FRONTENAC

ENVIRONMENTAL IMPACT STUDY GUIDELINES

December 12, 2024

Summary of Environmental Impact Study Guidelines

Environmental Impact Study (EIS) guidelines play an important role for citizens, applicants, consultants, and decision-makers by ensuring that environmental considerations are incorporated into project planning and decision-making within Frontenac County.

For citizens of Frontenac County, guidelines promote transparency in assessing potential environmental consequences of proposed developments. Guidelines ensure that assessments are completed in a structured and formal matter, allowing for trust and accountability between project developers and the public.

For applicants, guidelines offer a clear, structured method to identify and mitigate environmental risks related to their projects. By adhering to guidelines, applicants can avoid delays in project progression, minimize potential environmental harm, and enhance credibility and acceptability of projects within Frontenac County.

For consultants and developers carrying out projects within Frontenac County, guidelines provide a basis for making decisions regarding project management and investments. Guidelines ensure that all relevant environmental factors are considered, reducing the likelihood of negative impacts that may lead to legal disputes or regulatory fines.

In conclusion, EIS guidelines are essential in promoting responsible development practices that balance economic growth with environmental protection.

How to use this document

Any applicant or property owner that has been directed by the municipality to prepare an EIS for their project should review this document and must provide a copy to the qualified professional that they retain to conduct the study.

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1. ENVIRONMENTAL IMPACT STUDY OVERVIEW

Frontenac County supports healthy and prosperous communities. To provide this support, specific policies and measures need to be followed when there is a potential impact of site-specific development on natural heritage features (NHF) and hydrologic features (HF).

The term "site" is described as the specific geographical area where a proposed project or development will be located whereas the term "study area" refers to the 120 metres surrounding the site. The term development is defined as any works or the footprint of any structures in or adjacent to a NHF or HF, including but not limited to dwellings, sheds, decks, docks, boathouses, lot grading, or shoreline alterations. Wetlands, woodlands and habitat are examples of natural heritage features. Wetlands, watercourses and groundwater recharge areas are examples of hydrologic features.

The guidelines in this document set expectations for the Environmental Impact Study (EIS) process and for EIS requirements. The guidelines ensure that studies on NHF and/or HF within the County are consistent among one another and that reports follow consistent application of County and Township EIS related policy. This will ensure a balanced approach to development and conservation throughout Frontenac County.

The guidelines intend to identify EIS requirements under the Provincial Planning Statement, County Official Plan, Township Official Plans, and By-laws, to support local natural heritage conservation objectives, and to facilitate the review of EIS studies for land use planning applications by Frontenac County.

The intent of the EIS Guidelines is to:

1. Establish a standardized set of study criteria specific to NHF and HF;
2. Avoid conflicts between proposed development and NHF and/or HF through constraints analysis prior to development layout;
3. Provide a planning tool that can be used by the applicant to address environmental considerations throughout the development process;
4. Ensure high quality, consistent studies and reporting methods; and,
5. Facilitate and expedite the environmental review process.

1.1 DEFINITION OF AN ENVIRONMENTAL IMPACT STUDY

An EIS is a process that addresses the potential impact of site-specific development on NHF and HF. Studies will identify proposed developments that may impact NHF and/or HF, identify and assess anticipated and potential impacts on NHF and/or HF, identify measures that may be used to mitigate any potential impacts to NHF and/or HF, define development setbacks that are ecologically sustainable, and include statements that address possible negative impacts beyond the boundaries of the site where development is proposed (if applicable). They often provide recommendations for protection, enhancement, and monitoring for NHF and HF.

1.2 PURPOSE OF AN ENVIRONMENTAL IMPACT STUDY

The County recognizes the importance of natural heritage conservation as a planning objective as it contributes to the high quality of life we have come to expect in our communities. This important connection to natural heritage areas is reflected in the planning policies that are applicable within the County's jurisdiction.

In some instances, plans and policies do not permit development and/or site alteration in certain NHF or HF. In other situations, development and/or site alteration may be permitted in other NHF or HF, and on lands adjacent to NHF or HF. However, for this to be permitted, it must be demonstrated that the proposed development and/or site alteration will have no negative impacts either on the feature or on its ecological/hydrologic function. It is a priority of the County to avoid negative environmental impacts. When this is not possible, the proponent must then review and provide industry acceptable measures to mitigate all potential negative impacts.

An EIS has two main purposes:

1. The EIS is a planning tool used by the proponent to design the development proposal and/or site alteration to avoid negative environmental impacts and enhance the natural environment to ensure the natural setting is an asset. The environmental constraints section of an EIS must begin early in the design process, prior to development layout. The EIS will identify development constraints and identify areas that are appropriate for development.
2. The EIS is a decision-making tool that provides the information needed by the County to determine whether the proposal complies with the applicable plans, policies and regulations.

The EIS must be based on good scientific data and analyses that are defensible and that adequately address impacts on environmental features and functions. The EIS process must be integrated into the planning of a proposed project to ensure timely consideration of environmental factors and to avoid delays in the planning and approval process.

