical separation that forms a boundary by establishing an exact distance from a fixed point, such as a property line, an adjacent structure, or a natural feature, within which development and/or site alteration is prohibited in accordance with the policies of the Conservation Authority.

Settlement Areas
Urban areas and rural settlements within local municipalities (such as cities, towns, villages and hamlets) that are:

a) built up areas where development is concentrated and which have a mix of land uses; and

b) lands which have been designated in an Official Plan for development in accordance with the policies of this Plan. Where there are no lands that have been designated for development, the settlement area may be no larger than the area where development is concentrated.

Shoreline Areas
The interface between terrestrial and aquatic environments, allowing for interactions between them, providing: specialized habitats (e.g., natural beach, overhanging cover, bird stopover or nesting, etc.), natural cover, areas of shoreline erosion or accretion, nutrient and sediment filtration / buffering, shading, foraging opportunities.

Significant Areas of Natural and Scientific Interest
Those areas of natural and scientific interest identified as provincially significant and regionally significant by the Ontario Ministry of Natural Resources and Forestry using evaluation procedures established by the Province, as amended from time to time.

Significant Coastal Wetlands
Those coastal wetlands identified as provincially significant by the Ontario Ministry of Natural Resources and Forestry using evaluation procedures established by the Province, as amended from time to time (P.P.S., 2024).

Significant Groundwater Recharge Area
An area that has been identified as:

a) a significant groundwater recharge area by any public body for the purposes of implementing the P.P.S.;

b) a significant groundwater recharge area in the assessment report required under the Clean Water Act, 2006; or
c) an ecologically significant groundwater recharge area delineated in a subwatershed study or equivalent in accordance with provincial guidelines.

For the purposes of this definition, ecologically significant groundwater recharge areas are areas of land that are responsible for replenishing groundwater systems that directly support sensitive areas like cold water streams and wetlands (Greenbelt Plan, 2017).

Groundwater recharge areas are also classified as “significant” where they supply more water to an aquifer than the surrounding area (N.P.C.A., 2013). In other words, a recharge area is considered significant when it helps to maintain the water level in an aquifer that supplies a community with drinking water, or supplies groundwater recharge to a coldwater ecosystem that is dependent on this recharge to maintain its ecological function (N.V.C.A., 2015b).

Significant Surface Water Contribution Areas
Areas, generally associated with headwater catchments that contribute to baseflow volumes which are significant to the overall surface water flow volumes within a watershed (Greenbelt Plan, 2017).

Significant surface water contribution areas include headwater drainage features classified as protection, conservation and mitigation.

Significant Valleylands
Valleyland which is ecologically important in terms of features, functions, representation or amount, and contributing to the quality and diversity of an identifiable geographic area or natural heritage system. These are to be identified using criteria established by the Province (P.P.S, 2024).

Significant Wetlands
An area identified as provincially significant by the Ontario Ministry of Natural Resources and Forestry using evaluation procedures established by the Province, as amended from time to time (P.P.S., 2024).

Significant Wildlife Habitat
Wildlife habitat that is ecologically important in terms of features, functions, representation, or amount, and contributing to the quality and diversity of an identifiable geographic area or natural

heritage system. These are to be identified using criteria established by the Province (P.P.S., 2024).

Significant Woodlands
Woodlands that are ecologically important in terms of features such as species composition, age of trees and stand history; functionally important due to its contribution to the broader landscape because of its location, size or due to the amount of forest cover in the planning area; or economically important due to site quality, species composition, or past management history (P.P.S., 2024).

Site Alteration
Activities, such as grading, excavation and the placement of fill that would change the landform and natural vegetative characteristics of a site (P.P.S., 2024).

Stormwater Management Facility
A facility for the treatment, retention, infiltration or control of stormwater.

Subwatershed Planning
Planning that reflects and refines the goals, objectives, targets, and assessments of watershed planning, as available at the time subwatershed planning is completed, for smaller drainage areas, is tailored to subwatershed needs and addresses local issues.

Subwatershed planning typically includes: the consideration of existing development and the evaluation of the impacts of any potential or proposed land uses and development; the identification hydrologic features, areas, linkages, and functions; the identification of natural features, areas, and related hydrologic functions; and a plan for protecting, improving, or restoring the quality and quantity of water within a subwatershed.

Subwatershed planning is based on pre-development monitoring and evaluation; is integrated with natural heritage protection; and identifies specific criteria, objectives, actions, thresholds, targets, and best management practices for development, for water and wastewater servicing, for stormwater management, for managing and minimizing impacts related to severe weather events, and to support ecological needs.

Subwatershed Study
The plan or outcome from a subwatershed planning exercise.

Supporting Features and Areas
Lands that have been restored or have the potential of being restored. Supporting features and areas include grasslands, meadows, and thickets (defined in accordance with Ecological Land Classification for Southern Ontario); other valleylands; and other wildlife habitat; and enhancement areas where they are determined to contribute to the biodiversity and ecological function of the natural environment system.

Surface Water Feature
Water-related features on the earth's surface, including headwaters, rivers, stream channels, inland lakes, seepage areas, recharge/discharge areas, springs, wetlands, and associated riparian lands that can be defined by their soil moisture, soil type, vegetation, or topographic characteristics (P.P.S., 2024).

Sustainable
Meeting the needs of the present without compromising the ability of future generations to meet their own needs.

Vegetation Protection Zones
A vegetated buffer area surrounding a key natural heritage feature or key hydrologic feature (Greenbelt Plan, 2017).

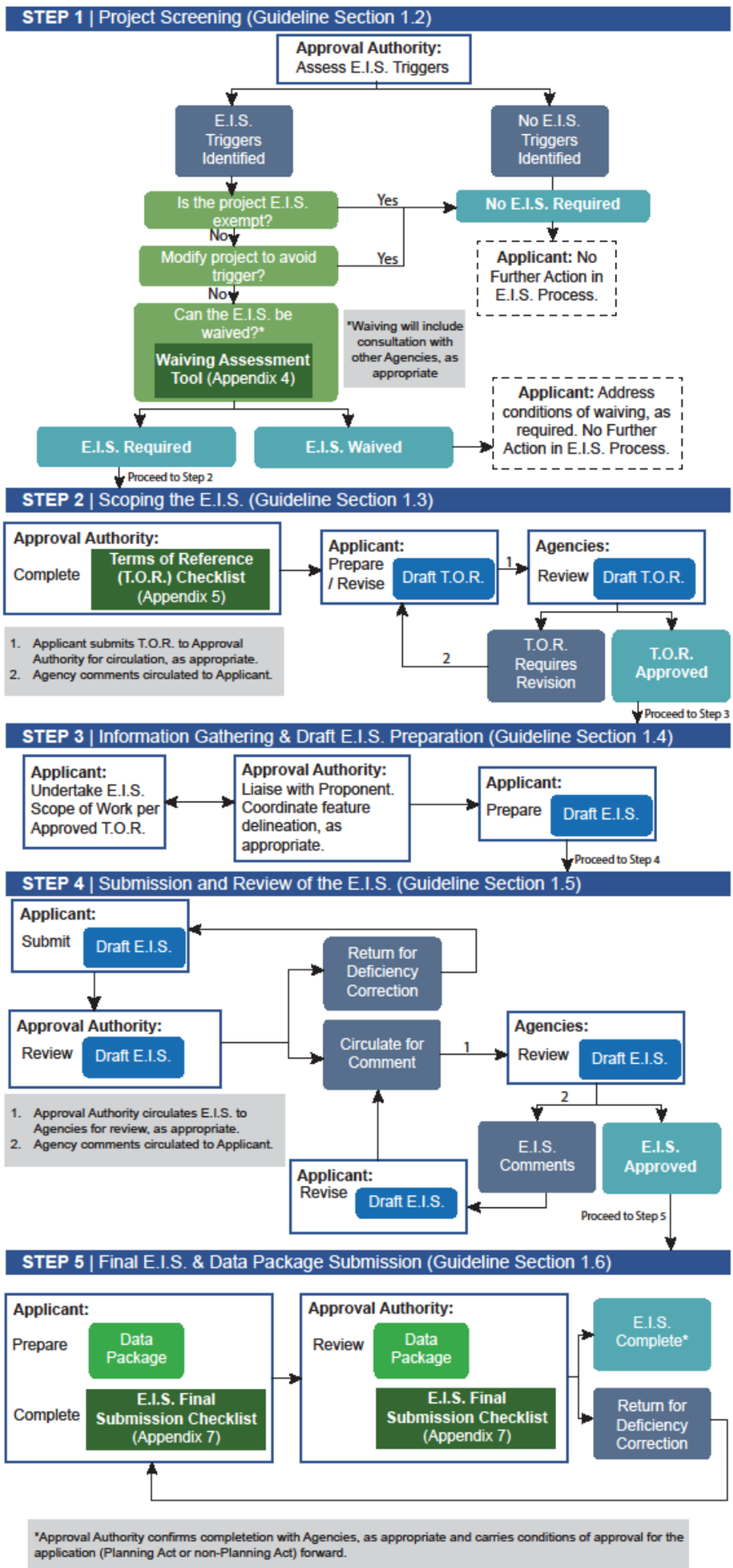
Water Resource System
A system consisting of groundwater features and areas and surface water features (including shoreline areas), and hydrologic functions, which provide the water resources necessary to sustain healthy aquatic and terrestrial ecosystems and human water consumption. The water resource system comprises of key hydrologic features and key hydrologic areas.

Wetlands
Lands that are seasonally or permanently covered by shallow water, as well as lands where the water table is close to or at the surface. In either case the presence of abundant water has caused the formation of hydric soils and has favoured the dominance of either hydrophytic plants or water tolerant plants. The four major types of wetlands are swamps, marshes, bogs and fens. Periodically soaked or wet lands being used for agricultural purposes which no longer exhibit wetland characteristics are not considered to be wetlands for the purposes of this definition (P.P.S., 2024).

Wildlife Habitat
Areas where plants, animals and other organisms live, and find adequate amounts of food, water, shelter, and space needed to sustain their populations. Specific wildlife habitats of concern may include areas where species concentrate at a vulnerable point in their annual or life cycle; and areas which are important to migratory or non-migratory species (P.P.S., 2024).

Woodlands
Treed areas that provide environmental and economic benefits to both the private landowner and the general public, such as erosion prevention, hydrological and nutrient cycling, provision of clean air and the long-term storage of carbon, provision of wildlife habitat, outdoor recreational opportunities, and the sustainable harvest of a wide range of woodland products. Woodlands include treed areas, woodlots or forested areas and vary in their level of significance at the local, regional and provincial levels. Woodlands will be delineated according to the Province's Ecological Land Classification system definition for forest (P.P.S., 2024). For the purposes of this definition, forests include terrestrial vegetation communities as defined in accordance with the Ecological Land Classification (E.L.C.) system, where the tree cover is greater than 60%.

Appendix 2 | E.I.S. Process Diagram


STEP 1 | Project Screening (Guideline Section 1.2)
Approval Authority: Assess E.I.S. Triggers
E.I.S. Triggers Identified
No E.I.S. Triggers Identified
Is the project E.I.S. exempt?
Yes
No E.I.S. Required
No
Modify project to avoid trigger?
Yes
Applicant: No Further Action in E.I.S. Process.
No
Can the E.I.S. be waived?*
Waiving Assessment Tool (Appendix 4)
*Waiving will include consultation with other Agencies, as appropriate
Applicant: Address conditions of waiving, as required. No Further Action in E.I.S. Process.
E.I.S. Required
E.I.S. Waived
Proceed to Step 2
STEP 2 | Scoping the E.I.S. (Guideline Section 1.3)
Approval Authority:
Complete
Terms of Reference (T.O.R.) Checklist (Appendix 5)
Applicant:
Prepare / Revise
Draft T.O.R.
1
Agencies:
Review
Draft T.O.R.
1. Applicant submits T.O.R. to Approval Authority for circulation, as appropriate.
2. Agency comments circulated to Applicant.
2
T.O.R. Requires Revision
T.O.R. Approved
Proceed to Step 3
STEP 3 | Information Gathering & Draft E.I.S. Preparation (Guideline Section 1.4)
Applicant: Undertake E.I.S. Scope of Work per Approved T.O.R.
Approval Authority: Liaise with Proponent. Coordinate feature delineation, as appropriate.
Applicant:
Prepare
Draft E.I.S.
Proceed to Step 4
STEP 4 | Submission and Review of the E.I.S. (Guideline Section 1.5)
Applicant:
Submit
Draft E.I.S.
Return for Deficiency Correction
Approval Authority:
Review
Draft E.I.S.
Circulate for Comment
1
Agencies:
Review
Draft E.I.S.
1. Approval Authority circulates E.I.S. to Agencies for review, as appropriate.
2. Agency comments circulated to Applicant.
2
E.I.S. Comments
E.I.S. Approved
Applicant:
Revise
Draft E.I.S.
Proceed to Step 5
STEP 5 | Final E.I.S. & Data Package Submission (Guideline Section 1.6)
Applicant:
Prepare
Data Package
Complete
E.I.S. Final Submission Checklist (Appendix 7)
Approval Authority:
Review
Data Package
E.I.S. Final Submission Checklist (Appendix 7)
E.I.S. Complete*
Return for Deficiency Correction
*Approval Authority confirms completetion with Agencies, as appropriate and carries conditions of approval for the application (Planning Act or non-Planning Act) forward.

Appendix 3 | E.I.S. Project Screening Tool

Project Screening Tool | Environmental Impact Study

INTRODUCTION

The Project Screening Tool supports and documents initial screening of a proposed project / application either at pre-consultation, or upon submission, as applicable for the type of project (refer s. 1.2 of the Guideline). **All development and site alteration projects should be screened**. Project screening is to occur through Pre-consultation on all Planning Act applications, or at the time of application where no formal pre-consultation is required (non-planning act applications).

Screening is to be completed by a municipal Planner, Environmental Planner, or Natural Heritage Planner with appropriate knowledge, experience, and background in natural heritage, from the Approval Authority or their designate.

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PROJECT INFORMATION

Proponent	
Name:	
Project Contact	
Name:	Email:
Title:	Phone:
Subject Lands	
Street Address:	Location Description:
Municipality:	Lot & Concession:
Project Summary	
Project Type[1]:	

[1] Please indicate the project type from the following list or specify the type if not listed below.

- Agricultural structure or building
- New single detached dwelling: existing lot **or** lot severance
- New accessory structure **or** development (e.g., garage, shed, swimming pool, driveway)
- Re-build – same footprint **or** larger or altered footprint
- Addition(s) to / expansion of existing building(s) **or** accessory building or development
- Septic system or other servicing
- Site alteration (grading, fill, etc.)
- Multi-unit / subdivision development

Project Description[2]:

PROJECT SCREENING

This project screening is being completed at:

☐ Pre-consultation

☐ Submission

Please list the information provided by the applicant that is informing this project screening:

ASSESSMENT RESOURCES

Project screening is to consider both mapped (Per Schedule C2 of the N.O.P.) and unmapped features and functions. Multiple resources are required to inform screening. Please select all that were used in preparing this screening assessment:

☐ Niagara Official Plan schedules and associated online mapping

☐ Local Area Municipality schedules and any associated online mapping

☐ Watershed Plan(s) and/or Subwatershed Plan(s)

☐ Aerial / satellite imagery of the project area (to screen for unmapped features / potential features)

☐ Conservation Authority mapping (e.g., regulated areas, wetlands, etc.)

☐ Land Information Ontario (L.I.O.)

[2] Provide a brief description of the proposed project. Include relevant information which informs the scope, scale or factors influencing the assessment of the proposed project for waiving.

☐ Natural Heritage Information Centre (N.H.I.C.)
☐ Department of Fisheries and Oceans (D.F.O.) Species at Risk mapping
☐ Other: _____

Please list specific plans (e.g., watershed or subwatershed plans), as applicable, for reference:

PROCESS TRIGGERS

Does the project or activity wholly or partially occur within / overlap any of the following?

☐ Key hydrological feature(s) outside of settlement areas
☐ Features and Components of the Niagara Region Natural Environment System (per section 3.1.1 and 3.1.2 of the N.O.P.)
☐ Local Area Municipality N.H.S', W.R.S' and/or N.E.S' as identified / appropriate based on local area municipal policies.
☐ Potential habitat for Endangered or Threatened Species.
☐ Potential Significant Wildlife Habitat
☐ Adjacent Lands to a component of the N.E.S. (Table A3-1 of the N.O.P.)
☐ Unmapped feature(s) requiring further assessment to determine status.

If **yes** to any of the above, the E.I.S. Process is triggered. Proceed to Prohibitions.	If **no** to all the above, the E.I.S. Process is not triggered. No further action required.

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PROHIBITIONS TO DEVELOPMENT & SITE ALTERATION

PROHIBITIONS

Development and/or site alteration are prohibited through policy from occurring in certain features and areas. Complete the checklist below to confirm the proposed activity is not prohibited.

Does the proposed development or site alteration occur wholly or partially within or include direct changes to one or more of the following (select all that apply)?

☐ Key hydrologic features outside of settlement areas

☐ Vegetation Protection Zones to features within the Greenbelt Plan Area or key hydrologic features outside of settlement areas

☐ Provincially Significant Wetlands

☐ Significant Coastal Wetlands

☐ Fish Habitat, except in accordance with *Provincial and Federal requirements*

☐ Habitat for Endangered and Threatened Species, except in accordance with *Provincial and Federal requirements*

☐ Lands Outside the Provincial N.H.S. and Outside of the N.E.P.A.

☐ Significant Woodlands (where associated Niagara Region policies apply)

If **yes** to any of the above.	If **no** to all the above.
Proceed to Exceptions.	Proceed to Exemptions.

If / where a proposed activity is prohibited, there may be opportunity to modify a proposal to avoid the prohibition. Proponents may choose to re-submit with a revised plan which addresses the prohibition, where appropriate.

EXCEPTIONS

There are some limited exceptions to the prohibitions identified above. The policies listed below identify exceptions to the prohibitions stated above. A development or site alteration must meet all applicable exceptions to remove the prohibition.

Yes	No	n/a	
☐	☐	☐	For key natural heritage features within the Greenbelt Plan Area and Key Hydrologic Features outside of settlement areas per section 3.1.5.5 of the N.O.P.
☐	☐	☐	For Vegetation Protection Zones of the per section 3.1.5.7.3 of the N.O.P.
☐	☐	☐	For Fish Habitat per section 3.1.12.1 of the N.O.P.
☐	☐	☐	For Habitat of Endangered Species and Threatened Species per section 3.1.13.1 of the N.O.P.
☐	☐	☐	Permitted usesin natural heritage features and areas per section 3.1.9.5.3 of the N.O.P.

Note: There are no exceptions for Provincially Significant Wetlands or Significant Coastal Wetlands.

If yes to **all applicable** prohibition exceptions, proceed to exemptions.

If no to any applicable prohibition exceptions, the proposed activity if prohibited.

If a conflict occurs between policy documents, it is the most restrictive that shall apply.

EXEMPTIONS TO THE REQUIREMENT FOR AN EIS

A limited number of conditions may exempt a proposed development or site alteration from requiring an E.I.S.

NIAGARA-WIDE EXEMPTIONS

A development or site alteration is exempt from the requirement for an E.I.S. where it **meets one or more of the following:**

☐ The activity has been authorized under an environmental assessment (E.A.) process, including a Class Environmental Assessment, carried out in accordance with provincial or federal legislation.

[3] Where a proposal, as submitted is prohibited, the lead planner may enter dialogue with the applicant to identify potential opportunities to modify the proposal to avoid the prohibition. Not all proposals will have suitable opportunities to modify and avoid the prohibition(s).

- ☐ A study that meets or exceeds the requirements of an E.I.S. has been completed within 5 years of the proposed activity occurring or within the timeframe of the project approval set out in that study (e.g., comprehensive *subwatershed study*).
- ☐ The activity is associated with the continuation of existing *agricultural uses.*
- ☐ The activity is for new building(s) and structure(s) for agricultural, agriculture-related uses, or on-farm diversified uses, **and** a minimum 30m VPZ or buffer (as applicable) is provided from any key natural heritage feature(s) or key hydrologic feature(s)[4].
- ☐ The only key feature is habitat for Endangered or Threatened species, and the activity has been approved / authorized through provincial and/or federal legislation[5]
- ☐ The only key feature is Fish Habitat, and the activity has been approved / authorized through provincial and/or federal legislation[6]

AREA-SPECIFIC EXEMPTIONS

For Niagara Peninsula Tender Fruit and Grape Area in the Greenbelt Plan.

New buildings or structures for agricultural, agriculture-related and on-farm diversified uses, where[7]:

- ☐ The only feature is a permanent or intermittent stream that also functions as an agricultural swale, roadside ditch, or municipal drain as determined through provincially approved mapping, **and** a minimum 15m VPZ is provided between the building or structure and the permanent or intermittent stream.

If **yes** to one or more exemptions.	If **no** exemptions are met.
An E.I.S. is not required.	The E.I.S. process is triggered, proceed to waiving or scoping[8].

[4] S. 3.1.5.7.5 and 3.1.9.8.4 of the N.O.P.
[5] S. 3.1.5.7.4 and S. 3.1.9.8.3 of the N.O.P.
[6] S. 3.1.12.1 and S. 3.1.12.2 of the N.O.P.
[7] S. 3.1.6.1 of the N.O.P.
[8] The decision to proceed to waiving or scoping will be determined by the planner and communicated to the applicant.

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ASSESSMENT SIGN-OFF

For records purposes, please identify who completed the project screening.

