EIS Checklist for Development Near Wetlands and Other Natural Heritage Features

Mississippi Valley Conservation Authority

Version 1

July 2022

Introduction

The purpose of this checklist is to:

- Assist environmental professionals with the preparation of Environmental Impact Study (EIS) reports.
- Ensure that the site visit(s) and the submitted report are complete and provide all the required supporting information needed to conduct the technical review.
- Ensure the report meets the policy requirements of the MVCA.
- Provide clear documentation that all impacts have been addressed and acceptable mitigation is proposed.

While the checklist outlined in Table 1 is focused on the Conservation Authority (CA) requirements, other agencies may require additional information. Depending on the type of development proposed and associated impacts other agencies such as municipalities, provincial government and the federal government may also be involved in the proposal review. For a summary of the responsibilities of each review agency please refer to Table 2 in the appendix.

Pre-consultation

The extent of the details required (i.e. the number of site visits) to sufficiently address the listed requirements (Table 1) will be dependent on the site features, the scale/type of development proposed, and the requirements of review partners. For this reason, applicants are strongly encouraged to ensure that meaningful pre-consultation with both CA staff and other review agency staff occurs prior to the undertaking of an EIS and the submission of a formal application with the approval authority.

The items identified in the checklist only represent minimum reporting requirements for the development proposals and additional requirements may need to be satisfied depending on the site and agency specific requirements. Pre-consultation will determine the anticipated scale of the development impacts; a scoped EIS may be permitted for minor works, and a comprehensive EIS may be required for larger projects. The complete checklist is to be applied to the comprehensive EIS requirements.

Report Requirements

- One-page executive summary of the site, the proposal, the findings of the field work, and a concluding statement
- Detailed description of the site and the development proposal
- Complete an assessment of all the natural heritage features on and adjacent to the site within the appropriate season(s) (refer to checklist details)
- Discuss the potential impacts to the feature(s) due to the proposal and any future onsite development or uses
- Assess those potential impacts to the feature(s) and discuss if/how they can they be mitigated
- Provide a concluding rationale on why the proposal is acceptable and why the mitigation will be successful
- all related studies (ex. stormwater or hydrogeological), are referenced and associated recommended mitigation measures are integrated and referenced within all reports.

The professionals involved in preparation of the technical studies and site investigations should follow the Ontario Ministry of Natural Resources Natural Heritage Reference Manual in conjunction with the Provincial Policy Statement (2020).

Table 1: The standard details required within an EIS report that is submitted with a planning or regulations application. See subsequent pages for further details on the contents of each requirement.

No.	Requirement
1	Site description
2	Development details
3	Conservation Authority Regulation limits
4	Field investigation details
5 a	Habitat Classification as per ELC
5 b	Presences and types of wetlands as per OWES
5 c	Presence and types of fish and/or fish habitat
5 d	Presence of Species At Risk, and/or Species At Risk habitat in the area
5 e	Presence and types of other significant natural heritage features
6	Physical and hydrologic features
7	Map(s)
8	Provide conclusions and recommendations: i) what features are impacted ii) mitigation if applicable iii) why mitigation will be successful
9	Report Appendix

EIS Report Contents Checklist

1) Site Description:
   a) Address, PIN number, Lot and Concession
   b) Owner's contact information
   c) Existing land use
   d) Historical land use
   e) Presence of significant features
      i) Watercourses
      ii) Lakes and open water
      iii) Wetlands
      iv) Provincially Significant Wetland (PSW)
      v) Areas of Natural Scientific Interest (ANSI)
      vi) Significant woodlands
      vii) Etc.