The municipality is the planning authority responsible for reviewing and approving an EIS. An EIS should be initiated only after a Terms of Reference is approved following a formal pre-application consultation process with municipal planning staff. The County currently lacks the qualified professionals to review an EIS, so the Terms of Reference and EIS will be peer reviewed by a third party, at the applicant's expense.

The completed EIS must be submitted to the County with the application for a development proposal requiring approval under the Planning Act. In accordance with the Complete Application Policies set out in the County's Official Plan, the EIS is to be prepared by a qualified professional. Approval of the EIS means that the study itself meets acceptable technical standards; however, it does not ensure approval of the planning application.

These EIS Guidelines have been arranged in such a way that the first section of the EIS, which constitutes the constraints analysis, can be submitted to the planning authority. Understanding the constraints within a site at a high level provides guidance to understand if the proposed development plan is possible by estimating the net developable area within a site, identifies where potential impacts may occur and then provides the required scoping details to determine the surveys required to address

those potential impacts through an EIS. Although submitting a constraints analysis is recommended for all sites as a way for the proposed proponent of the application to complete their internal due diligence, sites with limited or no NHF or HF may choose to skip this step. The relevant Conservation Authority should review when a proposed project is within their regulated areas.

1.3 WHEN IS AN ENVIRONMENTAL IMPACT STUDY REQUIRED?

An EIS must be submitted where development or site alteration is proposed wholly or partially within, or adjacent to a NHF and/or HF as defined in Provincial, County, and Township policies and regulations. An EIS may be required based on multiple features or layers of features/potential features (e.g., development in a woodland, not yet classified as significant) where there is potential for significance, other natural heritage features or habitat to be present (refer to NHFs and HFs described below).

- Provincially Significant Wetland (PSW)
  - Development and site alteration shall not be permitted on lands within PSWs or the associated buffer as per the relevant policy.

- Provincially Significant Life Science Area of Natural and Scientific Interest (ANSI)
  - No development shall be permitted in a provincially significant ANSI or the associated buffer, as per the relevant policy, unless it can be demonstrated, through an EIS, that there will be no negative impacts on the ANSI and its ecological function.

- Non-Provincially Significant Life Science Area of Natural and Scientific Interest
  - No development shall be permitted in a non-provincially significant ANSI or the associated buffer, as per the relevant policy, unless it can be demonstrated, through an EIS, that there will be no negative impacts on the ANSI and its ecological function.

- Habitat of Endangered Species and Threatened Species
  - No development shall be permitted unless it can be demonstrated that there will be no negative impacts on ecological function through an EIS or the required Provincial or Federal approvals are obtained to permit such impacts.

- Significant Woodlands
  - No development and/or site alteration in significant woodlands or the associated buffer, as per the relevant policy, unless it can be demonstrated, through an EIS, that there will be no negative impacts on the significant woodland and its ecological function.

- Significant Wildlife Habitat
  - No development and/or site alteration in significant wildlife habitat or the associated buffer, as per the relevant policy, unless it can be demonstrated, through an EIS, that there will be no negative impacts on the significant wildlife habitat and its ecological function.

- Fish Habitat
  - No development and site alteration in fish habitat or the associated buffer, as per the relevant policy, unless it can be demonstrated, through an EIS, that there will be no negative impacts on the fish habitat or on their ecological functions[1] or the required Federal approvals are obtained to permit such impacts.

- At Capacity Lake Trout Lakes
  - EIS required as development shall not be permitted within at capacity Lake Trout lakes[2,3].

- Significant Valleylands
  - Development and site alteration shall not be permitted in significant valleylands or the associated buffer, as per the relevant policy, unless it can be demonstrated, through an EIS that there will be no negative impacts on the natural features or their ecological functions.

- Coastal Wetlands
  - Development and site alteration in coastal wetlands (not including significant coastal wetlands) or the associated buffer, as per the relevant policy, unless it can be demonstrated, through an EIS that there will be no negative impacts on the natural features or their ecological functions.

- Locally Significant Wetlands
  - Development and site alteration shall not be permitted.

- Unevaluated Wetlands
  - Development and site alteration shall not be permitted.

[1]New development along watercourses and waterbodies which have demonstrated no negative impact on the fish habitat or on their ecological functions shall require a minimum setback. These setbacks shall remain undisturbed and naturally vegetated, where possible.

[2]Township Official Plans shall contain policies to protect these lakes; however, it includes specific exceptions related to specific development works related to development near at-capacity Lake Trout lakes.

[3]At Capacity Lake Trout lakes require an EIS. Additionally, there must be a minimum 300 metre distance between the lake and the proposed development including installation of new septic systems (not replacement).

2. STEPS INVOLVED IN AN ENVIRONMENTAL IMPACT STUDY

An EIS should include seven overall steps:

Step 1: Initial consultation to determine the scope of the EIS.