Screening Completed By	**Reviewed and Accepted By**
Name	Name
Position	Position
Company/Organization	Organization
Date	Date

Appendix 4 | E.I.S. Waiving Assessment Tool

Waiving Assessment Tool | Environmental Impact Study

INTRODUCTION

The Waiving Assessment Tool facilitates review of **eligible** development and site alteration projects to determine if the requirement for a standard Environmental Impact Study (E.I.S.) may be waived in accordance with Section 3.1.33.3 of the Niagara Official Plan (N.O.P.). The Waiving Assessment functions as a streamlined E.I.S. and includes typical information in a condensed format to assess project risk and potential impacts to the Natural Environment System. Waiving only applies to the requirement for an E.I.S., should a hydrologic evaluation be required, that is not addressed through this tool. Waiving is only permitted where there is no, or low risk of impact to the Natural Environment System **and** that the potential impacts are well understood and can be mitigated through standard measures. Waiving will include conditions; this can include specific mitigation and / or other measures to ensure policy requirements are met (e.g., no impact, no negative impact). All conditions must be met by the proponent to support waiving.

Completion of a waiving assessment **does not** guarantee that a project will have the E.I.S. requirement waived. It is a tool to inform the decision to waive or confirm the requirement for a standard E.I.S.

The Waiving Assessment Tool is to be used by the Approval Authority to document an assessment of a project and forms part of the formal project record. It may also be used as a reference for landowners, architects, consultants (engineers, ecologists, etc.) to understand what projects may be appropriate for waiving assessment and inform design to support potential waiving of the requirement for an E.I.S.

OVERVIEW

The Waiving Assessment Tool proceeds through several steps to summarize existing conditions, identify features on or adjacent to the Subject Lands, assess the project to determine risks and potential impacts to the Natural Environment System and its functions, and identify mitigation measures and conditions.

Each step includes content to be filled out and concludes with a decision/outcome providing direction on how to proceed at the conclusion of the step. A project may be deemed ineligible to proceed at various steps of the Waiving Assessment. Refer to **Figure 1** for an illustrative summary of the steps, key decision points and potential outcomes.

USING THE TOOL

The Waiving Assessment Tool is to be completed by a qualified representative of the Approval Authority (or their designate), including:

- Land Use Planners with support from Natural Heritage technical reviewers,
- Natural Heritage / Environment Planners, and/or
- Natural Heritage technical reviewers providing support services on behalf of the Approval Authority (or their designate).

OR

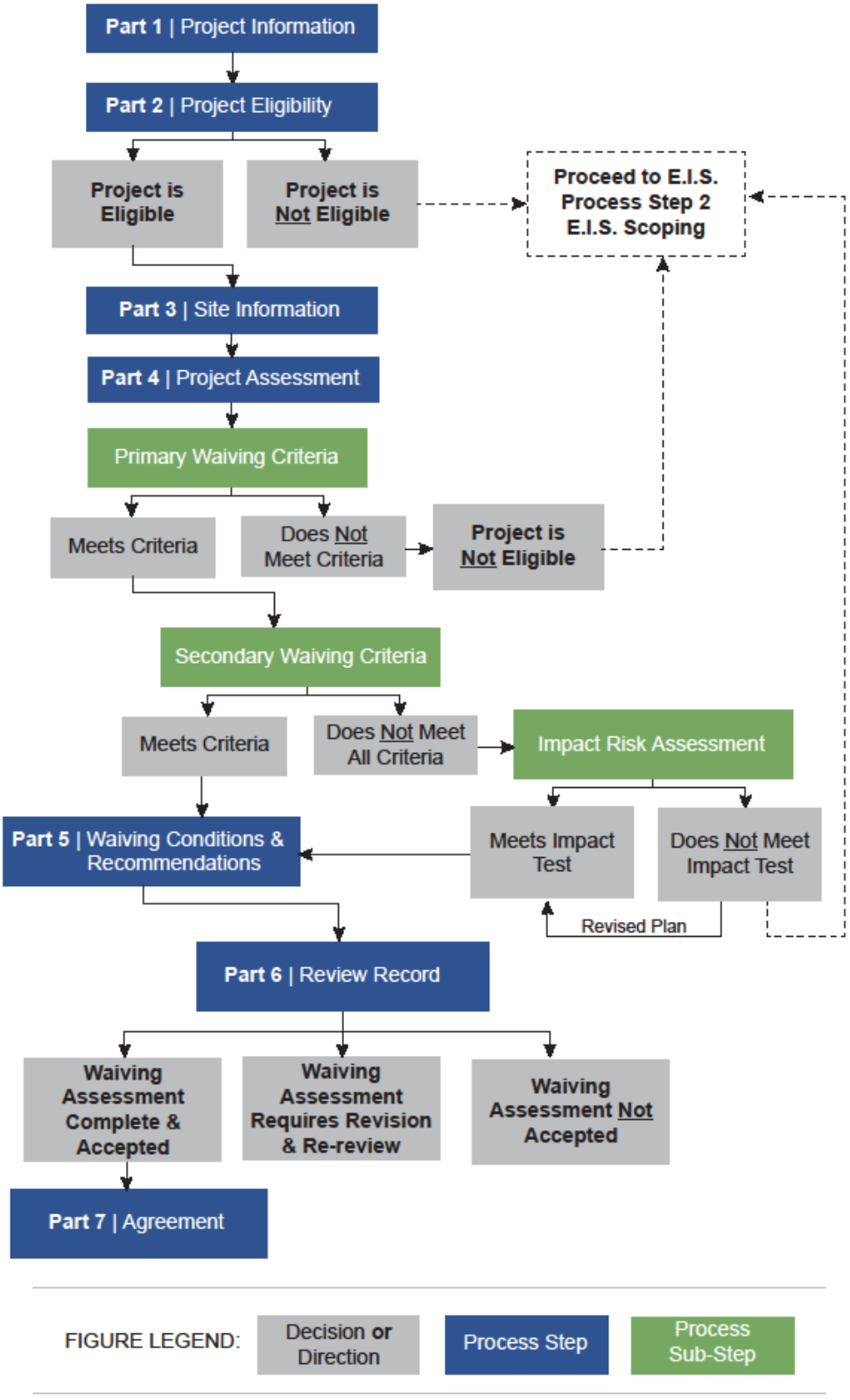
A qualified E.I.S. professional with demonstrated E.I.S. experience on behalf of a proponent.

Where the waiving tool is completed by an E.I.S. professional, the waiving tool **must** be reviewed and accepted by an appropriate and qualified representative of the Approval Authority.

IMPORTANT NOTES

In completing the waiving assessment tool:

- A completed Waiving Assessment Tool forms part of the project review file and should be retained in project records.
- Technical matters may be addressed through the waiving process to facilitate the assessment process or assist a project in having the E.I.S. requirement waived (e.g., Site Plan modification), as such, it is important that the individual leading the process can access relevant technical support.
- Always refer to the most current, in-force Planning documents (Official Plan(s), Provincial Policy Statement, etc.) to complete a Waiving Assessment.


Part 1 | Project Information
Part 2 | Project Eligibility
Project is Eligible
Project is Not Eligible
Proceed to E.I.S. Process Step 2 E.I.S. Scoping
Part 3 | Site Information
Part 4 | Project Assessment
Primary Waiving Criteria
Meets Criteria
Does Not Meet Criteria
Project is Not Eligible
Secondary Waiving Criteria
Meets Criteria
Does Not Meet All Criteria
Impact Risk Assessment
Part 5 | Waiving Conditions & Recommendations
Meets Impact Test
Does Not Meet Impact Test
Revised Plan
Part 6 | Review Record
Waiving Assessment Complete & Accepted
Waiving Assessment Requires Revision & Re-review
Waiving Assessment Not Accepted
Part 7 | Agreement
FIGURE LEGEND:
Decision or Direction
Process Step
Process Sub-Step

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PART 1 | PROJECT INFORMATION

Proponent	
Name:	
Project Contact	
Name:	Email:
Title:	Phone:
Subject Lands	
Street Address:	Location Description:
Municipality:	Lot & Concession:
Current OP Designation:	Assessment Roll Number (if available):
Current Zoning:	
Project Summary	
Project Type[1]:	
Application Type:	
Project description[2]:	

Map/Figure Attached: Yes ☐ No ☐

[1] Please enter the project type to the field from the following list or specify the type if not listed below.

- Agricultural structure or building
- New single detached dwelling: existing lot **or** lot severance
- New accessory structure **or** development (e.g., garage, shed, swimming pool, driveway)
- Re-build – same footprint **or** larger or altered footprint
- Addition(s) to / expansion of existing building(s) **or** accessory building or development
- Septic system or other servicing
- Site alteration (grading, fill, etc.)
- Multi-unit / subdivision development

[2] Provide a brief description of the proposed project. Include relevant information which informs the scope, scale or factors influencing the assessment of the proposed project for waiving.

PART 2 | PROJECT ELIGIBILITY

INELIGIBLE PROJECT TYPES

Some projects are ineligible due to scale, or due to an elevated potential risk to natural heritage features and areas. These projects require further assessment through an E.I.S.

Is the project one (or more) of the following?

- Medium-large scale development (residential, commercial, institutional)
- Large-scale agricultural development
- Medium-large scale recreational development
- Medium-Large scale site alteration
- Aggregate resource or other extractive industries
- Industrial development

Refer to **Attachment A** for examples of projects which may qualify as one of the above.

If **yes**, the project is ineligible for waiving. An E.I.S. is required. Proceed to '**E.I.S. Scoping**' (Step 2 of E.I.S. Process).	If **no**, the project is eligible for proceeding through the waiving assessment. Proceed to '**Site Information**'.

Note: Eligible projects may continue through the waiving assessment; it does not indicate or otherwise imply that the project will have the requirement for an E.I.S. waived.

PART 3 | SITE INFORMATION

This section provides information on the land within and surrounding the proposed activity to support the project assessment (Part 4). Ensure that pertinent information and notes are added which describe the conditions, potential sensitivities, connections / interactions, etc. to create a complete picture of the site.

SITE VISIT

A site visit is strongly recommended to support completion of this section. A site visit access authorization form and record of site visit form are provided in Attachment B. Please complete the information below.

A site visit was requested:

- ☐ Yes
- ☐ No, it was determined to not be required for this project / site.
- ☐ No, other (provide reason)

_____

_____

If requested, was the site visit completed?

- ☐ Yes, refer to site visit authorization and record of site visit (Attachment B).
- ☐ No, access was not granted.
- ☐ No, other (provide reason)

_____

_____

EXISTING LAND USE(S) / LAND COVER

- This section provides context for the current, existing land use(s)[1] / land cover present on the subject lands (proposed project area or property), and lands within 120m of the subject lands. Provide brief written descriptions below. Append a map / image showing the area.

SUBJECT LANDS

LANDS WITHIN 120m

[1] This may include, but is not limited to descriptors such as agricultural building cluster(s), active agricultural fields (cropped), pasture, fallow field, natural feature / area (e.g., meadow, wetland, forest), manicured lawn / areas, recreational (e.g., golf course, campground), residential (rural, estate, urban), commercial, industrial, institutional, park or open space, paved / impermeable surfaces, etc.

NATURAL HERITAGE FEATURES AND AREAS

Using available mapping and information, complete the table(s) below to identify features and areas associated with the N.E.S. occurring on or adjacent to the proposed activity.

Is all or a portion of the Subject Property regulated by N.P.C.A.? ☐ **Yes** ☐ **No**

If yes, consultation with N.P.C.A. is required to a) determine if additional study requirements apply and b) establish if permitting is required.

Have other Environmental or Ecological Studies[2] been completed that contain information relevant to the Subject Lands or adjacent lands? ☐ **Yes** ☐ **No**

If **yes**, please list these in the space below[3]:

Complete the tables and question below to identify features and functions known to, or with potential to occur wholly or partially on the Subject Lands or within Adjacent Lands.

[2] This may include other E.I.S.'s, Environmental Assessments, Subwatershed Studies, etc.

[3] Previous studies should be used to inform the waiving assessment. Age of any previous reports should be considered in how they may inform the assessment. Studies with field data / observational data >5 years old should be considered as background information.

Table 1: Components of the N.E.S.

Feature Present	**Feature / Function**[4]	Distance from Limit of Activity (m)[5]	Notes[6]
☐	Area(s) of Natural and Scientific Interest (A.N.S.I.) – Life Science		
☐	Area(s) of Natural and Scientific Interest (A.N.S.I.) – Earth Science		
☐	Woodland(s) – Significant / potentially significant		
☐	Woodland(s) – Other		
☐	Woodland(s) – Cultural or Regenerating Woodland		
☐	Wetland(s) – Provincially Significant		
☐	Wetland(s) – Significant Coastal		

[4] Refer to Schedule L to the N.O.P. for a list, definitions, and criteria for components of the N.E.S.

[5] For distances over 30m, estimates to the nearest 10m is acceptable. For distances up to 30m, estimates to the nearest 5m are acceptable (e.g., <5m, ~10m). If the distance varies due to shape / limit of a feature, provide a range (e.g., 5-10m, 10-25m) to represent the nearest and greatest extent.

[6] Describe the general land cover / condition of the lands between the feature and the proposed activity, features or species of note, feature quality, type, condition, relationships, and interactions between features, etc.

Feature Present	Feature / Function[4]	Distance from Limit of Activity (m)[5]	Notes[6]
☐	Wetland(s) – Other		
☐	Valleyland(s) – Significant		
☒	Valleyland(s) – Other		
☐	Thickets and/or Meadows		
☐	Sand Barren		
☐	Savannah		
☐	Tallgrass Prairie		
☐	Alvar		
☐	Habitat for Endangered Species and Threatened Species[7]		
☐	Significant Wildlife Habitat[8]		
☐	Fish Habitat		
☐	Linkage(s)		

[7] Per secondary source information and completion of the Preliminary Species at Risk Screening

[8] Per secondary source information and completion of the Preliminary Significant Wildlife Habitat Screening

Table 2: Key Hydrologic Features

Feature Present	**Feature / Function**[9]	Distance from Limit of Activity (m)[4]	Notes[5]
☐	Permanent and/or Intermittent Stream(s)		
☐	Riparian Lands		
☐	Floodplain, Flooding Hazard(s), Floodway(s)		
☐	Inland Lake(s) and their Littoral Zone(s)		
☐	Shoreline Areas		
☐	Seepage Areas and Springs		
☐	Headwater Drainage Feature(s)		

[9] Refer to Schedule L to the N.O.P. for a list, definitions, and criteria for components of the N.E.S.

Table 3: Key Hydrologic Areas and Other Hydrologic Areas

Feature Present	**Feature / Function**[10]	Distance from Limit of Activity (m)[4]	Notes[5]
☐	Significant Groundwater Recharge Area(s)		
☐	Highly Vulnerable Aquifer(s)		
☐	Significant Surface Water Contribution Area(s)		
☐	Other Hydrologic Function(s)		
☐	Floodplain, Flooding Hazard, or Floodway		
☐	Areas regulated by N.P.C.A.		

NOTES

[10] Refer to Schedule L to the N.O.P. for a list, definitions, and criteria for components of the N.E.S.

NATURAL FEATURES THAT HAVE BEEN DISTURBED

Features which have been affected by natural or anthropogenic disturbances are to be considered in the context of section 3.1.18 of the Niagara Official Plan. Please indicate if either policy applies to the Subject Lands:

Yes	No	Criterion
☐	☐	There is evidence that all or portions of a feature have been removed without authorization.
☐	☐	There is evidence of direct anthropogenic disturbance, but not removal of the feature.

If **yes** to **A or B** the project is ineligible for waiving. An E.I.S. is required.

Proceed to '**E.I.S. Scoping**' (Step 2 of E.I.S. Process).

If **no** to **A and B**, the project is eligible for proceeding through the waiving assessment.

Proceed to '**Project Assessment**.

PART 4 | PROJECT ASSESSMENT

Through this section, the proposed activity is assessed against a set of standardized criteria to determine if the eligible project meets the test for ‘no’ or ‘low risk’ to the Natural Environment System, its features, and functions, allowing the requirement for an E.I.S. to be waived. Conditions for waiving, which may include modifications to the proposed activity and / or mitigation measures will also be established.

NATURAL HERITAGE POLICY & REGULATORY CONTEXT

Assessment criteria are, in part, associated with the policy context for the subject lands. As such, it is important to identify which natural heritage policies apply.

The project occurs wholly or partially:

☐ Outside settlement area(s)

- ☐ within the Greenbelt Plan Area
- ☐ within the Niagara Escarpment Plan area
- ☐ outside of the above-noted areas

☐ Within settlement area(s)

☐ Within areas Regulated by the Niagara Peninsula Conservation Authority (N.P.C.A)

PRIMARY WAIVING CRITERIA

Complete the table below for all applicable[11] criteria. If a criterion does not apply, select 'n/a'. If it is unknown and cannot be easily determined without more detailed work, the criterion is not met; select 'no'.

Yes	No	n/a	Criterion
☐	☐	☐	The activity is wholly located outside of Natural Heritage Features and Areas[12], except in accordance with provincial or federal authorization(s)[13].
☐	☐	☐	The activity is wholly located outside of key hydrologic features, except in accordance with provincial or federal authorization(s)[7].
☐	☐	☐	The activity is wholly located outside of mandatory Vegetation Protection Zones for the Greenbelt Plan Area and key hydrologic features outside of settlement areas.
☒	☐	☒	The activity will not significantly[14] alter the existing direction[15], quantity[16], or quality[17] of surface water or groundwater.

[11] Applicability is based on policy context as informed by the proceeding section 'Natural Heritage Policy Context'.

[12] If the only key natural heritage feature is habitat for endangered species or threatened species, select n/a.

[13] This may include Fisheries Act Authorization for activities in Fish Habitat, Provincial permit(s) or authorizations. These must be 'in-hand' to be accepted in the waiving process.

[14] 'Significantly' in this context refers to changes in the direction, quantity or quality of water that will or has potential to cause changes in the form or function of the natural heritage feature(s) being considered through the waiving process (i.e., a negative impact).

[15] This may be assessed using information on grading, stormwater management plan(s), and feature catchment area(s), etc.

[16] This may be influenced by changes in pervious vs. impervious cover, stormwater management, etc.

[17] Quality may include thermal impacts, contamination, sediment, etc. Consideration should be given to mitigation measures being proposed, their efficacy and risk of failure.

If **all applicable Primary Criteria are met**, proceed to Secondary Criteria.	If **one or more Primary Criteria are not met**, the project not eligible for waiving. Do not proceed through waiving assessment.

SECONDARY WAIVING CRITERIA

Secondary waiving criteria support waiving of no and very low risk development and site alteration activities where site conditions (existing and proposed) provide a high level of confidence that there will be no negative impacts or that the potential nature and risk of impact(s) can be easily mitigated through uncomplicated measures.

Numerous factors influence the potential for a proposed development or site alteration to negatively impact natural heritage feature(s) and their function(s). This section identifies some conditions which reduce or eliminate the risk of creating new impact(s) and supporting the conclusion that a proposed development or site alteration is of no or low risk of impacting natural heritage feature(s) and their function(s).

NOTE:

- It is strongly recommended that natural heritage subject matter experts are consulted for or complete this section; interpretation and assessment are required.
- Where uncertainty exists regarding whether a proposed development or site alteration meets a criterion, the precautionary principle is to be applied and the criterion assessed as ‘not met’.

Complete all sections based on the proposed activity and existing land use(s).

A | EXISTING BARRIERS[18] | Presence of some existing land uses between a proposed activity and natural heritage feature(s) reduce the potential risk that the proposed activity will create a new or increase impacts to natural heritage feature(s) and / or their function(s).

Yes	No	n/a	Criteria
☐	☐	☐	An existing road[19] serves as a continuous barrier between the proposed activity and the feature(s). **Or** Existing development[20] of equal or greater density to that being proposed separates the proposed activity and the feature(s).
☐	☐	☐	The proposed activity will not alter the road / intervening land use.

B | POSITIONING | Where the proposed activity is a re-build / re-development of an existing structure, an addition to an existing structure, or construction of an accessory structure, the position of the proposed activity may provide sufficient buffering / separation to reduce or avoid potential risks of impact to natural heritage feature(s) or function(s).

Yes	No	n/a	Criteria
☐	☐	☐	The proposed development is wholly contained within the existing building footprint(s) (e.g., adding a second story, re-development of a building within the same footprint). **Or** The proposed expansion or accessory building extends away from the feature(s).

[18] Barriers in this context refers to barriers to movement of plants and/or animals or where an existing use acts as the interface between natural and built environments and are the primary source of existing impact(s).

[19] 'Road' is defined as linear public or private infrastructure, at the site or landscape scale constructed for the purpose of providing regular vehicular passage. It has a constructed bed and surface material which support long-term use by vehicles. Driveway and access laneways are not considered 'Roads' in this context. Private roads where they are <20m wide are not considered a barrier in this assessment.

[20] 'Existing development' includes residential development(s), commercial development(s), and industrial development(s). Natural, open space, agricultural lands (e.g., fields, pasture, grazing lands, etc.) and other similar uses do not qualify as effective barrier(s) in this context.

C | SEPARATION DISTANCE / BUFFER(S) | Separation between a proposed development or site alteration and natural heritage feature(s) provides buffering from potential impacts.

NOTE: Mandatory V.P.Z.'s to key natural heritage features within the Greenbelt Plan Area and key hydrologic features outside of settlement areas must be met (per Primary Waiving Criteria). The buffers provided below apply areas where these provincially prescribed buffers do not apply.