2) Development Details:
   a) Size: property size, development size, building envelope
   b) Location
   c) Setbacks
   d) Timing of development
   e) Activities associated with the proposal which may have an environmental impact (e.g. work on stream banks, tree-cutting, removal of vegetation, earth-moving, excavation and post-construction activities)
   f) Discuss the incorporation of long-term mitigation measures in the project design (for example; LIDs, swales, rain gardens etc)

3) Conservation Authority Regulation Limits on the Property:
   a) PSW + 120 m regulated area
   b) Non-evaluated regulated wetlands + 30 m regulated area
   c) Other significant features on the property also affected by CA regulations
      i) Flood plain, 1:100 year flood elevation + 15 m regulated area
      ii) Stable slope limit, top of bank + 15 m regulated area
      iii) Significant Valley Lands, etc.

4) Field Investigation:
   a) When conducted
   b) How conducted
   c) Who conducted
   d) Results
   e) Observed plant and animal species lists (can be placed in the appendix)
   f) GPS coordinates of features in UTM NAD83, (example, wetland boundaries)

![Mississippi Valley Conservation Authority logo]

5) Habitat Classification:
   a) Following ELC classifications, describe and map the habitat types on and adjacent to the site:
      i) Forests, grasslands, wetlands etc.
      ii) Describe habitat links, corridors within the broader landscape
   b) Type of Wetland(s) as per OWES guidelines:
      i) Swamp
      ii) Marsh
      iii) Bog
      iv) Fen
   c) Fish and fish habitat:
      i) Identify and map potential fish and fish habitat
      ii) Time(s) of year surveyed
      iii) Method(s) for survey
      iv) List species found/sample site
   d) Species At Risk (SAR)*:
      i) Identify, map and discuss potential SAR and/or SAR habitat on and adjacent to the site
   e) Other Significant Natural Heritage features. Identify, map and discuss:
      i) Woodlands
      ii) Valleylands
      iii) Wildlife habitat
      iv) Areas of natural and scientific interest (ANSI)

6) Physical and Hydrologic Features
   a) Waterbodies: wetland(s), lake, stream, drain etc.
   b) Water feature types: Permanent, ephemeral, intermittent, headwater features, etc.
   c) Soil types by texture/grain size (e.g. clay, silt sand) and drainage characteristics
   d) Overburden and bedrock geology
   e) Areas of high-water table
   f) Areas of groundwater recharge and discharge
   g) Locations and usage of wells
   h) Drainage patterns, basin boundaries and watercourses
   i) Existing erosion sites
   j) Areas of shallow soil

*Note: SAR and SAR habitat identification and regulation is not part of the CA mandate. However, it is important that the proponent consult with the MECP on this issue and include any sightings in the EIS and species lists.

7) Maps
   a) Well labelled maps are a key to understanding the relationship between the proposed development and the existing landscape features. At a minimum the following maps should be included in the report:
   b) A map of the site location to scale
   c) A detailed map of the site to scale
      i) Show the edge of the wetland based on OWES wetland delineation standards
      ii) Show all other natural heritage features
      iii) Vegetation and soil community locations
      iv) Show all applicable setback requirements: natural feature setbacks, regulation setbacks (ie. The regulatory 30 m for all wetlands, and 120 m total regulated area from the edge of the wetland for PSW), the limit of hazard setback, etc.
      v) Show the proposed development foot print, labelled with nearest distance to the wetland/natural heritage feature
   d) A map of SAR/SAR habitat in relation to the proposed development (See section 5d)

8) Conclusions and Recommendations
   a) Summarize what features are impacted.
   b) Discuss cumulative impacts to the area's natural heritage features.
      i) Quantify the significance of the impact within the context of the local watershed's ecosystem condition.
   c) Conclude if this development will have a significant negative impact on the natural heritage feature(s).
   d) State site specific applicable mitigation measures to be used during development and afterwards to reduce the negative impact of the proposed development on the natural heritage feature(s).
   e) Discuss why/how mitigation measures will be successful.
   f) If setback buffers are recommended as mitigation measures; provide a rational for why the prescribed/requested setback buffer distance is appropriate.
   g) If a reduction to a regulatory setback is being proposed, a discussion of the constraints that led to that proposal needs to be included; as well as a rational on how the development design will still be able to mitigate all impacts to the regulated natural heritage feature(s).
   h) Discuss monitoring for impacts after development as a clause of approval.
   i) If the proposed development is of a scale requiring other professional reports (i.e. hydrological impact study, storm water management plan, landscape plan etc.), then the conclusions and recommendations of the EIS must be incorporated with the recommendations and designs of these other reports.