- Involves consultation with the appropriate approval authority that has jurisdiction over the study area where the proposed development will occur. Members of the submission review team will be established during this step. Submission review team members may include relevant Frontenac County members, relevant Township members and any other party that will provide input on the submitted EIS. Conversation between the submission party (i.e., the applicant and their consultants) and relevant Frontenac County and relevant Township members will establish the scope, content, format and potential issues and concerns that the EIS should address.

Step 2: Terms of Reference development and a site visit.

- A Terms of Reference is developed by the environmental consultant hired by the applicant, using the 'Terms of Reference Checklist' in Appendix A as a guideline. The applicants, their consultants and the submission review team will then perform a site visit to confirm that the Terms of Reference has been adequately scoped. The submission review team will provide comments on the Terms of Reference prior to the start of the EIS.

Step 3: Undertake appropriate field investigations.

- The environmental consultant will undertake the appropriate field investigations and surveys as determined by the Terms of Reference. Refer to Appendix A: Terms of Reference Checklist and Appendix B: Scoping of Inventories, Associated Protocols and Delineations.

Step 4: EIS reporting.

- Contents of the EIS report including the relevant sections as described in Section 3 are developed by the environmental consultant.

Step 5: Ongoing consultation.

- Reporting to the submission review team is recommended so that the consulting team and the submission review team can maintain a dialogue throughout the process and the Terms of Reference can be adapted based on dialogue and feedback obtained from the results of the undertaken field studies.

Step 6: Review of submitted EIS by the submission review team.

- Once the EIS report is submitted, the submission review team will begin their review of the document. If the report is not deemed acceptable, the EIS will be sent back to the applicant and their consultants along with comments from the review team which may include the requirements for further studies. The submission review team will inform the applicant when the EIS is deemed acceptable in terms of content, clarity, and completeness. After this process, the County can accept the EIS and process the development application, taking into consideration that the final comments from the submission review team for the EIS have been addressed.

Step 7: Monitoring.

- If the application is approved, monitoring will enable the municipality, through development agreements or other similar, practical tools, the potential to require subsequent changes to site conditions if the environmental effects are found to exceed predicted effects or targets, or if there are identifiable negative effects. Monitoring of the environmental effects of the proposed development also provides well-documented, local examples of best management practices for certain types of development associated with particular types of NHF and/or HF and their functions that can be potentially applied to other development applications to create a consistent review process. Recommended monitoring programs must be practical in the context of staff capacity.

3. COMPONENTS OF AN ENVIRONMENTAL IMPACT STUDY

This section lists typical components of an EIS. The level of detail required for an EIS would be outlined in the Terms of Reference and depends on the development proposal and on the presence of significant NHF, HF and their function within the site and study area and any additional NHF or HF identified within the site. Methodologies, timing, and techniques used to perform the ecological inventory, literature review of relevant reports, current intensity of use of the site, and natural heritage planning components relevant to the site must be included within an EIS.

3.1 EXISTING CONDITIONS

A detailed overview of the existing conditions for the site of the proposed development must be documented in the EIS based on survey requirements agreed to in the Terms of Reference and following applicable survey protocols (refer to Appendix A: Terms of Reference Checklist and Appendix B: Scoping of Inventories, Associated Protocols and Delineations). This section should identify potential preliminary issues, outline information gaps and the need for additional surveys and data collection. This section should include:

- Planning context including existing designations, zoning and permitted uses.
- Site location maps and appropriate figures detailing the existing conditions related to documented field surveys.
- Known NHF within and beyond the site limits. This may include ANSI, wetlands, significant wildlife habitat, habitats of Endangered or Threatened species and fish habitat.
- Location of boundaries or edges of relevant identified features and functions.
- Interconnections or corridors with adjacent natural features.
- Identification of hazard lands which includes floodplains, watercourses, wetlands, Great Lakes coastlines, and steep slopes.
- Hydrological assessments to understand how groundwater interacts with features within the site.
- Geomorphological assessments to understand how natural stream movement over time can potentially impact proposed developments.
- A review of critical issues.
- Watershed targets and recommendations.

3.2 SITE DESCRIPTION

The site should be described at the landscape, vegetation, community and species scale. The following should be included in the site description:

- Description of the soils, landforms and surficial geology based on a review of mapping and available literature.

- Hydrological or hydrogeological resources and issues, including surface water features, recharge/discharge zones, groundwater elevations and flow directions, connections between groundwater and surface water features.
- A pre-development water balance to assess the quantity and quality of existing water budget components on the site.
- Biophysical inventory and analysis of terrestrial and aquatic communities, functions and processes that may be affected by development.
- Analysis of inter-relationships of the biophysical information, to show an overview of the existing ecosystem within the subject site as it relates to the larger local and regional ecosystem. Potential examples include linkage between features, such as groundwater-vegetation communities or groundwater-surface water relationships.
- Description of natural features and components of the natural heritage system of the site (examples include wetlands, environmentally sensitive areas, ANSI, woodland, rivers, ravine corridor etc.). Criteria to evaluate features significance should be included.