Yes	No	n/a	Criteria
☐	☐	☐	30+ meters from a Provincially Significant Wetland (P.S.W.) or a Provincially Significant Coastal Wetland
☐	☐	☐	15+ meters from other wetland(s)
☐	☐	☐	20+ meters from the dripline of a significant woodland
☐	☐	☐	10+ meters from the dripline of an 'other woodland'
☐	☐	☐	15+ meters from a Significant Valleyland
☐	☐	☐	20+ meters from a Life Science Area of Natural and Scientific Interest
☐	☐	☐	30+m from a watercourse

EXCEPTIONS TO MINIMUM SEPARATION DISTANCES / BUFFERS

There are **limited** occurrences where an exception to the separation distances listed above will apply. Exceptions shall only be considered where:

The proposed development or site alteration is **one** of the following:	
☐	An addition or modification to an existing structure, where the structure is already wholly or partially located within the separation distance applicable (per above).
☐	An accessory structure that does not require servicing.
☐	Minor site alteration to facilitate activities occurring outside of the buffer / separation distance.
and	
The proposed development or site alteration meets **all** the following	

☐	There is no, or very-low risk to features and their functions as a result of the proposed activity;
☐	There are no reasonable alternatives to undertaking the activity outside of the buffer / separation distance;
☐	There is confidence that adequate opportunities to mitigate potential impacts are available.

Where an exception is applicable, provide a brief description of the site-specific considerations and rationale for the exception in the space below.

SECONDARY WAIVING OUTCOME

If **yes** to:

- All of A or B, **and**
- All applicable criteria under C (i.e., yes for all features present) **or** where an exception to C is granted

The project may be waived.

Proceed to Waiving Conditions.

If **no** to:

- A, **and** B, or
- One or more of the applicable criteria under C, and no exception is granted

Proceed to Impact Risk Assessment.

IMPACT RISK ASSESSMENT

Where an eligible project meets the Primary Waiving Criteria, but does **not** meet the Secondary Waiving Criteria, further assessment of impacts and impact risk is required to inform waiving. **This assessment is to be completed by individual(s) with expertise in natural heritage features, functions and potential impacts associated with development and site alteration** (e.g., an ecologist, biologist, etc.).

EXISTING IMPACTS

High	Moderate	Low	-
☐	☐	☐	What is level of existing impact to the natural heritage feature(s) based on site conditions for the current land use(s) present on the subject lands and adjacent lands to the feature(s)?

Describe:

FEATURE SENSITIVITY

High	Moderate	Low	
☐	☒	☐	What is the sensitivity of the natural heritage feature(s) present to the proposed development or site alteration? If multiple features present, check all applicable boxes and detail below.

Describe:

SUMMARY OF POTENTIAL IMPACTS

Please identify the potential impacts, the risk they pose and if they can be **reasonably** avoided or mitigated through basic actions (conditions). Additional notes or context can be added to the text box below the table.

Potential Impact			Risk to Feature(s) / Function(s)			Avoid or mitigate?	
Yes	No	Impact Type	High	Mod	Low	Yes	No
☐	☐	Noise / light	☐	☐	☐	☐	☐
☐	☐	Soil compaction and/or root damage	☐	☐	☐	☐	☐
☐	☐	Introduction or spread of invasive species	☐	☐	☐	☐	☐
☐	☐	Removal or disturbance to natural vegetation	☐	☐	☐	☐	☐
☐	☐	Removal or disturbance to wildlife habitat	☐	☐	☐	☐	☐
☐	☐	Tree removal(s)	☐	☐	☐	☐	☐
☐	☐	Dumping or backyard creep	☐	☐	☐	☐	☐
☐	☐	Creation of new edge / edge impacts	☐	☐	☐	☐	☐
☐	☐	Fragmentation of natural feature(s) or function(s)	☐	☐	☐	☐	☐
☐	☐	Impact to corridor or linkage function(s)	☐	☐	☐	☐	☐
☐	☐	Occupancy impacts (e.g., increased dumping, informal trail building, domestic animals, etc.)	☐	☐	☐	☐	☐
☐	☐	Change in water direction, quantity, or quality[21] to natural feature(s)	☐	☐	☐	☐	☐
☐	☐	Risk to slope stability	☐	☐	☐	☐	☐

[21] Impacts to water quality include thermal impacts, turbidity, contaminants (including salt), etc.

Potential Impact			Risk to Feature(s) / Function(s)			Avoid or mitigate?	
☐	☐	Erosion, sedimentation	☐	☐	☐	☐	☒

NOTES

PROPOSED SETBACK, BUFFER AND/OR VEGETATION PROTECTION ZONE

What is the proposed distance (set-back) between the limit of the proposed activity and the natural heritage feature(s) / function(s)?	_____ m
Is a buffer / vegetation protection zone proposed[22] to be implemented?	☐ Yes ☐ No
If yes, how wide is the proposed buffer?	_____m

[22] Buffers and vegetation protection zones are to be comprised of natural, self-sustaining vegetation.

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IMPACT ASSESSMENT OUTCOME

Based on the impact risk assessment, please select the appropriate conclusion for the proposed development or site alteration:

☐ I am **confident** that with the application of mitigation measures, there is no, or very low risk of negative impact to the natural heritage feature(s) on and adjacent to the Subject Lands and/or their function(s).

☐ I am **not confident** that the application of mitigation measures will be sufficient to achieve no or very low risk of negative impact to the natural heritage feature(s) on or adjacent to the Subject Lands or their function(s).

I am **confident** that with the application of mitigation measures, there is no, or very low risk of negative impact to the natural heritage feature(s) on and adjacent to the Subject Lands and/or their function(s).

Proceed to Conditions.

I am **not confident** that the application of mitigation measures will be sufficient to achieve no or very low risk of negative impact to the natural heritage feature(s) on or adjacent to the Subject Lands or their function(s).

The project is not appropriate for waiving:

☐ An E.I.S. is required. Proceed to E.I.S. scoping.

☐ With revisions, the project / activity may be re-assessed for waiving*.

* Some projects may not be appropriate / suitable for waiving as submitted but have potential for waiving with revision(s). Please provide direction / comments on potential revisions in the space below:

NOTE: Waiving is not guaranteed on initial or subsequent submissions.

PART 5 | CONDITIONS & RECOMMENDATIONS

Conditions include mitigation measures and other recommendations necessary to support the conclusion that waiving the requirement for an E.I.S. is appropriate for a given project or activity. This section also provides an opportunity to identify recommended actions which would support an improvement or overall benefit to the natural heritage feature(s) and /or their functions. Recommendations are not considered mandatory but are strongly encouraged.

CONDITIONS

Conditions are measures that **must** be implemented by the proponent for the proposed development or activity to have the requirement for an E.I.S. waived. Conditions include mitigation measures to support no negative impact, measures to avoid impacts, etc.

In determining conditions, refer to potential impacts (Part 4). Select all items necessary to ensure no or low risk of negative impact to the natural heritage feature(s) and their functions for the Subject Lands. Conditions are broken down into mitigation measures and general conditions; complete both tables.

This assessment is to be completed by individual(s) with expertise in natural heritage features, functions and potential impacts associated with development and site alteration (e.g., an ecologist, biologist, etc.).

AVOIDANCE AND MITIGATION MEASURE(S)

Condition[23]	**Notes**[24]
☐ Physical set-back	
☐ Vegetated buffer / ecological buffer / vegetation protection zone	
☐ Dark sky lighting standards	
☐ Sediment & erosion control ☐ Fencing ☐ Filter socks ☐ Stabilization of exposed soil(s)	

[23] Refer to Attachment C for definitions and descriptions.

[24] Provide notes to describe, clarify or specify application to the project / activity. This assists in clarifying the condition.

Condition	
☐ Energy dissipation of outfall(s) / outlet(s)	
☐ Soil scarification / decompaction	
☐ Timing restrictions / windows ☐ Breeding Bird / bird nesting ☐ Bats ☐ Turtles ☐ Amphibians ☐ Fish	
☐ Bird friendly window treatment(s)	
☐ Invasive species removal / management	
☐ Planting guideline(s)	
☐ Barrier Plantings	
☐ Construction demarcation / exclusionary fencing	
☐ Permanent demarcation / exclusionary fencing	

GENERAL CONDITIONS

Condition	Notes
☐ Record of Agency Communication ☐ M.E.C.P.[25] ☐ D.F.O.[26] ☐ M.N.R.F.[27] ☐ N.E.C. ☐ N.P.C.A.	
☐ Proof of Authorization / Permit ☐ Fisheries Act Authorization or L.O.A. ☐ Endangered Species Act ☐ Species at Risk Act ☐ Conservation Authority Fill Permit	
☐ Submittal & acceptance of: ☐ Updated feature boundaries as confirmed through site visit(s) (ESRI compatible format) ☐ E.S.C. Plan	

[25] For administration of the Endangered Species Act – communication record is to include confirmation of conclusions regarding compliance with the E.S.A. (e.g., that conclusion of no impact is supported).

[26] For administration of the Fisheries Act – this may include written confirmation that an L.O.A. or authorization is not required, where applicable.

[27] For timing windows regarding in-water works / protection of fish and fish habitat and, as applicable guidance regarding wetland evaluations.

☐ Buffer / Planting Plan ☐ Restoration Plan ☐ Photometric Plan ☐ Grading Plan	

SUPPLEMENTARY MITIGATION MEASURES

In addition to conditions, supplementary mitigation measures may be identified. Supplementary mitigation measures are based on site specific conditions, opportunities to enhance feature(s) and/or function(s) of a natural heritage feature or area and / or the N.E.S. The identification of supplementary mitigation measures is to take into consideration and be appropriate to the type, scope and scale of development or activity being proposed.

Recommendation	Notes
☐ Bird friendly window treatment(s)	
☐ Invasive Species Management	
☐ Beneficial Plantings ☐ Mast producing species ☐ Pollinator friendly species ☐ Native species-focused	
☐ Enhancement or Restoration of Existing Habitat / Feature(s)[28]	
☐ Habitat Elements ☐ Bat box ☐ Bird / Nest Box ☐ Perching Pole(s) ☐ Logs / Woody Debris	

[28] There are several resources and funding opportunities associated with enhancement and restoration works. N.P.C.A. offers grant programs for restoration: https://npca.ca/restoration

☐ Other (please identify in notes)	
☐ Dark sky lighting standards	

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PART 6 | REVIEW RECORD

This section provides a record of the preparation of the waiving assessment and any iterative review(s) conducted.

Waiving Assessment Completed By	**Approval Authority Reviewer**
Name	Name
Position	Position
Company/Organization	Company / Organization
Date	Date

REVIEW OUTCOME

To be completed by the Approval Authority Reviewer.

☐ Waiving Assessment is complete & accepted. Proceed to Agreement.

☐ Waiving Assessment requires revision & re-review. Refer to comments and/or edits.

☐ Waiving Assessment is not accepted. Refer to comments.

COMMENTS

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PART 7 | AGREEMENT

This section is to be completed for **complete & accepted** Waiving Assessments only (per Part 6).

This agreement is based on the plans, designs and other information submitted to the Approval Authority for review as part of the Waiving Assessment. In signing this document, you (the proponent) confirm that the plans and associated information are true and accurate. Changes in design, conditions, or issues in meeting the agreed to Conditions trigger a requirement to re-submit for review. Changes to plans, designs, etc. may result in a project no longer being eligible for waiving.

By signing this Waiving Assessment Agreement, you (the proponent) are agreeing to the contents of the form, and agreeing to complete, to the satisfaction of the Approval Authority, Conditions identified in Part 5 of this assessment.

I / we have the authority to bind the individual, corporation or organization.

Proponent

Name	Phone
Position	Email
Company/Organization	Address
Date	Address

ATTACHMENT A | INELIGIBLE DEVELOPMENT EXAMPLES

Medium and Large-Scale development and site alteration are generally ineligible for waiving. Scale of development is informed by several factors and is site and activity specific.

The following provides some examples of development and site alteration which would be considered **ineligible** for waiving assessment. The information provided in this attachment is not exhaustive; other projects / project types not listed here may be considered ineligible based on scale or risk of impact to the Natural Environment System, significant feature(s), or significant function(s). The information provided here should be used as guidance for assessing project eligibility to proceed through the waiving assessment process.

Factors considered in determining if a project is ineligible include:

- Number of units (e.g., residential development)
- Areal extent (e.g., square meters, or hectares)
- Extent and nature of landscape change
- Magnitude, extent and duration factors that inform risk of impact(s)

Examples of ineligible non-agricultural projects include:

- Estate development(s)[29]
- Residential subdivision(s) or development(s) with >20 units[30]
- Secondary plans
- Industrial development
- New or major expansions to an existing golf course, campground, or other recreational facility
- Marinas (new or alterations to)
- Subdivisions or multi-unit developments along shorelines
- Grading or site alteration (including placement of fill) which will alter catchment areas and/or the contribution of flow (surface or ground water) to an H.D.F., watercourse or wetland.

Examples of ineligible agricultural projects include new or major expansions to:

---

[29] Low density, large lot, developments proposed outside of settlement area boundaries.

[30] Developments proposed within settlement area boundaries including greenfield, brown-field and/or re-development.

- Large livestock facilities
- Abattoir
- Processing facilities
- Medium to large scale winery facilities (e.g., restaurant, touring facility, event spaces, etc.)
- Medium to large scale greenhouse installations
- On-farm diversified uses requiring large buildings, large parking capacity, servicing or new or major expansions to existing recreational facilities

ATTACHMENT B | SITE VISIT AUTHORIZATION & VISIT RECORD

A site visit is strongly recommended to support the E.I.S. waiving assessment process. Site visit(s) provide an opportunity for the Approval Authority (or their designate) to observe the site conditions, develop a spatial understanding of the site and the proposed project. Most importantly, it provides an opportunity to inform the evaluation of the natural heritage feature(s) present on / adjacent to the subject lands and their potential sensitivity to support both the waiving assessment and potential conditions of waiving (e.g., mitigation measures).

This attachment provides two forms:

- A **standardized site access authorization request / agreement** which may be used by the Approval Authority to request access to a subject lands / site. This form provides a general description of activities during a site visit, can assist in identifying any conditions for site access and act as a documented record of site access request(s).
- A **record of site visit** to document the date, duration and attendees of a site visit. There is some space to record key observations, however other methods of recording information (e.g., photographs, annotating maps, digital data collection, paper data forms, etc.) should be employed, as appropriate.

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SITE ACCESS AUTHORIZATION REQUEST / AGREEMENT

ACCESS REQUEST

To support the preparation, or review of the Waiving Assessment for the Subject Lands, a site visit is being requested.

The site visit will include the following activities:

- ☐ Visual identification and assessment of feature(s) present (types, condition, landform, etc.).
- ☐ Recording of observational data (e.g., plants, animals, insects, habitat features, etc.)
- ☐ Records of site condition through photography, digital data collection and notes.
- ☐ Delineation of feature boundaries by G.P.S. or similar device
- ☐ Delineation of feature boundaries with staking / flags
- ☐ Review of the proposed activity or development area.
- ☐ Other: _____

Attendance at a site visit may be coordinated with other applicable agencies:

- ☐ Niagara Region
- ☐ Local Municipality: _____
- ☐ Niagara Peninsula Conservation Authority (N.P.C.A.)
- ☐ Niagara Escarpment Commission (N.E.C.)
- ☐ Other Agency: _____

A date(s) for a site visit, where access is granted will be coordinated through email and/or phone between the Approval Authority and the Proponent or their designate.

Access Request By:

Name	Company / Organization
Position	Date
Email	Phone

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ACCESS AGREEMENT

I/we have the authority to grant or deny access to the Subject Lands.

I / we have reviewed the site access request and:

- ☐ Grant access, without condition(s)
- ☐ Grant access, with condition(s)
- ☐ Do not grant access

Name	Company / Organization
Position	Date
Email	Phone

CONDITIONS OF ACCESS

The following conditions apply to site access:

- ☐ 24 hours-notice prior to access
- ☐ Coordinate site visit date / time with proponent or their designate
- ☐ I / we, or our designate must accompany any site visit(s)

ADVISORY INFORMATION FOR ACCESS

Please be advised of the following site conditions and/or risks for accessing the site:

- ☐ Dog(s)
- ☐ Physical risks (please specify and where possible, identify on a map)
- ☐ Tenants
- ☐ Other: _____

COMMENTS

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RECORD OF SITE VISIT

Date	Start / End Times
Completed By (Name)	Position
Organization	Email

ATTENDEES

Name	Company / Organization[31]

Where representation for the Approval Authority was delegated, please indicate these relationships / delegations:

[31] Where a consultant is acting / attending on behalf of a municipality or proponent, please indicate.

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KEY OUTCOMES & OBSERVATIONS

The following activities were undertaken / data collected:

- ☐ Representative site photos were taken
- ☐ Map(s) were annotated with observations
- ☐ Delineation of feature boundaries:
  - ☐ Wetland(s)
  - ☐ Woodland(s)
  - ☐ Other: _____
- ☐ GPS tracks and/or surveyed feature limits
  - ☐ Collected by proponent, to be provided to Approval Authority
  - ☐ Collected by Approval Authority, to be provided to Proponent
- ☐ Ecological Land Classification and/or other ecological data
  - ☐ Collected by proponent, to be provided to Approval Authority
  - ☐ Collected by Approval Authority, to be provided to Proponent
- ☐ Review of the proposed activity or development area.
- ☐ Other: _____

Provide a summary of key observations, site sensitivity, existing conditions / impacts, outcomes and/or discussions.

SITE VISIT LIMITATIONS

Identify any limitations[32] to the site visit which may have adversely affected purpose and outcome(s) of the site visit.

[32] Limitations may include items such as prohibition on accessing certain areas / features, safety concerns for access / inaccessible areas due to safety concerns, etc.

ATTACHMENT C | MITIGATION MEASURES & RECOMMENDATIONS - DESCRIPTIONS

This attachment provides general descriptions of mitigation measures and recommendations from Part 5 of the Waiving Assessment.

Aesthetic Lighting
In the context of the waiving assessment, aesthetic lighting refers to any light generating sources or fixtures in outdoor spaces (e.g., around a building, on a building, garden lighting, etc.) that are not required as a necessary safety measure.

Barrier Plantings
Barrier plantings are plantings designed to prevent or deter people from accessing a natural area. Generally, barrier plantings must be comprised of species which provide sufficient density / difficulty of physical passage or possess thorns (or similar physical deterrents) which deter human access. Barrier plantings are to be comprised of native species where they occur near natural heritage features and areas.

Bird Friendly Guidelines
Bird strikes on windows are a significant cause of death and injury to birds. Birds cannot see the glass and external reflections create the visual impression that there is vegetation, sky, etc. for birds causing them to collide with windows during flight. The Fatal Light Awareness Program (FLAP) provides guidance on how homeowners and building managers can help avoid these issues through application of window treatments. Please visit their website for up-to-date information: https://flap.org/ Additional opportunities to create bird friendly spaces are also encouraged.

Dark Sky Lighting Standards
Light pollution affects night sky observation and wildlife behaviour. Responsible use of outdoor lighting can help avoid minimize light pollution and mitigate light impacts on wildlife living in areas near you. Please visit the Dark Sky organization website and follow he Five Principles for Responsible Outdoor Lighting: https://darksky.org/resources/guides-and-how-tos/lighting-principles/

Demarcation / exclusionary fencing
Demarcation fencing is used to delineate an edge or limit; for the purposes of the waiving assessment, this is referring to demarcation either during construction to clearly identify the limit of disturbance, or permanently to demarcate the limit of a manicured or managed yard. In both

cases, the demarcation fence is used as a visual reminder and limit to avoid encroachment into buffers or natural areas.

Exclusionary fencing is used to prevent access. This fencing type is specifically intended to prevent people or animals from accessing natural areas. This should be used where there is concern regarding undesirable access.

Energy dissipation of outfall(s) / outlet(s)
Erosion can occur where water flows and can entrain (pick up) sediment and wear away vegetation. Energy dissipation measures are used to prevent erosion at points of intentional water flow outletting (e.g., eaves, outfalls, outlets). Various measures can be used and are selected based on volume and velocity of water, site conditions and location.

Invasive Species Removal / Management
The Ontario Invasive Plant Council tracks, educates and provides expertise on invasive plant species found in Ontario (https://www.ontarioinvasiveplants.ca/). Managing invasive plant species on your property provides valuable benefits to biodiversity both on your property and in the local landscape. Guidance on management and removal, alternatives to common garden invasives, etc. can be found on the website.

Sediment & Erosion Control Fencing
Sediment & erosion control fencing is used to avoid the transport of sediment out of a designated construction area. It is recommended along limits of construction where there is risk that sediment may move into a natural area or into our water courses during rainfall events. This fencing is used during construction and is removed at the end of construction when soil stabilization and plantings are completed.

Filter Socks
Filter socks are a linear, cylindrical sediment control measure often used in areas where installation of sediment fencing is not appropriate (e.g., on slopes, in treed areas, etc.).

Slope Stabilization
This may be necessary for sediment and erosion control. Slopes pose an increased risk of erosion and sediment transport into natural areas or watercourses. Slope stabilization measures may be appropriate in some situations and will be informed by professionals qualified in sediment & erosion control design.

Stabilization of exposed soils
Exposed soils are a primary source of sediment. Exposed soils should be stabilized as quickly as possible, and the duration of soil exposure should be minimized to the extent possible. Soil stabilization may include planting or use of fabrics / materials designed for this purpose.

Compaction Mitigation
Movement of machinery and other construction related activities can result in soil compaction. Compaction can negatively impact tree roots for existing trees and affect new plantings and drainage. Where soil compaction may impact existing vegetation, compaction mitigation measures may be required. Generally, these include temporary materials placed to absorb compaction (e.g., wood chips, mats) which are removed at the completion of construction and the area is then restored.

Soil scarification / decompaction
Where soil compaction has occurred, the soil can be scarified or de-compacted using mechanical methods to reduce the impact of the compaction. This approach is less preferred than mitigating the impact through compaction mitigation measures.

Physical set-back
This refers to the physical distance between an activity (e.g., the limit of grading or disturbance associated with construction) and a natural feature or function. There is no implied condition or composition associated with the lands within the set-back.