9) Appendices to the EIS
   a) Should provide a bibliography of literature cited and the qualifications of the study team.
   b) May also include site visit photos, observed species lists, and maps depending on the author's report format preference.

CA: Conservation Authority

Ecological Land Classification (ELC): In Ontario, the Ministry of Natural Resources and Forestry (MNRF) defines ecological units on the basis of bedrock, climate (temperature, precipitation), physiography (soils, slope, aspect) and corresponding vegetation, creating an Ecological Land Classification (ELC) system. This classification of the landscape enables planners and ecologists to organize ecological information into logical integrated units to enable landscape planning and monitoring.

EIS: Environmental Impact Statement

Natural Heritage Features: as defined in the Provincial Policy Statement (PPS). Natural features and areas shall be protected for the long term. The diversity and connectivity of natural features in an area, and the long-term ecological function and biodiversity of natural heritage systems, should be maintained, restored or, where possible, improved, recognizing linkages between and among natural heritage features and areas, surface water features and ground water features. They consist of significant wetlands, woodlands, valleylands, wildlife, habitat of endangered and threated species, fish habitat, and areas of natural and scientific interest (ANSI).

Ontario Wetland Evaluation System (OWES): The provincial standard used to define, delineate, and classify wetlands. The OWES is a science-based system that is used to evaluate and rank the relative value of wetlands. The ministry's OWES manuals are technical guidance documents that use scientific criteria to quantify wetland values and allow comparisons among wetlands. The manuals provide the "evaluation procedures" referred to in the PPS and are used to determine wetland significance under Section 2.1 of the PPS.

Provincially Significant Wetland (PSW): Are wetlands that have been evaluated by the Provincial Wetland Evaluation System, and approved by the Ontario Ministry of Natural Resources. The PPS refers to them as "an area identified as provincially significant by the Ontario Ministry of Natural Resources using evaluation procedures established by the Province".

Wetland: Means 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. (From the PPS)

Wetland Regulatory Limit: Is the area in which the Conservation Authorities Act Section 28 is applied to development within 120 m of the Provincially Significant Wetlands boundary, or within 30 m of a wetland that is over 0.5 hectares and has surface hydraulic connection to downstream features. Under the Provincial Policy Statement (2005), these lands are referred to as "those lands contiguous to a specific natural heritage feature or area where it is likely that development or site alteration would have a negative impact on the feature or area". Some municipalities have their own development setbacks from water that also need to be considered.

Table 2: A summary of review agency responsibilities.

Site Feature	Conservation Authority Regulation – O. Reg. 153/06	Municipality Provincial Policy Statement Natural Heritage 2.1 *	Conservation Authority - Provincial Policy Statement Natural Hazards 3.1	Provincial Regulations	Federal Regulations
Erosion	X		X		
Floodplain	X		X		
Stable Slope	X				
Surface Water			X		
Ground Water			X		
Source Water Drinking Areas			X		
Non-Significant wetlands (> 0.5 ha)	X				
Significant Wetlands	X	X			
Significant Valleylands		X			
Significant Woodlands		X			
Significant Wildlife Habitat		X			
Fish Habitat		X		X	X
Areas of Natural and Scientific Interest (ANSI)		X		X	
Species at Risk and SAR habitat				X	X

*Consult with your local municipal and county offices, as the Conservation Authority may undertake this review on behalf of the Municipality in accordance with a Memorandum of Agreement. Agreements vary across the watershed.