3.3 ECOLOGICAL FEATURES AND FUNCTIONS

An evaluation of components of the natural heritage system and the site's characteristics are included in this section. This includes identification of the key features and functions and:

- Whether the feature or function is measurable in its occurrence, and if so, its significance in terms of maintaining biodiversity.
- Whether the feature or function contributes to the quality and integrity of the area.
- Whether the feature or function contributes to the identification of the area as a NHF or area.
- Whether there is a reasonable expectation that the feature or function is sensitive to the proposed development.

Topics to be considered and to be included in the EIS as required are:

Ecological Functions

- Biodiversity (landscape, community and species levels);
- Habitat for aquatic and terrestrial species as it related to provision of food, shelter, reproduction, refuge from predators and movement for species;
- Habitat contiguity (size and shape);
- Species and habitat representation and abundance;
- Vegetation structure, density, diversity and distribution;
- Connections and linkages;
- Proximity to other relevant natural areas;
- Proximity to hydraulic features;
- Hydrological functions (i.e., hydrogeology, fluvial geomorphology and hydrology);
- Nutrient and energy cycling;
- Succession and disturbance;

- Reproduction and dispersal;
- Landscape linkages; and,
- Relationship between species and communities.

Wetland Functions

- Groundwater recharge and discharge;
- Water storage and release;
- Flood damage reduction;
- Shoreline stabilization;
- Sediment trapping;
- Nutrient and contaminant uptake and removal;
- Food chain support;
- Habitat for fish and wildlife; and,
- Attendant social and economic benefits.

Natural Heritage Features and Landscapes

- Moderating climate;
- Maintaining water cycles;
- Providing habitat for all species; and,
- Supplying oxygen and sequestering carbon dioxide.

Benefits of Importance to Humans

- Contributing to healthy and productive landscapes;
- Cleaning, conveying and storing of water;
- Improving air quality;
- Preventing erosion;
- Converting and storing atmospheric carbon;
- Providing natural resources and green space for human activities; and,
- Aesthetic and quality of life benefit.

Indirect Impacts

- Job creation or loss;
- Property value;
- Community cohesion;
- Public transportation;
- Noise pollution;
- Increased/decreased traffic; and,
- Potential exposure to pesticides and chemicals.

3.4 CORRIDORS AND LINKAGES

Describe existing and potential linkages between natural areas. The EIS should assess the following potential linkages within the site:

- Hydrological function (riparian areas, flood plains, valley lands, drainage areas, surface and groundwater connections, recharge and discharge areas);
- Degree of connection with natural areas (proximity, distance, intervening land use, corridors) and opportunities for connections through restoration; and,
- Linkage along the river corridor and the effect of stormwater management proposals.

Existing linkages should also consider the existing matrix and its ability to facilitate wildlife movement and how this matrix may change after the proposed development occurs. Assessment should include an evaluation of:

- Natural areas and habitats linked (number of sites linked and site sizes and conditions);
- The linkage habitat type (anthropogenic [e.g. utility corridor, hedgerow, plantation]; to natural community, river floodplain, etc.);
- Corridor/linkage main cover type quality;
- Corridor/linkage length and width;
- Continuity (e.g., long gaps greater than 100 metres, or gaps containing roads or other barriers to gaps less than 30 metres wide containing no barriers);
- Existing wildlife use in corridors; and,
- Opportunities to restore or enhance cover within corridors between natural areas.

After the ecological function analysis of each feature noted above has been assessed, a landscape feature containing all the individual features and their functions along with their connections between each other will be developed to form a Natural Heritage System to be protected from development. After the Natural Heritage System is defined on constraints mapping, the preliminary development area is identified.

On-site or adjacent features that are proposed to not be protected from development will be reviewed and assessed through the submitted EIS to determine if removal is possible with regards to form and function and policy compliance.

3.5 PROPOSED DEVELOPMENT

This section of the EIS report should include details about the proposed development. This should include, but not be limited to, the following:

- The land use of the subject property and whether the current proposal will change that use.
- A description of the existing conditions on the site, including existing structures.
- A description of any proposed new structures, including buildings and other accessory structures, such as decks, docks, boathouses, gazebos, etc.
- How the property is, or will be, accessed and any areas dedicated to parking.

- How the property is serviced in terms of water and sewage services and whether any upgrades or changes to those services are part of the proposed development.
- A copy of the site plan and any associated drawings that the applicant has prepared for the planning application and/or building permit process.

3.6 EVALUATION OF ECOLOGICAL IMPACTS

It should be noted that scientific literature must be consulted and cited in the body of the report to support statements made.