Planting Guideline(s)
Invasive species should not be used in plantings. Plantings should include and where possible, be primarily comprised of native species and/or species with biodiversity benefits. There are various tools and references to help homeowners and businesses identify better plants and seed mixes for their use. Some resources include:
https://www.ontarioinvasiveplants.ca/resources/grow-me-instead/
https://npca.ca/images/uploads/common/Native_Plant_Guide.pdf

Timing Restrictions / Windows
Most species have periods during their life cycles during which they are most vulnerable to impact. Many species have Laws and Regulations which protect them and restrict / inform certain activities or their timing. Sensitive periods are most often associated with breeding or hibernation / overwintering. Sensitivity during breeding is due to the risk of impact to eggs and/or young and the physical demands of breeding. Sensitivity during hibernation and overwintering is due to the low mobility of animals during this time, energy needs (i.e., conserving energy as they do not have access to food during this period), and the harsh environmental conditions they may be exposed to if disturbed during these periods. The following is a list of general timing windows; all timing windows should be confirmed with appropriate agencies or qualified professionals prior to implementation.

- Breeding Bird / Nesting Period: Late May through End of August
- Bat Roosting Period: May through September

- Reptile & Amphibian Overwintering: Mid-October through April or May
- Fish & Fish Habitat: Spring, or Fall Spawning Periods (variable)

Not all timing windows apply to all works. Certain activities represent risks to animals during these periods and it is those activities which are restricted during these periods.

Vegetated Buffer / Ecological Buffer / Vegetation Protection Zone

Buffers or Vegetation Protection Zones are a mitigation measure intended to reduce various common impacts associated with development including encroaching, water quality, invasive species, etc. Buffers are a portion of land immediate adjacent to and along the length of a natural heritage feature that is to be established as self-sustaining, natural (native) vegetation.

Appendix 5 | E.I.S. Terms of Reference Checklist

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Terms of Reference | Environmental Impact Study

INTRODUCTION

This form serves two purposes:

1. **Scoping**. Through preparation, review and approval of this form, the study requirements (e.g., field work) for an Environmental Impact Study (E.I.S.) are established.
2. **Terms of Reference**. Once approved, this document is accepted as the Terms of Reference for the E.I.S. The proponent (and their consultant) are to meet, at a minimum, the conditions set out through this document and any amendments as may be required for features or species not that could not be reasonably be accounted for at the time of preparation (e.g., unmapped features, Species at Risk, Significant Wildlife Habitat).

Initial preparation of this form may be undertaken by the Approval Authority or their designate, or a qualified E.I.S. professional. Approval may only be granted by the Approval Authority (or their designate). Reaching approval may be an iterative process, requiring multiple submissions.

TERMS & EXPECTATIONS

Subject Lands: This is typically the subject property, or a defined area within which the activity will be wholly contained – note this must include all associated works including access routes, stormwater, grading, etc. The Subject Lands is the focus of intensive survey(s) and generally requires the collection of primary data through on-site data collection as part of an E.I.S. Secondary sources of information (e.g., satellite imagery, eBird, G.B.I.F., N.H.I.C.) are to be used to supplement characterization of the Subject Lands.

Study Area: This includes all lands within 120m or 240m from the Subject Lands; Study Area distance is informed by the policy area in which the proposed activity is to occur. The Study Area may include some primary data collection, where appropriate (e.g., contiguous woodland, wetland or other feature which extends beyond the Subject Lands or has an increased potential of being impacted by the proposed development or site alteration). Limitations in site access may affect what / how surveys may be completed (e.g., roadside only). Secondary sources of information (e.g., satellite imagery, eBird, G.B.I.F., N.H.I.C.) are to be used to inform characterization of the Study Area.

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PROJECT INFORMATION

Proponent	
Name:	
Project Contact	
Name:	Email:
Title:	Phone:
Subject Lands	
Street Address:	Location Description:
Municipality:	Lot & Concession:
Project Summary	
Project Type[1]:	

[1] Please indicate the project type from the following list or specify the type if not listed below.

- Agricultural structure or building
- New single detached dwelling: existing lot **or** lot severance
- New accessory structure **or** development (e.g., garage, shed, swimming pool, driveway)
- Re-build – same footprint **or** larger or altered footprint
- Addition(s) to / expansion of existing building(s) **or** accessory building or development
- Septic system or other servicing
- Site alteration (grading, fill, etc.)
- Multi-unit / subdivision development

Project Description[2]:

[2] Provide a brief description of the proposed project. Include relevant information which informs the scope, scale or factors influencing the assessment of the proposed project for waiving.

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SITE CONTEXT & SECONDARY RESOURCES

NATURAL HERITAGE POLICY & REGULATORY CONTEXT

Study requirements and expectations are informed in part by policy context for the subject lands.

The project occurs wholly or partially:

- ☐ Outside settlement area(s)
  - ☐ within the Greenbelt Plan Area (Protected Countryside)
  - ☐ within the Niagara Escarpment Plan area
  - ☐ outside of the above-noted areas
- ☐ Within settlement area(s)
- ☐ Within areas Regulated by the Niagara Peninsula Conservation Authority (N.P.C.A.)

BACKGROUND & SECONDARY SOURCES

The E.I.S. is to be scoped to consider both mapped (Per Schedule C2 of the N.O.P.) and unmapped features and functions. Multiple resources are required to inform study scoping. Please select all that were used in preparing this screening assessment:

☐ Niagara Official Plan schedules and associated online mapping

☐ Local Area Municipality schedules and any associated online mapping

☐ Watershed Plan(s) and/or Subwatershed Plan(s)

☐ Aerial / satellite imagery of the project area (to screen for unmapped features / potential features)

☐ Conservation Authority mapping (e.g., regulated areas, wetlands, etc.)

☐ Land Information Ontario (L.I.O.)

☐ Natural Heritage Information Centre (N.H.I.C.)

☐ Department of Fisheries and Oceans (D.F.O.) Species at Risk mapping

☐ eBird

☐ iNaturalist

☐ Ontario Reptile and Amphibian Atlas (Ontario Nature)

☐ Ontario Butterfly Atlas (Toronto Entomologists' Association)

☐ Atlas of the Breeding Birds of Ontario (Birds Canada)

☐ Other: _____

Please list specific plans (e.g., watershed or subwatershed plans), as applicable, that will inform or

FEATURES & FUNCTIONS (PRELIMINARY)

A preliminary assessment of features and functions known to occur or with potential to occur is important for scoping study requirements (e.g., field investigations). Complete all sections below.

PRELIMINARY SPECIES AT RISK SCREENING

Using secondary source / background information and a desktop assessment of features and conditions to inform habitat potential, complete a preliminary screening for Species at Risk. The outcome of this preliminary assessment is to be used to inform field investigation requirements, timing, etc. The preliminary screening assessment should include, at minimum, the following:

- A comprehensive list of Species at Risk known to, or with potential to occur in the general area (aquatic and terrestrial)
- A brief habitat description for each species
- A brief description of habitat potential on the Subject Lands and within the Study Area
- Recommendation for survey(s) to assess habitat suitability and/or species occurrence, as appropriate.

A Species at Risk Screening Assessment table template is provided in the main E.I.S. Guideline (**Appendix 10**). This table can be partially completed to address this preliminary assessment. An alternative to the table may be used if it provides the minimum requirements set out above.

PRELIMINARY SIGNIFICANT WILDLIFE HABITAT SCREENING

Using secondary source / background information and a desktop assessment of features and conditions, complete a preliminary screening for Significant Wildlife Habitat. The outcome of this preliminary screening will identify preliminary candidate habitats to inform field investigation requirements, timing, etc. The preliminary screening assessment should include, at minimum, the following:

- A comprehensive list of Significant Wildlife Habitats for Ecoregion 7E and their candidacy criteria (per the Criteria Schedules for Ecoregion 7E)
- Outcomes of a brief assessment of the features and areas which occur wholly or partially within the Subject Lands and Study Area for candidacy in accordance with the above

Where candidate habitat is identified, two options for field investigations is available:

- Assume the S.W.H. type is present and proceed based on this precautionary principle.
- Complete the appropriate survey(s) to inform presence / absence of S.W.H.

Generally, the first option is appropriate where the feature(s) providing the habitat will be protected in place with appropriate mitigation measures to support no negative impact (e.g., buffers, linkages, etc., as appropriate to the specific conditions and activity).

A Significant Wildlife Habitat Screening Assessment table is provided in the main E.I.S. Guideline (**Appendix 9**). This table can be partially completed to address this preliminary assessment (i.e., complete the candidate column). An alternative to the table may be used if it provides the minimum requirements set out above.

SUMMARY OF FEATURES AND FUNCTIONS

Complete both tables in this section using all applicable secondary sources and preliminary assessments (Species at Risk, Significant Wildlife Habitat).

Components of the N.E.S. known to, or with potential to occur:

Subject Lands	Study Area	Feature / Function[3]
☐	☐	Area(s) of Natural and Scientific Interest (A.N.S.I.) – Life Science
☐	☐	Area(s) of Natural and Scientific Interest (A.N.S.I.) – Earth Science
☐	☐	Woodland(s) – Significant / potentially significant
☐	☐	Woodland(s) – Other
☐	☐	Woodland(s) – Cultural or Regenerating Woodland
☐	☐	Wetland(s) – Provincially Significant
☐	☐	Wetland(s) – Significant Coastal
☐	☐	Wetland(s) – Other
☐	☐	Valleyland(s) - Significant
☐	☐	Valleyland(s) - Other
☐	☐	Thickets and/or Meadows
☐	☐	Sand Barren
☐	☐	Savannah
☐	☐	Tallgrass Prairie
☐	☐	Alvar
☐	☐	Habitat for Endangered Species and Threatened Species[4]
☐	☐	Significant Wildlife Habitat[5]
☐	☐	Fish Habitat
☐	☐	Linkage(s)

[3] Refer to Schedule L to the N.O.P. for a list, definitions, and criteria for components of the N.E.S.
[4] Per secondary source information and completion of the Preliminary Species at Risk Screening
[5] Per secondary source information and completion of the Preliminary Significant Wildlife Habitat Screening

Key Hydrologic Features known to or with potential to occur:

Subject Lands	Study Area	Feature / Function[6]
☐	☐	Permanent and/or Intermittent Stream(s)
☐	☐	Riparian Lands
☐	☐	Floodplain, Flooding Hazard(s), Floodway(s)
☐	☐	Inland Lakes and their Littoral Zones
☐	☐	Shoreline Areas
☐	☐	Seepage Areas and Springs
☐	☐	Headwater Drainage Feature(s)

Notes:

[6] Refer to Schedule L to the N.O.P. for a list, definitions, and criteria for components of the N.E.S.

FIELD INVESTIGATION(S) & ASSESSMENTS

SUBJECT LANDS

Informed by the preceding sections and in consideration of the nature of the proposed activity, identify the scope of surveys to be undertaken to inform the E.I.S. for the Subject Lands.
In completing this section:

- Check all surveys that are to be undertaken to support the E.I.S.
- A list of accepted survey methods for Niagara are provided in **Appendix 1**. Methods include commonly accepted protocols, survey timing and number of visits required for most survey types.
    - Where the number of visits or timing is not set for a given survey type, or multiple methods are listed, these are to be provided in the tables below.
- Unless an alternative is indicated in the Approach & Supporting Rationale column, is assumed that the survey(s) will be in accordance with **Appendix 1**.
    - Some surveys require further detail be provided (e.g., timing or number of surveyed informed by species)
- Alternatives to methods set out in **Appendix 1** may be acceptable where the alternative(s) meets or exceeds the efficacy of the methods set out therein.
- Scoping of surveys is generally acceptable where:
    - It reflects the site conditions (e.g., no fall vegetation survey where the only feature is forest)
    - There is pre-existing information which can adequately inform the E.I.S. in place of primary field collection (e.g., fish community sampling)
    - Where it is confirmed that a feature will not be impacted by the proposed activity and any connections to a feature will be maintained (linkages, wildlife movement, etc.), a precautionary principle may be applied in lieu of primary field data collection. Under this approach, there is an assumption of significance (e.g., for Significant Wildlife Habitat) and it is managed in accordance with this assumed level of significance through the E.I.S.
    - The scoping reflects the scope, scale and risk of impact to the N.E.S. of the development.
- Sufficient rationale must be provided to support alternatives and/or scoping. Any alternatives and/or scoping must be accepted by the Approval Authority (or their designate).

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Complete each table below.

Vegetation & Feature Delineation

Survey Required	Survey Type	Scoping Requested	Alternative Requested
☐	Ecological Land Classification (E.L.C.)	☐	☐
☐	Botanical Inventory	☐	☐
☐	Woodland delineation	☐	☐
☐	Wetland delineation	☐	☐
☐	Valleyland (T.O.B.) delineation	☐	☐
☐	Ontario Wetland Evaluation System (O.W.E.S.)	☐	☐
☐	Woodland Assessment (stem density)	☐	☐

Supporting Rationale for Alternatives and/or Scoping (attach additional pages, if required):

Terrestrial Wildlife

Survey Required	Survey Type	Scoping Requested	Alternative Requested
☐	Breeding Birds – Open Country	☐	☐
☐	Breeding Birds – Other	☐	☐
☐	Marsh Birds	☐	☐
☐	Owls	☐	☐
☐	Other Crepuscular	☐	☐
☐	Raptors	☐	☐
☐	Amphibian Breeding – anurans	☐	☐
☐	Amphibian Breeding – salamanders	☐	☐
☐	Snakes	☐	☐
☐	Turtles	☐	☐
☐	Mammals	☐	☐
☐	Bats	☐	☐
☐	Terrestrial Crayfish	☐	☐
☐	Insects	☐	☐

Supporting Rationale for Alternatives and/or Scoping (attach additional pages, if required):

Aquatic

Survey Required	Survey Type	Scoping Requested	Alternative Requested
☐	Aquatic Habitat Assessment	☐	☐
☐	Fish community sampling	☐	☐
☐	Benthic Invertebrate Sampling	☐	☐
☐	Headwater Drainage Assessment	☐	☐

Supporting Rationale for Alternatives and/or Scoping (attach additional pages, if required):

STUDY AREA

It is appropriate / acceptable to assess the Study Area through secondary source and/or edge (e.g., roadside, limit of property) observation(s) under most situations. Field surveys may be warranted where:

- There is a risk of impact to a feature within the Study Area as a result of the proposed development or site alteration that cannot be adequately assessed without field survey(s); or
- There is a connection or relationship between features within the Subject Lands and Study Area that cannot be adequately evaluated without field survey(s)

Application of the precautionary principle may be an appropriate approach where the above conditions are identified and field surveys cannot be undertaken (e.g., where site access cannot be obtained).

Please provide a summary of the approach to be used for assessing the features and functions of

MAP / FIGURE

Attach a map / figure to the T.O.R. with the following key elements:

- Air photo / satellite imagery base
- Subject Lands and Study Area limits
- N.E.S. features (using available datasets / where initial mapping is available)
- Show proposed locations of field investigations, where appropriate (e.g., amphibian calling stations). Where surveys occur through a feature / features, this can be stated in the notes of this form (e.g., Ecological Land Classification).
- Basic information such as property address, scale, legend, north arrow, etc.

Map attached: Yes ☐

REPORTING REQUIREMENTS

The E.I.S. is to be prepared in accordance with the Niagara E.I.S. Guideline (per **Section 2.0**). Through acceptance and approval of this T.O.R., the applicant (or their designate) agrees to this requirement.

A brief list of Minimum Requirements for E.I.S. components is provided below. Monitoring may not be required for all E.I.S. Please confirm this requirement by checking the box, where required.

Minimum Requirements

- Introduction
- Planning Context
- Existing Conditions
- Evaluation of Features and Functions
- System Management
- Description of the Proposed Development or Site Alteration
- Impact Assessment & Mitigation Hierarchy
- Delineation and Refinement of System Boundaries
- Policy Assessment
- Conclusions
- References
- Conclusions
- Maps & Figures
- Approved T.O.R. (Appendix)
- Final Submission Checklist (**Appendix 7** to the E.I.S. Guideline) and all associated deliverables.

☐ Monitoring Program (required, if checked)

Direction regarding monitoring program, where required:

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AGREEMENT

Note: This agreement should only be signed by the Approval Authority where the contents are deemed acceptable and meet the requirements set out in the E.I.S. Guidelines. Iterations may be required to reach an acceptable Terms of Reference.

Once approved, this document is the accepted Terms of Reference for the E.I.S. The proponent (and their consultant) agrees to meet, at a minimum, the conditions set out through this document and any amendments as may be required for features or species not that could not be reasonably be accounted for at the time of preparation (e.g., unmapped features, Species at Risk, Significant Wildlife Habitat not anticipated through preliminary screening). The E.I.S. professional agrees to adhere to commonly accepted standards of practice and be accountable for good professional practice.

T.O.R. Completed By	**Reviewed and Accepted By**
Name	Name
Position	Position
Company/Organization	Organization
Date	Date

APPENDIX 1: Accepted Survey Methods

The following table outlines generally accepted survey methods for Niagara Region. Methods include commonly accepted protocols, survey timing and number of visits required for most survey types. Detailed methods for field data collection and data analysis are necessary for the completion of an E.I.S. Alternatives to methods set out in **Table 1** below may be acceptable where the alternative(s) meets or exceeds the efficacy of the methods set out therein.

Data collection requirements, protocols, and associated resources and references may be updated with time and **Table 1** may not reflect the most current versions / editions. The applicant should contact Niagara Region to confirm the most current versions.

Repeated sampling may be required to determine species presence and abundance for some taxa. Refer to the Optimal Periods and Number / Frequency of Surveys to determine the level of effort and timing required. Multiple years of survey may be warranted in some circumstances (e.g., where species at risk which require multiple seasons / years). The E.I.S. should describe the methods used and include date, time, location, weather conditions, staff, and other incidental information for all field surveys conducted.

Table 1. List of field surveys and the optimal period when surveys should be performed, number or frequency of survey(s), and associated resources and reference.

Focus of Field Survey	Optimal Periods* for Field Surveys in Niagara Region	Number / Frequency of Surveys	Recognized Field Survey Methods	Resources and References
Water Temperature	• July 1 to September 10, provided air temperature does not exceed 24.5°C and has not exceeded 24.5°C for previous 48 hours (daily maximum temperature) • Any date, provided sampling date is preceded by three days without rainfall that could affect baseflow (spot temperature measurements)	• 30 minutes sampling intervals • Frequency and length of monitoring is dependent on purpose of water temperature monitoring and the type of project	• Data loggers or manually collected	• Jones, N.E. and L. Allin. 2009. Measuring Stream Temperature Using Data Loggers: Laboratory and Field Techniques. MNR River and Stream Ecology Lab, Peterborough, Ontario. • Chu et al. 2009. Evaluation of a Simple Method to Classify the Thermal Characteristics of Streams Using a Nomogram of Daily Maximum Air and Water Temperatures. North American Journal of Fisheries Management V29:1605–1619.
Headwater Drainage Feature (H.D.F.)	• Early spring (late March to mid-April), spring (late April to mid-May), and summer (July to August).	• Three sampling events that align with the three optimal periods: early spring, spring, and summer.	• T.R.C.A & C.V.C.'s Headwater Drainage Features Guideline • Section 4, Module 10 of the Ontario Stream Assessment Protocol (O.S.A.P.)	• T.R.C.A. 2014. Evaluation, Classification and Management of Headwater Drainage Features Guideline. Toronto and Region Conservation Authority and Credit Valley Conservation, TRCA Approval July 2013 (Finalized January 2014). • Stanfield, L. 2017. Ontario Stream Assessment Protocol, Version 10. M.N.R.F. Fisheries Policy Section, Peterborough, Ontario.
Aquatic Habitat	• April to June for general habitat • Inventory of permanent features may occur throughout the spring and summer • Habitat assessments and habitat mapping to occur during snow/ice free conditions	• Minimum of one sampling event within the optimal period •	• Ontario Stream Assessment Protocol (O.S.A.P.) • MTO Fish Habitat Assessment Protocol	• Stanfield, L. 2017. Ontario Stream Assessment Protocol, Version 10. M.N.R.F. Fisheries Policy Section, Peterborough, Ontario. • M.T.O. 2009. Environmental Guide for Fish and Fish Habitat. M.T.O., Toronto, Ontario.
Fish Community	• April to June (most fish) • Various seasons for specific taxa • Fisheries inventories for intermittent and ephemeral systems, should be completed in the spring • Fisheries inventories for permanent systems, can be conducted throughout the summer	• Minimum of one sampling event within the optimal period • Spawning surveys timing and frequency is dependent on species of interest	• Ontario Stream Assessment Protocol (O.S.A.P.) • M.T.O. Fish Habitat Assessment Protocol	• Stanfield, L. 2017. Ontario Stream Assessment Protocol, Version 10. M.N.R.F. Fisheries Policy Section, Peterborough, Ontario. • M.T.O. 2009. Environmental Guide for Fish and Fish Habitat. M.T.O., Toronto, Ontario.