Evaluation of ecological impacts include:

- Mapping of all resources including existing and proposed grades. The environmental constraints to development should be overlaid onto one map illustrating the subject site and adjacent lands allowing for opportunities and constraints to be clearly identified. A current aerial photograph should also be supplied. Mapping should include an overlay of the proposed development concept onto the opportunities and constraints map. When there is a question of whether there is adequate or suitable area for development, concept plans for what is being proposed will be required to show building envelopes, relevant building setbacks, roads, driveways, parking, grading and location of utilities.
- Mapping and description of sensitivities of all NHF and their functions present within the development proposal boundary.
- A description of environmental effects of the proposed development that may impact natural areas. Impacts could include:
  - Direct on-site effects (i.e., direct loss of the feature or habitat).
  - Description of the nature, extent and duration of potential impacts to the site and adjacent lands, including all potential cumulative effects.
  - Impacts on NHFs identified by Frontenac County's Natural Heritage Study.
  - Effects on surface drainage systems such as ponding, erosion, changes in volume of surface runoff, changes in water quality (e.g., temperature, suspended sediment, chlorides and other pollutants, clarity, etc.), timing and intensity of surface flow, associated impacts to natural features and functions, and pre- to post-development water balance changes.
  - Effects on groundwater such as reduced surface water recharge to groundwater, changes in groundwater contribution to natural features, impedance of groundwater movement, impacts to groundwater discharge areas, construction-related impacts to aquifer integrity (i.e., puncturing, dewatering requirements), groundwater contamination, and redirection of groundwater flow.
  - A post-development overall water balance assessment may be required depending on the size, form, and use of the proposed development. A post-development feature-based water balance may be required for woodlots, wetlands, and watercourses. The post-development scenario must be compared to the existing condition and mitigation measures will be required to maintain existing flow regimes on a monthly basis for both groundwater and surface water.

- A description of the municipal requirements and standards, such as setbacks that will affect the development proposal and could impact the ability to maintain appropriate buffers, etc.
- A preliminary grading plan indicating both existing and proposed grades for services and building envelopes, including usable privacy areas, etc. It will need to be demonstrated that grading can be accommodated without impacts to a NHF or HF.
- Effects on adjacent areas, including transported effects such as sedimentation.
- Effects on the key characteristics of the NHF including loss of habitat, change in habitat, edge effects and impacts to sensitive species or communities.
- Effects on connectivity, and fragmentation and isolation of habitat.
- Potential for further demand on resources.
- Irreversible and reversible effects as well immediate and long-term effects as a result of the development proposed.
- Effects of occupancy (i.e., increased disturbance and indirect impact from increased access, pets, lighting, noise, encroachment, etc.).
- An explanation of the methods used to determine the above effects and literature references in support of the effects.
- A summary of the effects in table format.

3.7 MITIGATION MEASURES

This section provides the identification and explanation of alternative options and measures that could mitigate any potential negative environmental impacts. This includes modifications to the proposed development that avoids effects on key features, functions and/or methods to restore features and/or their functions that may be impacted by the development. If avoidance is not possible, a rationale must be provided with alternative options that will minimize potential impacts. This section should include:

- Any feasible mitigating measures that are relevant to the potential impacts of the proposed development.
- An analysis of buffers and setbacks that are relevant to protect the type of natural areas being affected by the proposed development.
- A description of mitigating measures proposed to eliminate or reduce the effects (e.g., timing restrictions, design techniques, buffers, erosion and sediment control measures, tree hoarding, edge or buffer plantings, etc.) that includes drawings or plans indicating the design details.
- A description of any proposed compensation measures to address impacts that cannot be mitigated and/or rehabilitation/restoration plans for areas disturbed.
- Maps depicting the location and extent of all proposed mitigation measures.

3.8 POLICIES AND LEGISLATION

Proposed development may be subject to a wide variety of Federal, Provincial, County and/or Township policy/legislative requirements relevant to the EIS. The proponent should be aware of applicable policies and legislations, and how they affect the property slated for development. The EIS should detail how the

proposed development meets the intent and requirements of relevant policies and the legislative framework.

Some potential Federal legislative requirements along with the agency responsible are:

- Canadian Environmental Assessment Act (Canadian Environmental Assessment Agency or Responsible Authority);
- Federal Fisheries Act (Fisheries and Oceans Canada);
- Migratory Birds Convention Act (Environment and Climate Change Canada);
- Navigable Waters (Transport Canada); and,
- Species at Risk Act (Environment and Climate Change Canada and/or Fisheries and Oceans Canada).

Some potential Provincial, County and/or Township legislative requirements along with the agency responsible are:

- Conservation Authorities Act;
- Endangered Species Act, Ontario Water Resources Act (Ministry of Environment, Conservation and Parks);
- Frontenac County Environmental Impact Statement Guidelines;
- Lakes and Rivers Improvement Act, Public Lands Act (Ministry of Natural Resources);
- Local by-laws, where applicable, such as Zoning By-law, Tree Cutting Bylaws, Grading Bylaws, etc. (Frontenac County and relevant Townships).
- Natural Heritage Reference Manual (Ministry of Natural Resources and Forestry);
- Official Plans (Frontenac County and relevant Townships);
- Planning Act (Ministry of Municipal Affairs and Housing); and,
- Provincial Planning Statement (Ministry of Municipal Affairs and Housing).