Focus of Field Survey	Optimal Periods* for Field Surveys in Niagara Region	Number / Frequency of Surveys	Recognized Field Survey Methods	Resources and References
	• Spawning surveys timing dependent on species of interest			
Benthos	• Spring and / or Fall	• One sampling event within the optimal period • Scope and specific data analysis to be determined on a project specific basis with appropriate regulatory agencies	• Ontario Benthos Biomonitoring Network (O.B.B.N.) Protocols • Ontario Stream Assessment Protocol (O.S.A.P.)	• Jones, C., K.M. Somers, B. Craig and T.B. Reynoldson. 2007. Ontario Benthos Biomonitoring Network: Protocol Manual. Ontario Ministry of the Environment, Dorset, Ontario. • Stanfield, L. 2017. Ontario Stream Assessment Protocol, Version 10. M.N.R.F. Fisheries Policy Section, Peterborough, Ontario.
Mussels	• June 1 to September 30, providing water temperature is warmer than 16°C • Best time for sampling is during low flows (water velocity at base flow, minimal turbidity)	• Minimum of one sampling event within the optimal period	• Protocol for the Detection and Relocation of Freshwater Mussel Species at Risk in Ontario-Great Lakes Area	• Mackie, G., T.J. Morris and D. Ming. 2008. Protocol for the Detection and Relocation of Freshwater Mussel Species at Risk in Ontario-Great Lakes Area (O.G.L.A.). D.F.O., Burlington, Ontario.
Vegetation Community Classification	• April through November	• Typically paired with flora inventory surveys, two or three visits depending on whether a fall season survey is needed (e.g., presence of meadow, alvar, prairie, potentially rare / uncommon hawthorns)	• E.L.C. System for Southern Ontario (1998, with updates)	• Lee, H., W. Bakowsky, J. Riley, J. Bowles, M. Puddister, P. Uhlig and S. McMurray. 1998. Ecological Land Classification for Southern Ontario. M.N.R., Peterborough, Ontario. • University of Guelph Department of Land Resource Studies. 2003. Field Manual for Describing Soils in Ontario. University of Guelph, Guelph, Ontario.
Flora Inventory	• April to June (spring ephemerals) • June to August (early summer flora) • August to September (late summer/fall flora) Of note: If a single season for vegetation survey(s) has been accepted through an approved T.O.R., it should be completed during the summer flora period (June to August).	• Two or three surveys depending on whether a fall season survey is recommended / required	• Record species within each E.L.C. polygon; • Include G.P.S. coordinates for any provincially rare or at risk species	• N.H.I.C. provincial conservation status ranks for plants and plant communities • Oldham, M.J. and S.R. Brinker. 2009. Rare Vascular Plants of Ontario, Fourth Edition. M.N.R.F., Peterborough, Ontario. • Oldham, M.J, 2017. List of the vascular plants of Ontario's Carolinian zone (ecoregion 7E). Carolinian Canada and Ontario Ministry of Natural Resources and Forestry. Peterborough, ON. • University of Guelph Department of Land Resource Studies. 2003. Field Manual for Describing Soils in Ontario. University of Guelph, Guelph, Ontario.
Wetlands	• Various components require surveys at different times of year	• Minimum of one sampling event within the optimal period depending on the wetland communities present (e.g., the	• Ontario Wetland Evaluation System (O.W.E.S.), Southern Manual (2022)	Notes: wetland evaluation requires inventories of plants and wildlife – follow protocols for taxa as outlined in this table

Focus of Field Survey	Optimal Periods* for Field Surveys in Niagara Region	Number / Frequency of Surveys	Recognized Field Survey Methods	Resources and References
	• Delineation for sites with challenging feature limits should occur during the wet growing season	presence of permanent open water)	• E.L.C. System for Southern Ontario (1998, with updates)	• M.N.R.F. 2022. Ontario Wetland Evaluation System, Southern Manual, 4th Edition.
Birds	• May 24 to July 10 (most breeding birds); other dates for birds with different life histories (e.g., owls, waterfowl) • February to March – owl breeding • March to April (migratory waterfowl) • April to May (spring migrants) • November to March (overwintering birds, such as raptors)	• Breeding Bird Surveys: typically two surveys, a third may be required if grassland species or habitat is present. • Migrants and over wintering bird surveys are site specific • Marsh Monitoring Program – two rounds between May 20th and July 5th, with at least 10 days apart	• Ontario Breeding Bird Atlas protocol • Forest Bird Monitoring Program • Marsh Monitoring Program • Taxon-specific protocols developed by M.N.R.F. or M.E.C.P. (e.g., winter raptors, migratory waterfowl, S.A.R. birds)	References: • Marsh Monitoring Protocol (Canadian Wildlife Service and Bird Studies Canada) • Ontario Forest Bird Monitoring Program protocol (Birds Canada, formerly Canadian Wildlife Service) • Ontario Breeding Bird Atlas protocols and conventions (Cadman et al. 2007 and on-line summaries at http://www.birdsontario.org/atlas/index.jsp) • Migratory Birds Convention Act (1994)
Bats	• Leaf-off (i.e., November to April) for bat habitat • June (acoustic bat surveys)	• Refer to protocol provided by M.E.C.P.	• Bat survey protocols (M.N.R.F.)	• Bat habitat and bat acoustic survey protocols are continuously being updated. Please consult with the M.E.C.P. Species at Risk Branch (or equivalent) for the most current protocols.
Amphibians	• March to early April (salamanders) • April, May and June (amphibian call count surveys)	• Three sampling events within the optimal period and weather (amphibian call-count) • Salamander survey frequency dependent on survey method.	• Marsh Monitoring Program (M.M.P.) Call Count Survey Protocol • Western Chorus Frog Protocols • Salamander pond trapping (species composition, preferred) • Egg mass surveys (Salamander)	• Bird Studies Canada, Environment Canada and United States Environmental Protection Agency. 2008. Marsh Monitoring Program: Participant's Handbook for Surveying Amphibians. • Blazing Star Environmental. 2022. Survey Protocol for 2022 Western Chorus Frog Long-Term Monitoring Program.
Turtles	• March to May (overwintering habitat) • May to August (nesting habitat)	• Incidental observations unless targeted surveys are warranted • Typically 5 sampling events for basking / general detection. Higher for nesting during optimal period(s).	• Active searching / vision encounter surveys	• Species specific protocols for targeted surveys
Snakes	• Spring and Fall (hibernacula – spring preferred) • March to October (most snakes)	• Incidental observations unless targeted surveys are warranted • Area searches or cover boards: a minimum of 5 sampling events during optimal period(s).	• Active searching / vision encounter surveys • Coverboards	• Species specific protocols for targeted surveys

Focus of Field Survey	Optimal Periods* for Field Surveys in Niagara Region	Number / Frequency of Surveys	Recognized Field Survey Methods	Resources and References
Butterflies	• May to September (depending on species)	• Incidental observations unless targeted surveys are warranted. • Refer to protocols for target species, where appropriate.	• Active searching • Sweep net capture and release	• Commission for Environmental Cooperation. 2009. Monarch Butterfly Monitoring in North America: Overview of Initiatives and Protocols
Dragonflies and Damselflies	• May to September (depending on species)	• Incidental observations unless targeted surveys are warranted • Refer to protocols for target species, where appropriate.	• Active searching • Sweep net capture and release	• Species specific protocols for targeted surveys
Species at Risk (S.A.R.) and S.A.R. Habitat	• Taxon-dependent	• Taxon-dependent	• Survey protocols for specific S.A.R. prepared by M.N.R.F. or M.E.C.P. (e.g., Butternut Health Assessment protocol, S.A.R. Snake Survey Protocol, S.A.R. turtle protocol, S.A.R. bats, etc.)	• M.E.C.P. 2021. Butternut Assessment Guidelines: Assessment of Butternut Tree Health for the Purposes of the Endangered Species Act, 2007. • M.N.R.F. 2016. Survey Protocol for Ontario's Species at Risk Snakes. Ontario Ministry of Natural Resources and Forestry, Species Conservation Policy Branch. Peterborough, Ontario. ii + 17 pp. • Portt, C.B., G.A Coker, N.E. Mandrak and D.L. Ming. 2008. Protocol for the detection of fish Species at Risk in Ontario Great Lakes Area (O.L.G.A.). D.F.O., Burlington, Ontario. • Other species-specific protocols as are available.
Significant Wildlife Habitat (SWH)	• Habitat type and taxon-dependent	• Habitat type and taxon-dependent	• Varied – review S.W.H. Criteria Schedules for Ecoregion 7E	• M.N.R.F. 2015. Significant Wildlife Habitat Criteria Schedules for Ecoregion 6E. • M.N.R.F. 2015. Significant Wildlife Habitat Criteria Schedules for Ecoregion 7E.

***All survey periods are general and weather dependent.**

Appendix 6 | E.I.S. Comment Response Template

ENVIRONMENTAL IMPACT ASSESSMENT (E.I.S.) – CONSOLIDATED COMMENTING & RESPONSE TABLE

PROJECT NAME:

APPLICANT:

PROJECT NUMBER / REFERENCE:

PROJECT TYPE: [Development / Site Alteration / Agricultural]

SUBMISSION INFORMATION	REVIEW AGENCY INFORMATION
E.I.S. PREPARED BY:	[AGENCY] [commenting / lead staff member]
1ST SUBMISSION DATE:	[AGENCY] [commenting / lead staff member]
2ND SUBMISSION DATE:	[AGENCY] [commenting / lead staff member]
3RD SUBMISSION DATE:	

COMMENT #	SECTION	SUB-SECTION	ADDITIONAL REFERENCE	COMMENTING AGENCY	COMMENT	RESPONSE / ACTION TAKEN	RESOLUTION / OUTSTANDING CONCERN	RESPONSE / ACTION TAKEN	RESOLUTION / OUTSTANDING CONCERN
SECTION [#, TITLE]									

Appendix 7 | E.I.S. Final Submission Checklist

Appendix 7 | E.I.S. Final Submission Checklist

This checklist is to be completed by:

Applicant:	_____	Consultant:	_____
Phone:	_____	Phone:	_____
Email:	_____	Email:	_____
Address:	_____	Address:	_____
	_____		_____

Development or site alteration Application Address:

Reporting Standard

☐ The approved E.I.S. report with any associated addenda; a title page that includes: the name of the applicant, address of the subject property, lists the author(s) of the report, the consulting firm(s) and the date the report was completed

☐ Provide contact information for the consulting company / principle author of the report

☐ A revised development or site alteration proposal (if required)

☐ Mechanisms or plan for implementation of recommendations identified in the approved E.I.S

☐ G.I.S. data package including all ecological data (e.g., ELC, species points / locations, watercourses, etc. where created or modified in the preparation of the E.I.S.)

- All geospatial data:
  - Is ESRI compatible files (preferred geodatabase, .shp acceptable). All file components must be provided.
  - Has UTM-17N, NAD-83 projection
  - Contains pertinent attributes to associate the data.
  - Has metadata provided with, at a minimum, its original source (e.g., LIO, or who created by for the purpose of the E.I.S.) and data year. If modified for the E.I.S., or prior to the E.I.S., who modified and date of modification.

☐ Digital copy of report, data, and shapefiles

☐ Species data is provided as an excel file

- Pertinent information to be provided with the species data, including: date, observer, evidence type / code (fauna), abundance, as applicable;
- Data is not to be generalized to the project or study area.

☐ Survey results tables
☐ Datasheets

Appendices and Attachments
☐ Approved Terms of Reference
☐ Mapping and Figures
☐ Species List
☐ Additional studies (as applicable)
☐ Addendums to the E.I.S. (as applicable)
☐ Correspondence and review comments / responses (as applicable)

Files and Permissions
☐ Permission is given to Niagara Region, Approval Authority, as well as the Conservation Authority (C.A.) and Niagara Escarpment Commission (N.E.C.) (as appropriate / applicable) to utilize data collected from this study.

I _____, agent for _____, confirm that the attached Draft Environmental Impact Study (E.I.S.) addresses the scope of work outlined in the approved Terms of Reference (T.O.R.), contains the above study requirements and have been completed in accordance with the Region's E.I.S. Guidelines.

Signature:_____ Date:_____

Appendix 8 | List of Background Sources

Appendix 8 | List of Background Sources

List of Background Information Sources

The following references provide important information and guidance for species, habitats and other features that may be present and can inform field data collection requirements and analysis necessary for the completion of an E.I.S. This list is not exhaustive and represents some of the more common and most referenced resources. Other site-specific resources may be available, such as E.I.S.s completed for nearby projects, Environmental Study Reports for nearby Class Environmental Assessments (E.A.'s), subwatershed studies and other documents. Site-specific background materials may be identified in consultation with various planning or agency authorities.

General References for all E.I.S.'s:

- Data from the Natural Heritage Information Centre (N.H.I.C.): https://www.ontario.ca/page/get-natural-heritage-information
- Conservation authority guideline or recommendation documents, as available, may include but are not limited to:
    - Landscaping and tree protection guidelines
    - Recommended seed mixes and / or species
    - Road ecology design guidelines
    - Monitoring protocols
    - Hydrological study guidelines
    - Wetland water balance guidelines
- Environment Canada. 2013. How Much Habitat is Enough? Third Edition. Environment Canada, Toronto, Ontario.
- Toronto and Region Conservation Authority (T.R.C.A.) and Credit Valley Conservation (C.V.C.). 2014. Evaluation, Classification and Management of Headwater Drainage Features Guidelines. Available from http://www.trca.on.ca/dotAsset/180724.pdf
- Land Information Ontario (LIO) geospatial data: https://www.ontario.ca/search/data-catalogue
- Ontario Ministry of Transportation (MTO) Habitat Mapping protocols
- A data request to the conservation authority may identify species, vegetation communities (e.g., E.L.C.), monitoring and other data relevant and applicable to an E.I.S.
- A data request to the M.E.C.P. S.A.R. Branch may provide relevant and applicable information to an E.I.S.

Earth Sciences and Hydrology

- Chapman, L.J. and D.F. Putnam. 1984. The Physiography of Southern Ontario, Fourth Edition. Geological Survey, Special Volume 2, 270 p. Accompanied by Map P.2715 (coloured), scale 1:600 000.
- University of Guelph Department of Land Resource Studies. 2003. Field Manual for Describing Soils in Ontario. University of Guelph, Guelph, Ontario.
- Wetland water balance risk evaluation tool (T.R.C.A. 2017) https://trca.ca/app/uploads/2017/12/WetlandWaterBalanceRiskEvaluation_Nov2017.pdf

Fish and Aquatic Habitat

- Fisheries and Oceans Canada (D.F.O.) Aquatic Species at Risk (S.A.R.) mapping: https://www.dfo-mpo.gc.ca/species-especes/sara-lep/map-carte/index-eng.html
- LIO Aquatic Resources Areas and watercourse data: https://www.ontario.ca/search/data-catalogue

Plants and Plant Communities

- N.H.I.C. provincial conservation status ranks for plant species and communities
- Oldham, M.J. and S.R. Brinker. 2009. Rare Vascular Plants of Ontario, Fourth Edition. M.N.R.F., Peterborough, Ontario.
- Lee, H., W. Bakowsky, J. Riley, J. Bowles, M. Puddister, P. Uhlig and S. McMurray. 1998. Ecological Land Classification for Southern Ontario. M.N.R., Peterborough, Ontario.

Wildlife and Wildlife Habitat

- N.H.I.C. provincial conservation status ranks for wildlife species
- Cadman, M., D. Sutherland and G. Beck. 2009. Atlas of the Breeding Birds of Ontario. Bird Studies Canada. Available from http://www.birdsontario.org/atlas/index.jsp
- Ontario Nature. 2019. Ontario Reptile and Amphibian Atlas. Available from https://ontarionature.org/programs/citizen-science/reptile-amphibian-atlas/
- Toronto Entomologists' Association. 2019. Ontario Butterfly Atlas. Available from http://www.ontarioinsects.org/atlas_online.htm
- Citizen science data from publicly available platforms such as:
    - eBird (https://ebird.org/home) and
    - iNaturalist (https://www.inaturalist.org/home)
- Significant Wildlife Habitat (S.W.H.) Criteria Schedules for Ecoregion 7E (M.N.R.F., 2015)

- Ontario Ministry of Natural Resources (M.N.R.). 2000. Significant Wildlife Habitat Technical Guide. M.N.R., Peterborough, Ontario.
- M.N.R.. 2010. Natural Heritage Reference Manual for Natural Heritage Policies of the Provincial Policy Statement, 2005. Second Edition. M.N.R., Peterborough, Ontario.

Significant Species Regulations and Legislation

- Species at Risk Act (S.A.R.A.), 2002, Regulations and Rankings (available from the S.A.R.A. public registry: https://www.canada.ca/en/environment-climate-change/services/species-risk-public-registry.html)
- Ontario Endangered Species Act (E.S.A.), 2007, Regulations and Rankings (available from http://cossaroagency.ca/species/)
- Species at Risk in Ontario (S.A.R.O.) List, O. Reg. 230/08 (available from https://www.ontario.ca/laws/regulation/080230) and O. Reg. 24/22 (available from https://www.ontario.ca/laws/regulation/r22024)
- Species at Risk (S.A.R.) Assessment Reports, Management Plans, Recovery Strategies, Government Response Statements, General Habitat Descriptions and other documentation
- Fisheries Act, 1985
- Migratory Birds Convention Act, 1994

Guideline Documents

- M.N.R.F. 2022. Ontario Wetland Evaluation System, Southern Manual. Third Edition (Version 4).
- M.N.R.F. 2015. Significant Wildlife Habitat Mitigation Support Tool. M.N.R.F., Peterborough, Ontario.
- M.N.R.F. 2016. Guidance for Development Activities in Redside Dace Protected Habitat. M.N.R.F., Peterborough Ontario.

Appendix 9 | Significant Wildlife Habitat Assessment Table Template

Appendix 9 | Significant Wildlife Habitat Assessment Table Template (EcoRegion 7E)

Seasonal Concentration Areas of Animals

Wildlife Habitat	Wildlife Species	Candidate S.W.H. E.L.C. Ecosite Codes	Candidate S.W.H Habitat Criteria and Information Sources	Confirmed S.W.H. Defining Criteria	Assessment of Habitat in E.I.S. Study Area
Waterfowl Stopover and Staging Areas (Terrestrial) **Rationale:** Habitat important to migrating waterfowl.	American Black Duck Northern Pintail Gadwall Blue-winged Teal Green-winged Teal American Wigeon Northern Shoveler Tundra Swan	CUM1 CUT1 Plus evidence of annual spring flooding from meltwater or run-off within these Ecosites. Fields with seasonal flooding and waste grains in the Long Point, Rondeau, Lake St. Clair, Grand Bend and Point Pelee areas may be important to Tundra Swans.	• Fields with sheet water during Spring (mid-March to May) • Fields flooding during spring melt and run-off provide important invertebrate foraging habitat for migrating waterfowl • Agricultural fields with waste grains are commonly used by waterfowl, these are not considered S.W.H. unless they have spring sheet water available <u>Information Sources</u> • Anecdotal information from the landowner, adjacent landowners or local naturalist clubs may be good information in determining occurrence. • Reports and other information available from Conservation Authorities • Sites documented through waterfowl planning processes (eg. EHJV implementation plan) • Field Naturalist Clubs • Ducks Unlimited Canada • Natural Heritage Information Centre (N.H.I.C.) Waterfowl Concentration Area	Studies carried out and verified presence of an annual concentration of any listed species, evaluation methods to follow “Bird and Bird Habitats: Guidelines for Wind Power Projects” • Any mixed species aggregations of 100 or more individuals required • The flooded field ecosite habitat plus a 100-300m radius, dependent on local site conditions and adjacent land use is the significant wildlife habitat • Annual use of habitat is documented from information sources or field studies (annual use can be based on studies or determined by past surveys with species numbers and dates) • S.W.H. M.I.S.T. Index #7 provides development effects and mitigation measures.	

Seasonal Concentration Areas of Animals

Wildlife Habitat	Wildlife Species	Candidate S.W.H. E.L.C. Ecosite Codes	Candidate S.W.H Habitat Criteria and Information Sources	Confirmed S.W.H. Defining Criteria	Assessment of Habitat in E.I.S. Study Area
Waterfowl Stopover and Staging Areas (Aquatic) **Rationale:** Important for local and migrant waterfowl populations during the spring or fall migration or both periods combined. Sites identified are usually only one of a few in the eco-district.	American Black Duck Northern Pintail Gadwall Blue-winged Teal Green-winged Teal American Wigeon Northern Shoveler Tundra Swan Canada Goose Cackling Goose Snow Goose American Black Duck Northern Pintail Northern Shoveler American Wigeon Gadwall Green-winged Teal Blue-winged Teal Hooded Merganser Common Merganser Lesser Scaup Greater Scaup Long-tailed Duck Surf Scoter White-winged Scoter Black Scoter Ring-necked duck Common Goldeneye Bufflehead Redhead Ruddy Duck Red-breasted Merganser Brant Canvasback Ruddy Duck	MAS1 MAS2 MAS3 SAS1 SAM1 SAF1 SWD1 SWD2 SWD3 SWD4 SWD5 SWD6 SWD7	• Ponds, marshes, lakes, bays, coastal inlets and watercourses used during migration. Sewage treatment ponds and storm water ponds do not qualify as a S.W.H., however a reservoir managed as a large wetland or pond/lake does qualify • These habitats have an abundant food supply (mostly aquatic invertebrates and vegetation in shallow water). <u>Information Sources</u> • Environment Canada • Naturalist clubs often are aware of staging/stopover areas. • O.M.N.R.F. Wetland Evaluations indicate presence of locally and regionally significant waterfowl staging. • Sites documented through waterfowl planning processes (e.g. EHJV implementation plan) • Ducks Unlimited projects • Element occurrence specification by Nature Serve: http://www.natureserve.org • Natural Heritage Information Centre (N.H.I.C.) Waterfowl Concentration Area	Studies carried out and verified presence of: • Aggregations of 100 or more of listed species for 7 days, results in >700 waterfowl use days • Areas with annual staging of ruddy ducks, canvasbacks, and redheads are S.W.H. • The combined area of the E.L.C. ecosites and a 100m radius area is the S.W.H. • Wetland area and shorelines associated with sites identified within the S.W.H.T.G. Appendix K are significant wildlife habitat. • Evaluation methods to follow “Bird and Bird Habitats: Guidelines for Wind Power Projects” • Annual Use of Habitat is Documented from Information Sources or Field Studies (Annual can be based on completed studies or determined from past surveys with species numbers and dates recorded). • S.W.H. M.I.S.T. Index #7 provides development effects and mitigation measures.	

Seasonal Concentration Areas of Animals

Wildlife Habitat	Wildlife Species	Candidate S.W.H. E.L.C. Ecosite Codes	Candidate S.W.H Habitat Criteria and Information Sources	Confirmed S.W.H. Defining Criteria	Assessment of Habitat in E.I.S. Study Area
Shorebird Migratory Stopover Area **Rationale:** High quality shorebird stopover habitat is extremely rare and typically has a long history of use.	Greater Yellowlegs Lesser Yellowlegs Marbled Godwit Hudsonian Godwit Black-bellied Plover American Golden-Plover Semipalmated Plover Solitary Sandpiper Spotted Sandpiper Semipalmated Sandpiper Pectoral Sandpiper White-rumped Sandpiper Baird's Sandpiper Least Sandpiper Purple Sandpiper Stilt Sandpiper Short-billed Dowitcher Red-necked Phalarope Whimbrel Ruddy Turnstone Sanderling Dunlin	BBO1 BBO2 BBS1 BBS2 BBT1 BBT2 SDO1 SDS2 SDT1 MAM1 MAM2 MAM3 MAM4 MAM5	• Shorelines of lakes, rivers and wetlands, including beach area, bars and seasonally flooded, muddy and un-vegetated shoreline habitats • Great Lakes coastal shorelines, including groynes and other forms of armour rock lakeshores, are extremely important for migratory shorebirds in May to mid-June and early July to October • Sewage treatment ponds and storm water ponds do not qualify as S.W.H.. <u>Information Sources</u> • Western hemisphere shorebird reserve network • Canadian Wildlife Service (C.W.S.) Ontario Shorebird Survey • Bird Studies Canada • Ontario Nature • Local birders and naturalist clubs • Natural Heritage Information Centre (N.H.I.C.) Shorebird Migratory Concentration Area	Studies confirming: • Presence of 3 or more of listed species and >1000 shorebird use days during spring or fall migration period (shorebird use days are the accumulated number of shorebirds counted per day over the course of the fall or spring migration period) • Whimbrel stop briefly (<24hrs) during spring migration, any site with >100 Whimbrel used for 3 years or more is significant. • The area of significant shorebird habitat includes the mapped E.L.C. shoreline ecosites plus a 100m radius area • Evaluation methods to follow "Bird and Bird Habitats: Guidelines for Wind Power Projects" • S.W.H. M.I.S.T. Index #8 provides development effects and mitigation measures.	

Seasonal Concentration Areas of Animals

Wildlife Habitat	Wildlife Species	Candidate S.W.H. E.L.C. Ecosite Codes	Candidate S.W.H Habitat Criteria and Information Sources	Confirmed S.W.H. Defining Criteria	Assessment of Habitat in E.I.S. Study Area
Raptor Wintering Area **Rationale:** Sites used by multiple species, a high number of individuals and used annually are most significant	Rough-legged Hawk Red-tailed Hawk Northern Harrier American Kestrel Snowy Owl **Special Concern:** Short-eared Owl Bald Eagle	Hawks/Owls: Combination of E.L.C. Community Series; need to have present one Community Series from each land class; Forest: FOD, FOM, FOC. Upland: CUM, CUT, CUS, CUW. Bald Eagle: Forest Community Series: FOD, FOM, FOC, SWD, SWM or SWC on shoreline areas adjacent to large rivers or adjacent to lakes with open water (hunting area).	• The habitat provides a combination of fields and woodlands that provide roosting, foraging and resting habitats for wintering raptors • Raptor wintering (hawk/owl) sites need to be >20 ha with a combination of forest and upland • Least disturbed sites, idle/fallow or lightly grazed field/meadow (>15ha) with adjacent woodlands • Field area of the habitat is to be wind swept with limited snow depth or accumulation. • Eagle sites have open water and large trees and snags available for roosting <u>Information Sources</u> • O.M.N.R.F. Ecologist or Biologist • Naturalist clubs • Natural Heritage Information Centre (N.H.I.C.) Raptor Winter Concentration Area • Data from Bird Studies Canada • Results of Christmas Bird Counts • Reports and other information available from Conservation Authorities	Studies confirm the use of these habitats by: •One or more Short-eared Owls or; One or more Bald Eagles or; At least 10 individuals and two of the listed hawk/owl species. •To be significant a site must be used regularly (3 in 5 years) for a minimum of 20 days by the above number of birds. •The habitat area for an Eagle winter site is the shoreline forest ecosites directly adjacent to the prime hunting area •Evaluation methods to follow “Bird and Bird Habitats: Guidelines for Wind Power Projects” •S.W.H. M.I.S.T. Index #10 and #11 provides development effects and mitigation measures.	

Seasonal Concentration Areas of Animals

Wildlife Habitat	Wildlife Species	Candidate S.W.H. E.L.C. Ecosite Codes	Candidate S.W.H Habitat Criteria and Information Sources	Confirmed S.W.H. Defining Criteria	Assessment of Habitat in E.I.S. Study Area
Bat Hibernacula **Rationale**: Bat hibernacula are rare habitats in all Ontario landscapes.	Big Brown Bat	Bat Hibernacula may be found in these ecosites: CCR1 CCR3 CCA1 CCA2 (Note: buildings are not considered S.W.H.)	• Hibernacula may be found in caves, mine shafts, underground foundations and Karsts • Active mine sites should not be considered as S.W.H. • The locations of Bat Hibernacula are relatively poorly known. <u>Information Sources</u> • O.M.N.R.F. for possible locations and contact for local experts • Natural Heritage Information Centre (N.H.I.C.) Bat Hibernaculum • Ministry of Northern Development and Mines for location of mine shafts. • Clubs that explore caves (e.g. Sierra Club) • University Biology Departments with bat experts.	• All sites with confirmed hibernating bats are S.W.H. • The area includes 200 m radius around the entrance of the hibernaculum for most development types and 1000 m for wind farms • Studies are to be conducted during the peak swarming period (Aug. – Sept.). Surveys should be conducted following methods outlined in the “Bats and Bat Habitats: Guidelines for Wind Power Projects” • S.W.H. M.I.S.T. Index #1 provides development effects and mitigation measures.	

Seasonal Concentration Areas of Animals

Wildlife Habitat	Wildlife Species	Candidate S.W.H. E.L.C. Ecosite Codes	Candidate S.W.H Habitat Criteria and Information Sources	Confirmed S.W.H. Defining Criteria	Assessment of Habitat in E.I.S. Study Area

Bat Maternity Colonies
 	
Rationale: Known locations of forested bat maternity colonies are extremely rare in all Ontario landscapes.
	Big Brown Bat
	Silver-haired Bat
		Maternity colonies considered S.W.H. are found in forested Ecosites.
		
		All E.L.C. Ecosites in E.L.C. Community Series: FOD, FOM, SWD, SWM
			• Maternity colonies can be found in tree cavities, vegetation and often in buildings (buildings are not considered to be S.W.H.).
			• Maternity roosts are not found in caves and mines in Ontario
			• Maternity colonies located in Mature deciduous or mixed forest stands with >10/ha large diameter (>25cm dbh) wildlife trees
			• Female bats prefer wildlife trees (snags) in early stages if decay, class 1-3 or class 1 or 2
			• Silver-haired Bats prefer older mixed or deciduous forest and form maternity colonies in tree cavities and small hollows. Older forest areas with at least 21 snags/ha are preferred
			
			<u>Information Sources</u>
			• O.M.N.R.F. for possible locations and contact for local experts
			• University Biology Departments with bat experts.
				• Maternity colonies with confirmed use by:
				  • >10 Big Brown Bats
				  • >5 adult female Silver-haired Bats
				• The area of habitat includes the entire woodland or a forest stand E.L.C. Ecosite or an Ecoelement containing the maternity colonies
				• Evaluation methods for maternity colonies should be conducted following methods outlined in the “Bats and Bat Habitats: Guidelines for Wind Power Projects”
				• S.W.H. M.I.S.T. Index #12 provides the development effects and mitigation measures.	

Seasonal Concentration Areas of Animals

Wildlife Habitat	Wildlife Species	Candidate S.W.H. E.L.C. Ecosite Codes	Candidate S.W.H Habitat Criteria and Information Sources	Confirmed S.W.H. Defining Criteria	Assessment of Habitat in E.I.S. Study Area
Turtle Wintering Areas **Rationale:** Generally sites are the only known sites in the area. Sites with the highest number of individuals are most significant	**Special Concern:** Midland Painted Turtle Northern Map Turtle Snapping Turtle	Snapping and Midland Painted Turtles: SW, MA, OA and SA; FEO and BOO. Northern Map Turtle: Open water areas such as deeper rivers or streams and lakes with current can also be used as overwintering habitat.	• For most turtles, wintering areas are in the same general areas as their core habitat. Water has to be deep enough not to freeze and have soft mud substrates. • Overwintering sites are permanent water bodies, large wetlands and bots or fens with adequate dissolved oxygen. • Manmade ponds such as sewage lagoons or storm water ponds should not be considered S.W.H.. <u>Information Sources</u> • E.I.S. studies carried out by conservation authorities. • Field naturalists clubs. • O.M.N.R.F. ecologist or biologist • N.H.I.C.	• Presence of five overwintering Midland Painted Turtles is significant. • One or more Northern Map Turtle or Snapping Turtle overwintering within a wetland is significant. • The mapped E.L.C. ecosite area with the overwintering turtles is the S.W.H.. If the hibernation site is within a stream or river, the deep-water pool where the turtles are overwintering is the S.W.H.. • Overwintering areas may be identified by searching for congregations (basking areas) of turtles on warm, sunny days during the fall (September to October) or spring (March to May). Congregation of turtles is more common where wintering areas are limited and therefore significant. • S.W.H. M.I.S.T. Index #28 provides development effects and mitigation measures for turtle wintering habitat	

Seasonal Concentration Areas of Animals

Wildlife Habitat	Wildlife Species	Candidate S.W.H. E.L.C. Ecosite Codes	Candidate S.W.H Habitat Criteria and Information Sources	Confirmed S.W.H. Defining Criteria	Assessment of Habitat in E.I.S. Study Area
Reptile Hibernaculum **Rationale:** Generally sites are the only known sites in the area. Sites with the highest number of individuals are	Snakes: Eastern Gartersnake Northern Watersnake Northern Red-bellied Snake Northern Brownsnake Smooth Green Snake Northern Ring-necked Snake **Special Concern:** Milksnake Eastern Ribbonsnake	For all snakes, habitat may be found in any ecosite other than very wet ones. Talus, Rock Barren, Crevice, Cave, and Alvar sites may be directly related to these habitats. Observations or congregations of snakes on sunny warm days in the spring or fall is a good indicator.	• For snakes, hibernation takes place in sites located below frost lines in burrows, rock crevices and other natural or naturalized locations. The existence of features that go below frost line; such as rock piles or slopes, old stone fences, and abandoned crumbling foundations assist in identifying candidate S.W.H. • Areas of broken and fissured rock are particularly valuable since they provide access to subterranean sites below the frost line • Wetlands can also be important over-wintering habitat in conifer or shrub swamps and swales, poor fens or depressions in bedrock terrain with sparse trees or shrubs with sphagnum moss or sedge hummock ground cover. <u>Information Sources</u> • In spring, local residents or landowners may have observed the emergence of snakes on their property (e.g. old dug wells). • Reports and other information available from Conservation Authorities. • Field Naturalist Clubs • University herpetologists • Natural Heritage Information Centre (N.H.I.C.)	Studies confirming: • Presence of snake hibernacula used by a minimum of five individuals of a snake sp. or; individuals of two or more snake spp. • Congregations of a minimum of five individuals of a snake sp. or; individuals of two or more snake spp. near potential hibernacula (e.g. foundation or rocky slope) on sunny warm days in Spring (Apr/May) and Fall (Sept/Oct) • NOTE: If there are Special Concern Species present, then site is S.W.H. • NOTE: Sites for hibernation possess specific habitat parameters (e.g. temperature, humidity, etc) and consequently are used annually, often by many of the same individuals of a local population (i.e. strong hibernation site fidelity). Other critical life processes (e.g. mating) often take place in close proximity to hibernacula. • The feature in which the hibernacula is located plus a 30 m radius area is the S.W.H. • S.W.H. M.I.S.T. Index #13 provides development effects and mitigation measures for snake hibernacula.	

Seasonal Concentration Areas of Animals

Wildlife Habitat	Wildlife Species	Candidate S.W.H. E.L.C. Ecosite Codes	Candidate S.W.H Habitat Criteria and Information Sources	Confirmed S.W.H. Defining Criteria	Assessment of Habitat in E.I.S. Study Area
Colonially-Nesting Bird Breeding Habitat (Bank and Cliff) **Rationale:** Historical use and number of nests in a colony make this habitat significant. An identified colony can be very important to local populations. All swallow population are declining in Ontario.	Cliff Swallow Northern Rough-winged Swallow (this species is not colonial but can be found in Cliff Swallow colonies)	Eroding banks, sandy hills, borrow pits, steep slopes, and sand piles Cliff faces, bridge abutments, silos, barns. Habitat found in the following ecosites: CUM1 CUT1 CUS1 BLO1 BLS1 BLT1 CLO1 CLS1 CLT1	• Any site or areas with exposed soil banks, undisturbed or naturally eroding that is not a licensed/permitted aggregate area. • Does not include man-made structures (bridges or buildings) or recently (2 years) disturbed soil areas, such as berms, embankments, soil or aggregate stockpiles. • Does not include a licensed/permitted Mineral Aggregate Operation. <u>Information Sources</u> • Reports and other information available from Conservation Authorities • Ontario Breeding Bird Atlas • Bird Studies Canada NatureCounts http://www.birdscanada.org/birdmon • Field Naturalist Clubs	Studies confirming: • Presence of 1 or more nesting sites with 8 or more cliff swallow pairs and/or rough-winged swallow pairs during the breeding season. • A colony identified as S.W.H. will include a 50m radius habitat area from the peripheral nests • Field surveys to observe and count swallow nests are to be completed during the breeding season. Evaluation methods to follow “Bird and Bird Habitats: Guidelines for Wind Power Projects” • S.W.H. M.I.S.T. Index #4 provides development effects and mitigation measures.	

Seasonal Concentration Areas of Animals

Wildlife Habitat	Wildlife Species	Candidate S.W.H. E.L.C. Ecosite Codes	Candidate S.W.H Habitat Criteria and Information Sources	Confirmed S.W.H. Defining Criteria	Assessment of Habitat in E.I.S. Study Area
Colonially-Nesting Bird Breeding Habitat (Tree/Shrubs) **Rationale:** Large colonies are important to local bird population, typically sites are only known colony in area and are used annually.	Great Blue Heron Black-crowned Night-Heron Great Egret Green Heron	SWM2 SWM3 SWM5 SWM6 SWD1 SWD2 SWD3 SWD4 SWD5 SWD6 SWD7 FET1	• Nests in live or dead standing trees in wetlands, lakes, islands, and peninsulas. Shrubs and occasionally emergent vegetation may also be used. • Most nests in trees are 11 to 15 m from ground, near the top of the tree. <u>Information Sources</u> • Ontario Breeding Bird Atlas colonial nest records. • Ontario Heronry Inventory 1991 available from Bird Studies Canada or N.H.I.C. (O.M.N.R.F.). • Natural Heritage Information Centre (N.H.I.C.) Mixed Wader Nesting Colony • Aerial photographs can help identify large heronries. • Reports and other information available from Conservation Authorities, M.N.R.F. District Offices and Field Naturalist Clubs.	Studies confirming: • Presence of 2 or more active nests of Great Blue Heron or other listed species. • The habitat extends from the edge of the colony and a minimum 300m radius or extent of the Forest Ecosite containing the colony or any island <15 ha with a colony is the S.W.H. • Confirmation of active heronries are to be achieved through site visits conducted during the nesting season (April to August) or by evidence such as the presence of fresh guano, dead young and/or eggshells • S.W.H. M.I.S.T. Index #5 provides development effects and mitigation measures.	

Seasonal Concentration Areas of Animals

Wildlife Habitat	Wildlife Species	Candidate S.W.H. E.L.C. Ecosite Codes	Candidate S.W.H Habitat Criteria and Information Sources	Confirmed S.W.H. Defining Criteria	Assessment of Habitat in E.I.S. Study Area
Colonially -Nesting Bird Breeding Habitat (Ground) **Rationale:** Colonies are important to local bird population, typically sites are only known colony in area and are used annually.	Herring Gull Great Black-backed Gull Little Gull Ring-billed Gull Common Tern Caspian Tern Brewer's Blackbird	Any rocky island or peninsula (natural or artificial) within a lake or large river (two-lined on a 1;50,000 NTS map). Close proximity to watercourses in open fields or pastures with scattered trees or shrubs (Brewer's Blackbird) MAM1 – 6 MAS1 – 3 CUM CUT CUS	• Nesting colonies of gulls and terns are on islands or peninsulas associated with open water or in marshy areas. • Brewers Blackbird colonies are found loosely on the ground in or in low bushes in close proximity to streams and irrigation ditches within farmlands. <u>Information Sources</u> • Ontario Breeding Bird Atlas, rare/colonial species records. • Canadian Wildlife Service • Reports and other information available from Conservation Authorities. • Natural Heritage Information Centre (N.H.I.C.) Colonial Waterbird Nesting Area • M.N.R.F. District Offices. • Field Naturalist Clubs	Studies confirming: • Presence of > 25 active nests for Herring Gulls or Ring-billed Gulls, >5 active nests for Common Tern or >2 active nests for Caspian Tern • Presence of 5 or more pairs for Brewer's Blackbird • Any active nesting colony of one or more Little Gull, and Great Black-backed Gull is significant • The edge of the colony and a minimum 150m radius area of habitat, or the extent of the E.L.C. ecosites containing the colony or any island <3 ha with a colony is the S.W.H. • Studies would be done during May/June when actively nesting. Evaluation methods to follow "Bird and Bird Habitats: Guidelines for Wind Power Projects" • S.W.H. M.I.S.T. Index #6 provides development effects and mitigation measures.	

Seasonal Concentration Areas of Animals

Wildlife Habitat	Wildlife Species	Candidate S.W.H. E.L.C. Ecosite Codes	Candidate S.W.H Habitat Criteria and Information Sources	Confirmed S.W.H. Defining Criteria	Assessment of Habitat in E.I.S. Study Area
Migratory Butterfly Stopover Areas **Rationale:** Butterfly stopover areas are extremely rare habitats and are biologically important for butterfly species that migrate south for the winter.	Painted Lady Red Admiral **Special Concern:** Monarch	Combination of E.L.C. Community Series; need to have present one Community Series from each landclass: FIELD: CUM, CUT, CUS FOREST: FOC, FOD, FOM, CUP Anecdotally, a candidate site for butterfly stopover will have a history of butterflies being observed.	• A butterfly stopover area will be a minimum of 10 ha in size with a combination of field and forest habitat present, and will be located within 5 km of Lake Erie or Lake Ontario • The habitat is typically a combination of field and forest, and provides the butterflies with a location to rest prior to their long migration south • The habitat should not be disturbed, fields/meadows with an abundance of preferred nectar plants and woodland edge providing shelter are requirements for this habitat • Staging areas usually provide protection from the elements and are often spits of land or areas with the shortest distance to cross the Great Lakes <u>Information Sources</u> • M.N.R.F. District Offices • Natural Heritage Information Centre (N.H.I.C.) • Agriculture Canada in Ottawa may have list of butterfly experts. • Field Naturalist Clubs • Toronto Entomologists Association	Studies confirm: • The presence of Monarch Use Days (MUD) during fall migration (Aug/Oct). MUD is based on the number of days the site is used by Monarchs, multiplied by the number of individuals using the site. Numbers of butterflies can range from 100-500/day, significant variation can occur between years and multiple years of sampling should occur • Observational studies are to be completed and need to be done frequently during the migration period to estimate MUD. • MUD of >5000 or >3000 with the presence of Painted Ladies or Red Admiral's is to be considered significant. • S.W.H. M.I.S.T. Index #16 provides development effects and mitigation measures.	

Seasonal Concentration Areas of Animals

Wildlife Habitat	Wildlife Species	Candidate S.W.H. E.L.C. Ecosite Codes	Candidate S.W.H Habitat Criteria and Information Sources	Confirmed S.W.H. Defining Criteria	Assessment of Habitat in E.I.S. Study Area
Landbird Migratory Stopover Areas **Rationale:** Sites with a high diversity of species as well as high numbers are most significant.	All migratory songbirds Canadian Wildlife Service Ontario website: http://www.ec.gc.ca/nature/default.asp?lang=En&n=421B7A9D-1 All migrant raptor species: Ontario Ministry of Natural Resources: Fish and Wildlife Conservation Act, 1997. Schedule 7: Specially Protected Birds (Raptors)	All Ecosites associated with these E.L.C. Community Series: FOC FOM FOD SWC SWM SWD	• Woodlots >5 ha in size and within 5 km of Lake Erie and Lake Ontario. If woodlands are rare in an area of shoreline, woodland fragments 2-5 ha can be considered for this habitat • If multiple woodlands are located along the shoreline those woodlands <2 km from Lake Erie and Lake Ontario are more significant • Sites have a variety of habitats: forest, grassland and wetland complexes • The largest sites are more significant • Woodlots and forest fragments are important habitats to migrating birds, these features located along the shore and within 5 km of Lake Erie and Lake Ontario are Candidate S.W.H.. <u>Information Sources</u> • Bird Studies Canada • Ontario Nature • Local birders and field naturalist clubs • Ontario Important Bird Areas (IBA) Program	Studies confirm: • Use of the habitat by >200 birds/day and with >35 species and with at least 10 bird species recorded on at least 5 different survey dates. This abundance and diversity of migrant bird species is considered above average and significant • Studies should be completed during spring (Mar.-May) and fall (Aug.-Oct.) migration using standardized assessment techniques. Evaluation to follow “Bird and Bird Habitats: Guidelines for Wind Power Projects” • S.W.H. M.I.S.T. Index #9 provides development effects and mitigation measures.	