3.9 RECOMMENDATIONS

This section should outline how the proposal can maintain or enhance ecological functions of the NHF and HF. The following issues should be addressed:

- Should the development proposal proceed as planned?
- Should the development proposal be revised to reduce/eliminate effects and if so, how? Any proposed revisions should be illustrated conceptually on the resource mapping base.
- Provide any proposed mitigation/compensation measures.
- Provide any proposed conditions, including any recommended monitoring requirements.

3.10 APPENDICES

Appendices should include all relevant supplementary information such as:

- Literature cited;

- Field collection record, flora and fauna species lists by area and by date of inventory;
- Borehole/water level reading data;
- Flow measurements;
- Water quality data sheets;
- Calculations; and,
- List of people contacted during the study or referenced in the report.

3.11 EXECUTIVE SUMMARY

This section should be placed at the beginning of the EIS report and should include a description of the proposed development, its effects on the environment, and a summary of all the recommendations.

4. CONCLUSION

In conclusion, these EIS Guidelines serve as a comprehensive framework to ensure that environmental considerations are fully integrated into the decision-making processes for proposed projects in Frontenac County. By adhering to these guidelines, proponents can identify, predict, and evaluate potential environmental impacts, ensuring that necessary measures are taken to mitigate adverse effects.

As environmental challenges continue to evolve, it is recommended that these guidelines remain adaptable, incorporating the latest protocols, survey methods and other relevant concepts.

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APPENDIX A:

Terms of Reference Checklist

TERMS OF REFERENCE CHECKLIST

The following indicates Natural Heritage Policies, scoping of inventories and delineations, and Terms of Reference requirements that may need to be abided by for developments that require an EIS in Frontenac County. These requirements may be changed or scoped depending on the proposal and location. If additional NHF and/or HF are identified during the preparation of an EIS, the Terms of Reference Checklist may have to be reassessed. Additional studies or consultation may be required if the proposed development directly or indirectly affects NHF and/or HF. The Terms of Reference is to be prepared by a qualified professional and submitted in electronic form along with hard copies.

PROJECT INFORMATION

Project Name:

Proponent:

Primary Contact:

Contact Information (Email):

(Phone):

Project Location (street address or lot and concession):

Geographic Township and/or District:

Consultant:

Consultant Lead:

Contact Information (Email):

(Phone):

PROJECT TYPE

☐ Agricultural building or structure within building cluster

☐ Agricultural building or structure outside building cluster

☐ Re-build – same footprint

☐ Re-build – larger or altered footprint

☐ Consent to sever and create a new lot

☐ Consent for a lot addition

☐ Consent for an easement

☐ Addition to an existing building/structure

☐ New single detached dwelling on an existing lot

☐ Accessory building/structure re-development or modification

☐ New accessory structure (garage, shed etc.)

☐ Septic system or other servicing

☐ New accessory development (swimming pool, driveway etc.)

☐ Other development or site alteration (wind farm, logging operations etc.) Please specify:

NATURAL HERITAGE POLICIES TO BE REVIEWED

☐ County and Township official plans

☐ Secondary or tertiary plans

☐ Provincial Planning Statement (2024)

☐ Ontario Endangered Species Act (2007)

☐ Conservation Authorities Act (1990)

BACKGROUND DATA TO BE REVIEWED

☐ Natural Heritage Information Centre

☐ Ontario Breeding Bird Atlas

☐ E-bird

☐ Reptile and Amphibian Atlas

☐ Fisheries and Oceans Canada Species at Risk Mapping

☐ Municipal Drain Classification Mapping

☐ Watershed Study

☐ Records obtained from the Ministry of Environment, Conservation and Parks/Ministry of Natural Resources and Forestry/Conservation Authority

☐ Other:

IDENTIFY FEATURE SIGNIFICANCE USING CRITERIA FROM

☐Township official plan

☐ County official plan

☐ County Natural Heritage Study

☐ Natural Heritage Reference Manual

☐ Significant Wildlife Habitat Criteria Schedules

☐ Ontario Endangered Species Act (2007)

☐ Federal Species at Risk Act (2002)

IMPACTS

Include assessment of impacts related, but not limited, to servicing, grading/construction, water balance, water taking/pumping, stormwater discharge, vegetation/habitat removal, lighting, human encroachment/dumping etc. both during construction and post-construction as required.

MITIGATION

Provide a list of mitigation measures, if applicable.

ENHANCEMENT

Provide enhancement in accordance with Protection Plan policies.

APPENDIX B:

Scoping of Inventories, Associated Protocols and Delineations

SCOPING OF INVENTORIES, ASSOCIATED PROTOCOLS AND DELINEATIONS

FIELD STUDIES REQUIRED	NOT APPLICABLE	SITE	STUDY AREA	POTENTIALLY REQUIRED IF FEATURES PRESENT AND POTENTIALLY DISTURBED	NOTES
ECOLOGICAL LAND CLASSIFICATION	☐	☐	☐	☐	Spring/summer/fall Ecological Land Classification timing periods and vegetation community classifications can be further described using: • Ecological Land Classification System for Southern Ontario (ELC, Lee et al.1998), including the catalogue code updates version (Lee, 2008), • Natural Heritage Resources of Ontario: Vegetation Communities of Southern Ontario (Bakowsky, 1997) • Ontario Institute of Pedology 1985 Field Manual to Describing Soils, Third Edition.
BOTANICAL INVENTORY	☐	☐	☐	☐	Spring/summer/fall botanical inventory periods and species can be further described using: • Ecological Land Classification System for Southern Ontario (ELC, Lee et al. 1998) • Natural Heritage Information Centre Biodiversity Explorer and Rarity Rankings (Natural Heritage Information Centre | ontario.ca) • Flora Ontario (http://www.uoguelph/ca/foibis), • Distribution and Status of the Vascular Plants of Central Region (Riley 1989)
TREE INVENTORY	☐	☐	☐	☐	Botanical inventory databases can be used for tree inventory Information.
BUTTERNUT HEALTH ASSESSMENT	☐	☐	☐	☐	Details regarding Butternut assessments and Butternut exemptions can be found in Section 21 of Ontario Regulation 830/21. Refer to the Endangered Species Act (ESA), 2007 regarding Butternut impacts and habitat.
WOODLAND BOUNDARY STAKING	☐	☐	☐	☐	Woodland boundary staking can occur anytime throughout the year.
WETLAND EVALUATION	☐	☐	☐	☐	Refer to: Ministry of the Environment, Conservation and Parks | ontario.ca

FIELD STUDIES REQUIRED	NOT APPLICABLE	SITE	STUDY AREA	POTENTIALLY REQUIRED IF FEATURES PRESENT AND POTENTIALLY DISTURBED	NOTES
WETLAND BOUNDARY STAKING	☐	☐	☐	☐	Refer to: • Ontario Wetland Evaluation System for Southern Ontario (OMNR 2002) Ministry of the Environment, Conservation and Parks | ontario.ca
BREEDING BIRD SURVEY	☐	☐	☐	☐	Refer to: • Ontario Breeding Bird Atlas: Instructions for General Atlassing (Cadman et al. 2007), online summaries Ontario Breeding Bird Atlas (birdsontario.org) • Breeding Bird Surveys following Environment Canada Canadian Wildlife Service protocols (http://www.ec.gc.ca/reommbs/default.asp?lang=En&n=416B57CA-1) • Marsh Monitoring Program Bird Survey protocols Marsh Cover (bsc-eoc.org) • Migratory Birds Convention Act (1994)
BOBOLINK/EASTERN MEADOWLARK SURVEY	☐	☐	☐	☐	Refer to breeding bird survey databases and Bobolink and Eastern Meadowlark Recovery Strategy (Bobolink and Eastern Meadowlark Recovery Strategy | ontario.ca).
RED-HEADED WOODPECKER/ PILEATED WOODPECKER SURVEY	☐	☐	☐	☐	Refer to breeding bird survey databases, Red-headed Woodpecker Recovery Strategy (Red-headed Woodpecker recovery strategy | ontario.ca) and .
EASTERN WHIP-POOR-WILL/COMMON NIGHTHAWK SURVEY	☐	☐	☐	☐	Refer to: • Breeding bird survey databases • DRAFT Survey Protocol for Eastern Whip-poor-will (Caprimulgus vociferus) in Ontario (OMNRF, 2014) (survey protocols) • Ontario Whip-poor-will Project: Central Ontario Survey Data Form (Birds Canada, 2011) (roadside survey protocols)

FIELD STUDIES REQUIRED	NOT APPLICABLE	SITE	STUDY AREA	POTENTIALLY REQUIRED IF FEATURES PRESENT AND POTENTIALLY DISTURBED	NOTES
BREEDING AMPHIBIAN SURVEY	☐	☐	☐	☐	Refer to: • Marsh Monitoring Program Amphibian Survey protocols • Marsh Cover (bsc-eoc.org)) • Ontario Herpetofauna Summary • Ministry of the Environment, Conservation and Parks | ontario.ca • Environment Canada Monitoring Protocol for Plethodontid Salamanders • Joint EMAN/Parks Canada national monitoring protocol for plethodontid salamanders / [by] Paul Zorn, Valerie Blazeski, and Brian Craig.: En14-144/2004E-PDF - Government of Canada Publications - Canada.ca
WESTERN CHORUS FROG SURVEY	☐	☐	☐	☐	Refer to breeding amphibian survey databases.
SALAMANDER SURVEY	☐	☐	☐	☐	Refer to breeding amphibian survey databases.
EGG MASS SURVEY	☐	☐	☐	☐	
REPTILE SURVEY	☐	☐	☐	☐	Refer to: https://www.ontario.ca/page/survey-protocol-ontarios-species-risk-snakes#section-2 for relevant survey information
LEAF-OFF BAT HABITAT VISUAL SURVEY	☐	☐	☐	☐	Refer to: • Species At Risk Ontario (SARO) for bats protected under the ESA (Endangered Species Act) (2007) • MNRF Bat Survey Protocol • MNRF Maternity Roost Surveys MNRF Use of Buildings by Species at Risk Bats Survey Methodology