Seasonal Concentration Areas of Animals

Wildlife Habitat	Wildlife Species	Candidate S.W.H. E.L.C. Ecosite Codes	Candidate S.W.H Habitat Criteria and Information Sources	Confirmed S.W.H. Defining Criteria	Assessment of Habitat in E.I.S. Study Area
Deer Winter Congregation Areas **Rationale:** Deer movement during winter in the southern areas of Eco-region 7E are not constrained by snow depth, however deer will annually congregate in large numbers in suitable woodlands to reduce or avoid the impacts of winter conditions	White-tailed Deer	All forested Ecosites with these E.L.C. Community Series: FOC, FOM, FOD, SWC, SWM, SWD Conifer plantations much smaller than 50 ha may also be used.	• Woodlots >100 ha in size or if large woodlots are rare in a planning area, woodlots >50 ha • Deer movement during winter in the southern areas of Ecoregion 7E are not constrained by snow depth, however deer will annually congregate in large numbers in suitable woodlands • Large woodlots >100 ha and up to 1,500 ha are known to be used annually by densities of deer that range from 0.1-0.5 deer/ha • Woodlots with high densities of deer due to artificial feeding are not significant. <u>Information Sources</u> • M.N.R.F. District Offices • LIO/NRVIS	Studies confirm: • Deer management is an M.N.R.F. responsibility, deer winter congregation areas considered significant will be mapped by M.N.R.F. • Use of the woodlot by white-tailed deer will be determined by M.N.R.F., all woodlots exceeding the area criteria are significant, unless determined not to be significant by M.N.R.F. • Studies should be complete4d during winter (Jan./Feb.) when >20 cm of snow is on the ground using aerial survey techniques, ground road surveys, or a pellet count deer survey • S.W.H. M.I.S.T. Index #2 provides development effects and mitigation measures	

Specialized Habitat for Wildlife

Habitat Type	Wildlife Species	Candidate S.W.H. E.L.C. Ecosite Codes	Candidate S.W.H. Habitat Criteria and Information Sources	Confirmed S.W.H. Defining Criteria	Assessment of Habitat in E.I.S. Study Area
Waterfowl Nesting Area **Rationale:** Important to local waterfowl populations, sites with greatest number of species and highest number of individuals are significant.	American Black Duck Northern Pintail Northern Shoveler Gadwall Blue-winged Teal Green-winged Teal Wood Duck Hooded Merganser Mallard	All upland habitats located adjacent to these wetland E.L.C. Ecosites are Candidate S.W.H.: MAS1, MAS2, MAS3, SAS1, SAM1, SAF1, MAM1, MAM2, MAM3, MAM4, MAM5, MAM6, SWT1, SWT2, SWD1, SWD2, SWD3, SWD4 NOTE Includes adjacency to Provincially Significant Wetlands.	• A waterfowl nesting area extends 120 m from a wetland (>0.5 ha) or a wetland (>0.5 ha) and any small wetlands (0.5 ha) within 120 m or a cluster of 3 or more small (<0.5 ha) wetlands within 120 m of each individual wetland where waterfowl nesting is known to occur • Upland areas should be at least 120 m wide so that predators such as raccoons, skunks and foxes have difficulty finding nests • Wood Ducks and Hooded Mergansers utilize large diameter trees (>40 cm dbh) in woodlands for cavity nest sites. <u>Information Sources</u> • Ducks Unlimited staff may know the locations of particularly productive nesting sites • M.N.R.F. Wetland Evaluations for indication of significant waterfowl nesting habitat • Reports and other information available from Conservation Authorities	Studies confirmed: • Presence of 3 or more nesting pairs for listed species excluding Mallards, or; • Presence of 10 or more nesting pairs for listed species including Mallards. • Any active nesting site of an American Black Duck is considered significant. • Nesting studies should be completed during the spring breeding season (April - June). Evaluation methods to follow “Bird and Bird Habitats: Guidelines for Wind Power Projects” • A field study confirming waterfowl nesting habitat will determine boundary of the waterfowl nesting habitat for the S.W.H., this may be greater or less than 120 m from the wetland and will provide enough habitat for waterfowl to successfully nest • S.W.H. M.I.S.T. Index #25 provides development effects and mitigation measures.	

Specialized Habitat for Wildlife

Habitat Type	Wildlife Species	Candidate S.W.H. E.L.C. Ecosite Codes	Candidate S.W.H. Habitat Criteria and Information Sources	Confirmed S.W.H. Defining Criteria	Assessment of Habitat in E.I.S. Study Area
Bald Eagle and Osprey Nesting, Foraging and Perching Habitat **Rationale**: Nest sites are fairly uncommon in Eco - region 7E and are used annually by the species. Many suitable nesting locations may be lost due to increasing shoreline development pressures and scarcity of habitat.	Osprey SPECIAL CONCERN Bald Eagle	E.L.C. Forest Community Series: FOD, FOM, FOC, SWD, SWM and SWC directly adjacent to riparian areas – rivers, lakes, ponds and wetlands.	• Nests are associated with lakes, ponds, rivers or wetlands along forested shorelines, islands, or on structures over water. • Osprey nests are usually at the top a tree whereas Bald Eagle nests are typically in super canopy trees in a notch within the tree's canopy. • Nests located on man-made objects are not to be included as S.W.H. (e.g. telephone poles and constructed nesting platforms) <u>Information Sources</u> • N.H.I.C. compiles all known nesting sites for Bald Eagles in Ontario • M.N.R.F. values information (LIO/NRVIS) will list known nesting locations. Note: data from NRVIS is provided as a point and does not represent all the habitat • Nature Counts, Ontario Nest Records Scheme data. • O.M.N.R.F. District. • Check the Ontario Breeding Bird Atlas or Rare Breeding Birds in Ontario for species documented • Reports and other information available from Conservation Authorities. • Field Naturalists clubs	Studies confirm the use of these nests by: • One or more active Osprey or Bald Eagle nests in an area • Some species have more than one nest in a given area and priority is given to the primary nest with alternate nests included within the area of the S.W.H.. • For an Osprey, the active nest and a 300 m radius around the nest or the contiguous woodland stand is the S.W.H., maintaining undisturbed shorelines with large trees within this area is important • For a Bald Eagle the active nest and a 400-800 m radius around the nest is the S.W.H.. Area of the habitat from 400-800 m is dependent on sight lines from the nest to the development and inclusion of perching and foraging habitat • To be significant a site must be used annually. When found inactive, the site must be known to be inactive for > 3 years or suspected of not being used for >5 years before being considered not significant. • Observational studies to determine nest site use, perching sites and foraging areas need to be done from early March to mid-August. • Evaluation methods to follow "Bird and Bird Habitats: Guidelines for Wind Power Projects" • S.W.H. M.I.S.T. Index #26 provides development effects and mitigation measures	

Specialized Habitat for Wildlife

Habitat Type	Wildlife Species	Candidate S.W.H. E.L.C. Ecosite Codes	Candidate S.W.H. Habitat Criteria and Information Sources	Confirmed S.W.H. Defining Criteria	Assessment of Habitat in E.I.S. Study Area
Woodland Raptor Nesting Habitat **Rationale:** Nests sites for these species are rarely identified; these area sensitive habitats and are often used annually by these species.	Northern Goshawk Cooper's Hawk Sharp-shinned Hawk Red-shouldered Hawk Barred Owl Broad-winged Hawk	May be found in all forested E.L.C. Ecosites. May also be found in SWC, SWM, SWD and CUP3.	• All natural or conifer plantation woodland/forest stands >30 ha with > 4 ha of interior habitat. Interior habitat determined with a 200 m buffer. • Stick nests found in a variety of intermediate-aged to mature conifer, deciduous or mixed forests, within tops or crotches of trees. Species such as Cooper's Hawk nest along forest edges sometimes on peninsulas or small off-shore islands. • In disturbed sites, nests may be used again, or a new nest will be in close proximity to old nest <u>Information Sources</u> • O.M.N.R.F. Districts. • Check the Ontario Breeding Bird Atlas or Rare Breeding Birds in Ontario for species documented. • Check data from Bird Studies Canada. • Reports and other information available from Conservation Authorities.	Studies confirm: • Presence of one or more active nests from species list is considered significant • Red-shouldered Hawk and Northern Goshawk – A 400 m radius around the nest or 28 ha area of habitat is the S.W.H.. The 28 ha habitat area would be applied where optimal habitat is irregularly shaped around the nest. • Barred Owl – A 200m radius around the nest is the S.W.H. • Broad-winged Hawk and Coopers Hawk, – A 100m radius around the nest is the S.W.H. • Sharp-Shinned Hawk – A 50m radius around the nest is the S.W.H. • Conduct field investigations from early March to end of May. The use of call broadcasts can help in locating territorial (courting/nesting) raptors and facilitate the discovery of nests by narrowing down the search area. • S.W.H. M.I.S.T. Index #27 provides development effects and mitigation measures	

Specialized Habitat for Wildlife

Habitat Type	Wildlife Species	Candidate S.W.H. E.L.C. Ecosite Codes	Candidate S.W.H. Habitat Criteria and Information Sources	Confirmed S.W.H. Defining Criteria	Assessment of Habitat in E.I.S. Study Area
Turtle Nesting Areas **Rationale:** These habitats are rare and when identified will often be the only breeding site for local populations of turtles	**Special Concern:** Midland Painted Turtle Northern Map Turtle Snapping Turtle	Exposed mineral soil (sand or gravel) areas adjacent (<100 m) or within the following E.L.C. Ecosites: MAS1, MAS2, MAS3, SAS1, SAM1, SAF1, BOO1, FEO1	• Best nesting habitat for turtles are close to water and away from roads and sites less prone to loss of eggs by predation from skunks, raccoons or other animals. • For an area to function as a turtle-nesting area, it must provide sand and gravel that turtles are able to dig in and is located in open, sunny areas. Nesting areas on the sides of municipal or provincial road embankments and shoulders are not S.W.H.. • Sand and gravel beaches adjacent to undisturbed shallow weedy areas of marshes, lakes and rivers are most frequently used. <u>Information Sources</u> • Use Ontario Soil Survey reports and maps to help find suitable substrate for nesting turtles (well-drained sands and fine gravels). • Check the Ontario Herpetofaunal Summary Atlas records or other similar atlases for uncommon turtles; location information may help to find potential nesting habitat for them. • Natural Heritage Information Centre (N.H.I.C.). • Field naturalist clubs.	Studies confirm: • Presence of 5 or more nesting Midland Painted Turtles. • One or more Northern Map Turtles or Snapping Turtles nesting is a S.W.H.. • The area or collection of sites within an area of exposed mineral soils where the turtles nest, plus a radius of 30 to 100 m around the nesting area dependent on slope, riparian vegetation and adjacent land use is the S.W.H.. • Travel routes from wetland to nesting area are to be considered within the S.W.H. as part of the 30 to 100 m area of habitat. • Field investigations should be conducted in prime nesting season typically late spring to early summer. Observational studies observing the turtles nesting is a recommended method. • S.W.H. M.I.S.T. Index #28 provides development effects and mitigation measures for turtle nesting habitat.	

Specialized Habitat for Wildlife

Habitat Type	Wildlife Species	Candidate S.W.H. E.L.C. Ecosite Codes	Candidate S.W.H. Habitat Criteria and Information Sources	Confirmed S.W.H. Defining Criteria	Assessment of Habitat in E.I.S. Study Area
Seeps and Springs **Rationale:** Seeps/Springs are typical of headwater areas and are often at the source of coldwater streams.	Wild Turkey Ruffed Grouse Spruce Grouse White-tailed Deer Salamanders	Seeps/springs are areas where groundwater comes to the surface. Often they are found within headwater areas within forested habitats. Any forested Ecosite within the headwater areas of a stream could have seeps/springs.	• Any forested area (with <25% meadow/field/ pasture) within the headwaters of a stream or river system • Seeps and springs are important feeding and drinking areas. Especially in the winter will support a variety of plant and animal species. <u>Information Sources</u> • Topographical Map. • Thermography. • Hydrological surveys conducted by Conservation Authorities and MOECC. • Field Naturalists Clubs and landowners. • Municipalities and Conservation Authorities may have drainage maps and headwater areas mapped	Field studies confirm: • Presence of a site with 2 or more seeps/springs should be considered S.W.H.. • The area of an E.L.C. forest ecosite or an ecoelement within ecosite containing the seeps/springs is the S.W.H.. The protection of the recharge area considering the slope, vegetation, height of trees and groundwater condition need to be considered in delineation the habitat • S.W.H. M.I.S.T. Index #30 provides development effects and mitigation measures	

Specialized Habitat for Wildlife

Habitat Type	Wildlife Species	Candidate S.W.H. E.L.C. Ecosite Codes	Candidate S.W.H. Habitat Criteria and Information Sources	Confirmed S.W.H. Defining Criteria	Assessment of Habitat in E.I.S. Study Area
Amphibian Breeding Habitat (Woodland) **Rationale:** These habitats are extremely important to amphibian biodiversity within a landscape and often represent the only breeding habitat for local amphibian populations	Eastern Newt Blue-spotted Salamander Spotted Salamander Gray Treefrog Spring Peeper Western Chorus Frog Wood Frog	All Ecosites associated with these E.L.C. Community Series: FOC, FOM, FOD, SWC, SWM, SWD Breeding pools within the woodland or the shortest distance from forest habitat are more significant because they are more likely to be used due to reduced risk to migrating amphibians.	• Presence of a wetland, pond or woodland pool (including vernal pools) >500 m2 (about 25 m diameter) within or adjacent (within 120 m) to a woodland (no minimum size). Some small wetlands may not be mapped and may be important breeding pools for amphibians. • Woodlands with permanent ponds or those containing water in most years until mid-July are more likely to be used as breeding habitat. <u>Information Sources</u> • Ontario Herpetofaunal Summary Atlas (or other similar atlases) for records • Local landowners may also provide assistance as they may hear spring-time choruses of amphibians on their property. • O.M.N.R.F. Districts and wetland evaluations • Field Naturalist clubs • Canadian Wildlife Service Amphibian Road Call Survey • Ontario Vernal Pool Association: http://www.ontariovernalpools.org	Studies confirm: • Presence of breeding population of 1 or more of the listed newt/salamander species or 2 or more of the listed frog species with at least 20 individuals (adults or egg masses) or 2 or more of the listed frog species with Call Level Codes of 3. • A combination of observational study and call count surveys will be required during the spring (Mar.-Jun.) when amphibians are concentrated around suitable breeding habitat within or near the woodland/wetlands • The habitat is the wetland area plus a 230m radius of woodland area. If a wetland area is adjacent to a woodland, a travel corridor connecting the wetland to the woodland is to be included in the habitat. • S.W.H. M.I.S.T. Index #14 provides development effects and mitigation measures	

Specialized Habitat for Wildlife

Habitat Type	Wildlife Species	Candidate S.W.H. E.L.C. Ecosite Codes	Candidate S.W.H. Habitat Criteria and Information Sources	Confirmed S.W.H. Defining Criteria	Assessment of Habitat in E.I.S. Study Area
Amphibian Breeding Habitat (Wetlands) **Rationale:** Wetlands supporting breeding for these amphibian species are extremely important and fairly rare within Central Ontario landscapes.	Eastern Newt American Toad Spotted Salamander Four-toed Salamander Blue-spotted Salamander Gray Treefrog Western Chorus Frog Northern Leopard Frog Pickerel Frog Green Frog Mink Frog Bullfrog	E.L.C. Community Classes SW, MA, FE, BO, OA and SA. Typically these wetland ecosites will be isolated (>120 m) from woodland ecosites, however larger wetlands containing predominantly aquatic species (e.g. Bullfrog) may be adjacent to woodlands.	• Wetlands >500m2 (about 25m diameter), supporting high species diversity are significant; some small or ephemeral habitats may not be identified on M.N.R.F. mapping and could be important amphibian breeding habitats • Presence of shrubs and logs increase significance of pond for some amphibian species because of available structure for calling, foraging, escape and concealment from predators • Bullfrogs require permanent water bodies with abundant emergent vegetation. <u>Information Sources</u> • Ontario Herpetofaunal Summary Atlas (or other similar atlases) • Canadian Wildlife Service Amphibian Road Surveys and Backyard Amphibian Call Count. • O.M.N.R.F. Districts and wetland evaluations. • Reports and other information available from Conservation Authorities	Studies confirm: • Presence of breeding population of 1 or more of the listed newt/salamander species or 2 or more of the listed frog/toad species with at least 20 individuals (adults or eggs masses) or 2 or more of the listed frog/toad species with Call Level Codes of 3 or; Wetland with confirmed breeding Bullfrogs are significant • The E.L.C. ecosite wetland area and the shoreline are the S.W.H. • A combination of observational study and call count surveys will be required during the spring (March-June) when amphibians are concentrated around suitable breeding habitat within or near the wetlands. • If a S.W.H. is determined for Amphibian Breeding Habitat (Wetlands) then Movement Corridors are to be considered as outlined in Table 1.4.1 of this Schedule. • S.W.H. M.I.S.T. Index #15 provides development effects and mitigation measures	

Specialized Habitat for Wildlife

Habitat Type	Wildlife Species	Candidate S.W.H. E.L.C. Ecosite Codes	Candidate S.W.H. Habitat Criteria and Information Sources	Confirmed S.W.H. Defining Criteria	Assessment of Habitat in E.I.S. Study Area
Woodland Area - Sensitive Bird Breeding Habitat **Rationale:** Large, natural blocks of mature woodland habitat within the settled areas of Southern Ontario are important habitats for area sensitive interior forest song birds.	Yellow-bellied Sapsucker Red-breasted Nuthatch Veery Blue-headed Vireo Northern Parula Black-throated Green Warbler Blackburnian Warbler Black-throated Blue Warbler Ovenbird Scarlet Tanager Winter Wren Pileated Woodpecker **Special Concern:** Cerulean Warbler Canada Warbler	All Ecosites associated with these E.L.C. Community Series: FOC, FOM, FOD, SWC, SWM, SWD	• Habitats where interior forest breeding birds are breeding, typically large mature (>60 yrs old) forest stands or woodlots >30 ha • Interior forest habitat is at least 200 m from forest edge habitat Information Sources: • Local birder clubs. • Canadian Wildlife Service (CWS) for the location of forest bird monitoring. • Bird Studies Canada conducted a 3-year study of 287 woodlands to determine the effects of forest fragmentation on forest birds and to determine what forests were of greatest value to interior species • Reports and other information available from Conservation Authorities.	Studies confirm: • Presence of nesting or breeding pairs of 3 or more of the listed wildlife species. • Note: any site with breeding Cerulean Warblers or Canada Warblers is to be considered S.W.H. • Conduct field investigations in spring and early summer when birds are singing and defending their territories • Evaluation methods to follow “Bird and Bird Habitats: Guidelines for Wind Power Projects” • S.W.H. M.I.S.T. Index #34 provides development effects and mitigation measures HABITATS OF SPECIES OF CONSERVATION CONCERN	

Habitat for Species of Conservation Concern (Not including Endangered or Threatened Species)

Habitat Type	Wildlife Species	Candidate S.W.H. E.L.C. Ecosite Codes	Candidate S.W.H. Habitat Criteria and Information Sources	Confirmed S.W.H. Defining Criteria	Assessment of Habitat in E.I.S. Study Area
Marsh Breeding Bird Habitat **Rationale:** Wetlands for these bird species are typically productive and fairly rare in Southern Ontario landscapes.	American Bittern Virginia Rail Sora Common Gallinule American Coot Pied-billed Grebe Marsh Wren Sedge Wren Common Loon Green Heron Trumpeter Swan **Special Concern:** Black Tern Yellow Rail	MAM1 MAM2 MAM3 MAM4 MAM5 MAM6 SAS1 SAM1 SAF1 FEO1 BOO1 For Green Heron: all SW, MA and CUM1 sites	• Nesting occurs in wetlands. • All wetland habitat is to be considered as long as there is shallow water with emergent aquatic vegetation present • For Green Heron, habitat is at the edge of water such as sluggish streams, ponds and marshes sheltered by shrubs and trees. Less frequently, it may be found in upland shrubs or forest a considerable distance from water <u>Information Sources</u> • O.M.N.R.F. District and wetland evaluations. • Field Naturalist clubs • Natural Heritage Information Centre (N.H.I.C.) Records. • Reports and other information available from Conservation Authorities. • Ontario Breeding Bird Atlas	Studies confirm: • Presence of 5 or more nesting pairs of Sedge Wren or Marsh Wren or breeding by any combination of 4 or more of the listed species • Note: any wetland with breeding of 1 or more Black Terns, Trumpeter Swan, Green Heron or Yellow Rail is S.W.H. • Area of the E.L.C. ecosite is the S.W.H.. • Breeding surveys should be done in May/June when these species are actively nesting in wetland habitats. • Evaluation methods to follow “Bird and Bird Habitats: Guidelines for Wind Power Projects” • S.W.H. M.I.S.T. Index #35 provides development effects and mitigation measures	

Habitat for Species of Conservation Concern (Not including Endangered or Threatened Species)