FIELD STUDIES REQUIRED	NOT APPLICABLE	SITE	STUDY AREA	POTENTIALLY REQUIRED IF FEATURES PRESENT AND POTENTIALLY DISTURBED	NOTES
LEAF-ON BAT HABITAT VISUAL SURVEY	☐	☐	☐	☐	Refer to: • SARO for bats protected under the ESA • MNRF Bat Survey Protocol • MNRF Maternity Roost Surveys MNRF Use of Buildings by Species at Risk Bats Survey
ACOUSTIC BAT MONITORING	☐	☐	☐	☐	Refer to the Ministry of Environment, Conservation and Parks bat survey standards for protocols and timing.
VISUAL AQUATIC HABITAT ASSESSMENT AND CHARACTERIZATION	☐	☐	☐	☐	
FISH SAMPLING	☐	☐	☐	☐	Refer to: • Ontario Fisheries Inventory and Assessment Protocols Ministry of the Environment, Conservation and Parks | ontario.ca • Ontario Fisheries Planning available from MNRF Ministry of the Environment, Conservation and Parks | ontario.ca
WATER TEMPERATURE SAMPLING	☐	☐	☐	☐	Refer to the Cataraqui Region Conservation Authority, Quinte Conservation, Rideau Valley Conservation Authority or Mississippi Valley Conservation digital resources depending on which jurisdiction the proposed development is occurring in.
WATER QUALITY SAMPLING	☐	☐	☐	☐	Refer to the Cataraqui Region Conservation Authority, Quinte Conservation, Rideau Valley Conservation Authority or Mississippi Valley Conservation digital resources depending on which jurisdiction the proposed development is occurring in.

FIELD STUDIES REQUIRED	NOT APPLICABLE	SITE	STUDY AREA	POTENTIALLY REQUIRED IF FEATURES PRESENT AND POTENTIALLY DISTURBED	NOTES
SIGNIFICANT WILDLIFE HABITAT	☐	☐	☐	☐	Refer to Significant Wildlife Habitat Technical Guide (OMNR 2000) Ministry of the Environment, Conservation and Parks | ontario.ca
SPECIALIZED WILDLIFE SURVEYS	☐	☐	☐	☐	Refer to relevant survey protocols based on reviewing agency consultation. Surveys could include mammal surveys, Odonata surveys, Lepidoptera surveys, mussel surveys, benthic invertebrates surveys etc.
SAR HABITAT WILDLIFE ASSESSMENT	☐	☐	☐	☐	Refer to Species at risk in Ontario | Ontario.ca for relevant SAR according to Ontario Regulation 230/08.
GEOMORPHOLOGICAL ASSESSMENTS	☐	☐	☐	☐	Refer to the Cataraqui Region Conservation Authority, Quinte Conservation, Rideau Valley Conservation Authority or Mississippi Valley Conservation digital resources depending on which jurisdiction the proposed development is occurring in. • Geology Ontario Geology Ontario (gov.on.ca) • Professional Practice Guidelines for Geomorphologists (https://www.pgo.ca/uploaded/files/pp-guidelines-geomorphology.pdf)
HAZARD ASSESSMENTS	☐	☐	☐	☐	Refer to the Cataraqui Region Conservation Authority, Quinte Conservation, Rideau Valley Conservation Authority or Mississippi Valley Conservation policies, procedures and relevant guidelines depending on which jurisdiction the proposed development is occurring in.
HYDROLOGY ASSESSMENTS	☐	☐	☐	☐	Refer to the Cataraqui Region Conservation Authority, Quinte Conservation, Rideau Valley Conservation Authority or Mississippi Valley Conservation policies and relevant guidelines for hydrology studies depending on which jurisdiction the proposed development is occurring in.

FIELD STUDIES REQUIRED	NOT APPLICABLE	SITE	STUDY AREA	POTENTIALLY REQUIRED IF FEATURES PRESENT AND POTENTIALLY DISTURBED	NOTES
HYDROGEOLOGY ASSESSMENTS	☐	☐	☐	☐	Refer to the Cataraqui Region Conservation Authority, Quinte Conservation, Rideau Valley Conservation Authority or Mississippi Valley Conservation for relevant guidelines for hydrogeology studies depending on which jurisdiction the proposed development is occurring in. • The Hydrogeology of South Ontario 58, Ministry of the Environment, Conservation and Parks | Ontario.ca