Habitat Type	Wildlife Species	Candidate S.W.H. E.L.C. Ecosite Codes	Candidate S.W.H. Habitat Criteria and Information Sources	Confirmed S.W.H. Defining Criteria	Assessment of Habitat in E.I.S. Study Area
Open Country Bird Breeding Habitat **Rationale;** This wildlife habitat is declining throughout Ontario and North America. Species such as the Upland Sandpiper have declined significantly the past 40 years based on CWS (2004) trend records.	Upland Sandpiper Grasshopper Sparrow Vesper Sparrow Northern Harrier Savannah Sparrow **Special Concern:** Short-eared Owl	CUM1 CUM2.	• Large grassland areas (includes natural and cultural fields and meadows) >30 ha • Grasslands not Class 1 or 2 agricultural lands, and not being actively used for farming (i.e. no row cropping or intensive hay or livestock pasturing in the last 5 years) • Grassland sites considered significant should have a history of longevity, either abandoned fields, mature hayfields and pasturelands that are at least 5 years or older. • The Indicator bird species are area sensitive requiring larger grassland areas than the common grassland species <u>Information Sources</u> • Agricultural land classification maps, Ministry of Agriculture. • Local bird clubs. • Ontario Breeding Bird Atlas • E.I.S. Reports and other information available from Conservation Authorities	Field studies confirm: • Presence of nesting or breeding of 2 or more of the listed species • A field with 1 or more breeding Short-eared Owls is to be considered S.W.H. • The area of S.W.H. is the contiguous E.L.C. ecosite field areas • Conduct field investigations of the most likely areas in spring and early summer when birds are singing and defending their territories • Evaluation methods to follow “Bird and Bird Habitats: Guidelines for Wind Power Projects” • S.W.H. M.I.S.T. Index #32 provides development effects and mitigation measures	

Habitat for Species of Conservation Concern (Not including Endangered or Threatened Species)

Habitat Type	Wildlife Species	Candidate S.W.H. E.L.C. Ecosite Codes	Candidate S.W.H. Habitat Criteria and Information Sources	Confirmed S.W.H. Defining Criteria	Assessment of Habitat in E.I.S. Study Area
Shrub/Early Successional Bird Breeding Habitat **Rationale;** This wildlife habitat is declining throughout Ontario and North America. The Brown Thrasher has declined significantly over the past 40 years based on CWS (2004) trend records.	Indicator Species: Brown Thrasher Clay-coloured Sparrow Common Species: Field Sparrow Black-billed Cuckoo Eastern Towhee Willow Flycatcher **Special Concern:** Yellow-breasted Chat Golden-winged Warbler	CUT1, CUT2, CUS1, CUS2, CUW1, CUW2 Patches of shrub ecosites can be complexed into a larger habitat for some bird species	• Large field areas succeeding to shrub and thicket habitats >10 ha in size • Shrub land or early successional fields, not class 1 or 2 agricultural lands, not being actively used for farming (i.e. no row-cropping, haying or live-stock pasturing in the last 5 years) • Shrub thicket habitats (>10 ha) are most likely to support and sustain a diversity of these species • Shrub and thicket habitat sites considered significant should have a history of longevity, either abandoned fields or pasturelands <u>Information Sources</u> • Agricultural land classification maps, Ministry of Agriculture. • Local bird clubs. • Ontario Breeding Bird Atlas • Reports and other information available from Conservation Authorities	Field studies confirm: • Presence of nesting or breeding of 1 of the indicator species and at least 2 of the common species • A habitat with breeding Yellow-breasted Chat or Golden-winged Warbler is to be considered as Significant Wildlife Habitat • The area of the S.W.H. is the contiguous E.L.C. ecosite field/thicket area. • Conduct field investigations of the most likely areas in spring and early summer when birds are singing and defending their territories • Evaluation methods to follow “Bird and Bird Habitats: Guidelines for Wind Power Projects” • S.W.H. M.I.S.T. Index #33 provides development effects and mitigation measures	

Habitat for Species of Conservation Concern (Not including Endangered or Threatened Species)

Habitat Type	Wildlife Species	Candidate S.W.H. E.L.C. Ecosite Codes	Candidate S.W.H. Habitat Criteria and Information Sources	Confirmed S.W.H. Defining Criteria	Assessment of Habitat in E.I.S. Study Area
Terrestrial Crayfish **Rationale:** Terrestrial Crayfish are only found within SW Ontario in Canada and their habitats are very rare.	Chimney or Digger Crayfish; (*Fallicambarus fodiens*) Devil Crayfish or Meadow Crayfish; (*Cambarus diogenes*)	MAM1, MAM2, MAM3, MAM4, MAM5, MAM6, MAS1, MAS2, MAS3, SWD, SWT, SWM CUM1 with inclusions of above meadow marsh ecosites can be used by terrestrial crayfish	• Wet meadow and edges of shallow marshes (no minimum size) should be surveyed for terrestrial crayfish • Constructs burrows in marshes, mudflats, meadows, the ground can't be too moist. Can often be found far from water • Both species are a semi-terrestrial burrower which spends most of its life within burrows consisting of a network of tunnels. Usually the soil is not too moist so that the tunnel is well-formed. <u>Information Sources</u> • Information sources from "Conservation Status of Freshwater Crayfishes" by Dr. Premek Hamr for the WWF and CNF, March, 1998	Studies confirm: • Presence of 1 or more individuals of species listed or their chimneys (burrows) in suitable meadow marsh, swamp or moist terrestrial sites • Area of E.L.C. ecosite or an ecoelement area of meadow marsh or swamp within the larger ecosite area is the S.W.H. • Surveys should be done April to August in temporary or permanent water. Note the presence of burrows or chimneys are often the only indicator of presence, observance or collection of individuals is very difficult • S.W.H. M.I.S.T. Index #36 provides development effects and mitigation measures	

Habitat for Species of Conservation Concern (Not including Endangered or Threatened Species)

Habitat Type	Wildlife Species	Candidate S.W.H. E.L.C. Ecosite Codes	Candidate S.W.H. Habitat Criteria and Information Sources	Confirmed S.W.H. Defining Criteria	Assessment of Habitat in E.I.S. Study Area
Special Concern and Rare Wildlife Species **Rationale:** These species are quite rare or have experienced significant population declines in Ontario.	All Special Concern and Provincially Rare (S1, S2, S3, SH) plant and animal species. Lists of these species are tracked by the N.H.I.C.	All plant and animal element occurrences (EOs) within a 1 km or 10 km grid. Older EOs were recorded prior to GPS being available, therefore location information may lack accuracy	• When an element occurrence is identified within a 1 or 10 km grid for a Special Concern or provincially Rare species; linking candidate habitat on the site needs to be completed to E.L.C. Ecosites <u>Information Sources</u> • Natural Heritage Information Centre (N.H.I.C.) will have Special Concern and Provincially Rare (S1-S3, SH) species lists with element occurrences data. • N.H.I.C. Website “Get Information”: http://nhic.mnr.gov.on.ca • Ontario Breeding Bird Atlas • Expert advice should be sought as many of the rare spp. Have little information available about their requirements	Studies confirm: • Assessment/inventory of the site for the identified special concern or rare species needs to be completed during the time of year when the species is present or easily identifiable. • The area of the habitat to the finest E.L.C. scale that protects the habitat form and function is the S.W.H., this must be delineated through detailed field studies. The habitat needs be easily mapped and cover an important life stage component for a species e.g. specific nesting habitat or foraging habitat. • S.W.H. M.I.S.T. Index #37 provides development effects and mitigation measures	

Rare Vegetation Communities

Rare Vegetation Community	E.L.C. Ecosite Codes	Candidate S.W.H. Habitat Description	Candidate S.W.H. Detailed Information and Sources	Confirmed S.W.H. Defining Criteria	Assessment of Habitat in E.I.S. Study Area
Cliffs and Talus Slopes **Rationale:** Cliffs and Talus Slopes are extremely rare habitats in Ontario	Any E.L.C. Ecosite within Community Series: TAO TAS TAT CLO CLS CLT	A Cliff is vertical to near vertical bedrock >3 m in height. A Talus Slope is rock rubble at the base of a cliff made up of coarse rocky debris..	• Most cliff and talus slopes occur along the Niagara Escarpment <u>Information Sources</u> • The Niagara Escarpment Commission has detailed information on location of these habitats • O.M.N.R.F. Districts • Natural Heritage Information Centre (N.H.I.C.) has location information available on their website • Field Naturalist Clubs • Conservation Authorities	• Confirm any E.L.C. Vegetation Type for Cliffs or Talus Slopes • S.W.H. M.I.S.T. Index #21 provides development effects and mitigation measures	

Rare Vegetation Communities

Rare Vegetation Community	E.L.C. Ecosite Codes	Candidate S.W.H. Habitat Description	Candidate S.W.H. Detailed Information and Sources	Confirmed S.W.H. Defining Criteria	Assessment of Habitat in E.I.S. Study Area
Sand Barren **Rationale:** Sand barrens are rare in Ontario and support rare species. Most Sand Barrens have been lost due to cottage development and forestry	E.L.C. Ecosites: SBO1 SBS1 SBT1 Vegetation cover varies from patchy and barren to continuous meadow (SBO1), thicket-like (SBS1), or more closed and treed (SBT1). Tree cover always <60%	Sand barrens typically are exposed sand, generally sparsely vegetated and caused by a lack of moisture, periodic fires and erosion. Usually located within other types of natural habitat such as forest or savannah. Vegetation can vary from patchy and barren to tree covered but less than 60%.	• A sand barren area >0.5 ha in size <u>Information Sources</u> • The Niagara Escarpment Commission has detailed information on location of these habitats • O.M.N.R.F. Districts • Natural Heritage Information Centre (N.H.I.C.) has location information available on their website • Field Naturalist Clubs • Conservation Authorities	• Confirm any E.L.C. Vegetation Type for Sand Barrens • Site must not be dominated by exotic or introduced species (<50% vegetative cover are exotic spp.) • S.W.H. M.I.S.T. Index #20 provides development effects and mitigation measures	

Rare Vegetation Communities

Rare Vegetation Community	E.L.C. Ecosite Codes	Candidate S.W.H. Habitat Description	Candidate S.W.H. Detailed Information and Sources	Confirmed S.W.H. Defining Criteria	Assessment of Habitat in E.I.S. Study Area
Alvar **Rationale:** Alvars are extremely rare habitats in Ecoregion 7E.	ALO1 ALS1 ALT1 FOC1 FOC2 CUM2 CUS2 CUT2-1 CUW2 **Five Alvar Indicator Species:** 1) *Carex crawei* 2) *Panicum philadelphicum* 3) *Eleocharis compressa* 4) *Scutellaria parvula* 5) *Trichostema brachiatum* These indicator species are very specific to Alvars within Ecoregion 7E	An Alvar is typically a level, mostly unfractured calcareous bedrock feature with a mosaic of rock pavements and bedrock overlain by a thin veneer of soil. The hydrology of alvars is complex, with alternating periods of inundation and drought. Vegetation cover varies from sparse lichen-moss associations to grasslands and shrublands and comprising a number of characteristic or indicator plants. Undisturbed alvars can be phyto- and zoogeographically diverse, supporting many uncommon or are relict plant and animal species. Vegetation cover varies from patchy to barren with a less than 60% tree cover	• An Alvar site >0.5 ha in size • Alvar is particularly rare in Ecoregion 7E where the only known sites are found in the western islands of Lake Erie <u>Information Sources</u> • Alvars of Ontario (Federation of Ontario Naturalists, 2000) • Conserving Great Lakes Alvars (Ontario Nature) • O.M.N.R.F. Districts • Natural Heritage Information Centre (N.H.I.C.) has location information available on their website • Field Naturalist Clubs • Conservation Authorities	• Field studies identify that four of the five **Alvar Indicator Species** at a Candidate Alvar Site is significant • Site must not be dominated by exotic of introduced species (<50% vegetative cover are exotic spp.) • The alvar must be in excellent condition and fit in with surrounding landscape with few conflicting land uses • S.W.H. M.I.S.T. Index #17 provides development effects and mitigation measures	

Rare Vegetation Communities

Rare Vegetation Community	E.L.C. Ecosite Codes	Candidate S.W.H. Habitat Description	Candidate S.W.H. Detailed Information and Sources	Confirmed S.W.H. Defining Criteria	Assessment of Habitat in E.I.S. Study Area
Old Growth Forest **Rationale:** Due to historic logging practices and land clearance for agriculture, old growth forest is rare in Ecoregion 7E.	Forest Community Series: FOD FOC FOM SWD SWC SWM	Old Growth Forests are characterized by heavy mortality or turnover of over-storey trees resulting in a mosaic of gaps that encourage development of a multi-layered canopy and an abundance of snags and downed woody debris.	• Woodland area is >0.5 ha <u>Information Sources</u> • O.M.N.R.F. Forest Resource Inventory mapping • O.M.N.R.F. Districts • Field Naturalist Clubs • Conservation Authorities • Sustainable Forestry License (SFL) companies will possibly know locations through field operations • Municipal forestry departments	Field studies will determine: • If dominant tree species of the forest are >140 years old, then the area containing these trees is S.W.H. • The forested area containing the old growth characteristics will have experienced no recognizable forestry activities (cut stumps will not be present) • The area of forest ecosites combined or an ecoelement within an ecosite that contain the old growth characteristics is the S.W.H. • Determine E.L.C. vegetation types for the forest area containing the old growth characteristics • S.W.H. M.I.S.T. Index #23 provides development effects and mitigation measures	

Rare Vegetation Communities

Rare Vegetation Community	E.L.C. Ecosite Codes	Candidate S.W.H. Habitat Description	Candidate S.W.H. Detailed Information and Sources	Confirmed S.W.H. Defining Criteria	Assessment of Habitat in E.I.S. Study Area
Savannah **Rationale:** Savannahs are extremely rare habitats in Ontario.	TPS1 TPS2 TPW1 TPW2 CUS2	A Savannah is a tallgrass prairie habitat that has tree cover between 25-60% In Ecoregion 7E, known tallgrass prairie and savannah remnants are scattered between Lake Huron and Lake Erie, near Lake St. Clair, north of and along the Lake Erie shoreline, in Brantford and in the Toronto area (north of Lake Ontario).	• No minimum size to site • Site must be restored or a natural site. Remnant sites such as railway right-of-ways are not considered S.W.H. <u>Information Sources</u> • Natural Heritage Information Centre (N.H.I.C.) has location information available on their website • Field Naturalist Clubs • Conservation Authorities	Field studies confirm: • One or more of the Savannah indicator species listed in Appendix N should be present. Note: savannah plant spp. List from Ecoregion 7E should be used. • Area of the E.L.C. Ecosite is the S.W.H. • Site must not be dominated by exotic or introduced species (<50% vegetative cover are exotic spp.) • S.W.H. M.I.S.T. Index #18 provides development effects and mitigation measures.	

Rare Vegetation Communities

Rare Vegetation Community	E.L.C. Ecosite Codes	Candidate S.W.H. Habitat Description	Candidate S.W.H. Detailed Information and Sources	Confirmed S.W.H. Defining Criteria	Assessment of Habitat in E.I.S. Study Area
Tallgrass Prairie **Rationale:** Tallgrass Prairies are extremely rare habitats in Ontario	TPO1 TPO2	A tallgrass prairie has ground cover dominated by prairie grasses. An open tallgrass prairie habitat has <25% tree cover. In Ecoregion 7E, known tallgrass prairie and savannah remnants are scattered between Lake Huron and Lake Erie, near Lake St. Clair, north of and along the Lake Erie shoreline, in Brantford and in the Toronto area (north of Lake Ontario).	• No minimum size to site • Site must be restored or a natural site. Remnant sites such as railway right-of-ways are not considered S.W.H. <u>Information Sources</u> • Natural Heritage Information Centre (N.H.I.C.) has location information available on their website • Field Naturalist Clubs • Conservation Authorities	Field studies confirm: • One or more of the Prairie indicator species listed in Appendix N should be present. Note: savannah plant spp. List from Ecoregion 7E should be used. • Area of the E.L.C. Ecosite is the S.W.H. • Site must not be dominated by exotic or introduced species (<50% vegetative cover are exotic spp.) • S.W.H. M.I.S.T. Index #19 provides development effects and mitigation measures.	

Rare Vegetation Communities

Rare Vegetation Community	E.L.C. Ecosite Codes	Candidate S.W.H. Habitat Description	Candidate S.W.H. Detailed Information and Sources	Confirmed S.W.H. Defining Criteria	Assessment of Habitat in E.I.S. Study Area
Other Rare Vegetation Communities **Rationale:** Plant communities that often contain rare species which depend on the habitat for survival.		Provincially rare (S1, S2, S3) vegetation communities are listed in Appendix M of the Significant Wildlife Habitat Technical Guide (M.N.R.F., 2000). Any E.L.C. Ecosite Code that has a possible E.L.C. Vegetation Type that is provincially rare is candidate S.W.H.. Rare Vegetation Communities may include beaches, fens, forest, marsh, barrens, dunes and swamps.	• E.L.C. Ecosite codes that have the potential to be a rare E.L.C. Vegetation Type as outlined in Appendix M of the Significant Wildlife Habitat Technical Guide (M.N.R.F., 2000). • M.N.R.F./N.H.I.C. will have up to date listing for rare vegetation communities. <u>Information Sources</u> • Natural Heritage Information Centre (N.H.I.C.) has location information available on their website • Field Naturalist Clubs • Conservation Authorities	• Field studies should confirm if an E.L.C. Vegetation Type is a rare vegetation community based on listing within Appendix M of the Significant Wildlife Habitat Technical Guide (M.N.R.F., 2000). • Area of the E.L.C. Vegetation Type polygon is the S.W.H.. • S.W.H. M.I.S.T. Index #37 provides development effects and mitigation measures.	

Animal Movement Corridors

Habitat Type	Wildlife Species	Candidate S.W.H. E.L.C. Ecosites Codes	Candidate S.W.H. Habitat Criteria and Information Sources	Confirmed S.W.H. Defining Criteria	Assessment of Habitat in E.I.S. Study Area
Amphibian Movement Corridors **Rationale:** Movement corridors for amphibians moving from their terrestrial habitat to breeding habitat can be extremely important for local populations.	Eastern Newt American Toad Spotted Salamander Four-toed Salamander Blue-spotted Salamander Gray Treefrog Western Chorus Frog Northern Leopard Frog Pickerel Frog Green Frog Mink Frog Bullfrog	Corridors may be found in all ecosites associated with water. Corridors will be determined based on identifying the significant breeding habitat for these species in Table 1.1	• Movement corridors between breeding habitat and summer habitat • Movement corridors must be determined when amphibian breeding habitat is confirmed as S.W.H. (Amphibian Breeding Habitat, Wetland) <u>Information Sources</u> • M.N.R.F. District Office. • Natural Heritage Information Centre (N.H.I.C.). • Reports and other information available from Conservation Authorities. • Field Naturalist Clubs	• Field Studies must be conducted at the time of year when species are expected to be migrating or entering breeding sites • Corridors should consist of native vegetation, with several layers of vegetation. Corridors unbroken by roads, waterways or bodies, and undeveloped areas are most significant • Corridors should have at least 15m of vegetation on both sides of waterway or be up to 200m wide of woodland habitat and with gaps <20m • Shorter corridors are more significant than longer corridors, however amphibians must be able to get to and from their summer and breeding habitat • S.W.H. M.I.S.T. Index #40 provides development effects and mitigation measures	

Appendix 10 | Species at Risk Screening Assessment Table

Endangered and Threatened Species

Species	Source	Status	Habitat Description	Habitat Present on Site	Surveys Conducted	Likelihood of Occurrence and Rationale	Potential to be Impacted by Proposed Activities	Anticipated/Confirmed Compliance Requirements	Authorizing Agency Consultation/Status
Plants									
		SARA- ESA-							
Insects									
		SARA- ESA-							
Amphibians									
		SARA- ESA-							
Reptiles									
		SARA- ESA-							
Birds									
		SARA- ESA-							
Mammals									
		SARA- ESA-							

Special Concern Species

Species	Source	Status	Habitat Description	Habitat Present on Site	Surveys Conducted	Likelihood of Occurrence and Rationale	Potential to be Impacted by Proposed Activities
Plants							
		SARA- ESA-					
Insects							
		SARA- ESA-					
Amphibians							
		SARA- ESA-					
Reptiles							
		SARA- ESA-					
Birds							
		SARA- ESA-					
Mammals							
		SARA- ESA-					

Appendix 11 | Potential Mitigation Measures

Appendix 11 | Potential Mitigation Measures

Mitigation measures are intended to maintain the health, features and function of the N.E.S. components and contribute to reducing or eliminating potential short or long-term impacts from development or site alteration on the N.E.S. New strategies and methods for the mitigation of development or site alteration impacts can be expected to continuously emerge, and as such, Applicants should refer to and cite recent scientific literature. Examples of mitigation measures may include, but are not limited to, the following:

1. Buffers and/or setbacks adequate to reduce impacts and preserve ecological functions along edges of natural features;
2. Consider use of 'living fences' to deter access into sensitive features or areas;
3. Installation of functional ecopassages for roads that cross natural areas to allow movement of resident plants and animals;
4. Construction timing restrictions to avoid critical periods such as fish spawning, bird breeding and nesting or bat roosting;
5. Effective temporary stormwater management and sediment control during construction;
6. Ministry of the Environment and Climate Change (M.E.C.P.)'s Stormwater management plan and S.W.M.P. design;
7. Innovative infiltration measures suitable for the site such as infiltration trenches, porous pavements, catchment cisterns, etc.;
8. Institute strategies to reduce salt application to roads that cross or are located adjacent to waterways;
9. Consider adoption of on-site stormwater management including green roofs;
10. Low impact development techniques;
11. Urban design guidelines that consider factors such as window treatments to prevent bird strikes, lighting that does not impact adjacent natural areas, street and lot orientation that provides additional separation from natural features;

12. Salvaging and relocation strategies for plants and animals that will be directly impacted by development or site alteration;
13. Trail siting and design that considers ecological sensitivities and principles;
14. Promotion of stewardship initiatives;
15. Installation of temporary and permanent fencing;
16. Posting securities for environmental damage repair; and
17. Promotion of public awareness through the development of homeowners' guides and the creation and installation of information signage.