Categorizing and Protecting Habitat under the Endangered Species Act

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1 CONTEXT

The purposes of the *Endangered Species Act*, 2007 ("ESA" or "the Act") are to:

- identify species at risk based on the best available scientific information, including information obtained from community knowledge and Aboriginal traditional knowledge;
- protect species that are at risk and their habitats, and promote the recovery of species that are at risk; and,
- promote stewardship activities to assist in the protection and recovery of species that are at risk.

If a species is listed on the Species at Risk in Ontario (SARO) list¹ as an extirpated, endangered or threatened species, it receives protection under section 9 of the ESA. If a species is listed as an endangered or threatened species, its habitat also receives protection under section 10 of the ESA.

This policy focuses specifically on the implementation of subsection 10(1) of the ESA which states that "*No person shall damage or destroy the habitat of a species that is listed on the Species at Risk in Ontario [SARO] list as an endangered or threatened species*"².

The Ministry of Natural Resources (MNR) first and foremost encourages activity proponents to look for opportunities to carry out their activities in ways that will avoid any adverse effects on a species at risk or its habitat. However, where specific legislated requirements are met, the ESA enables the Minister of Natural Resources to issue an authorization to a proponent that authorizes them to engage in an activity that would otherwise be prohibited by section 10 of the Act . The Minister is not obligated to issue an authorization to a proponent. Authorizations may only be issued where the legislated requirements in the ESA will be met by the conditions in the authorization. A person who carries out an activity that damages or destroys habitat without appropriate authorization under the ESA, may be prosecuted under subsection 10(1).

2 PURPOSE

The purpose of this document is to outline the overall approach and considerations that the Ministry of Natural Resources will use in determining whether a proposed activity is likely to damage or destroy habitat protected under subsection 10(1) of the ESA. This determination will be carried out primarily in the context of determining whether it is advisable for the proponent of a planned activity to apply for an authorization under the Act prior to proceeding with the activity^{4, 5, 6}.

Specifically, this document:

- provides guidance on the terms "damage" and "destroy" within the context of subsection 10(1) of the Act;
- identifies a set of principles and considerations that MNR will consider in determining whether a proposed activity will damage or destroy habitat; and
- explains how habitat protected under the ESA will be categorized based on the species' anticipated tolerance to disturbance.

In addition to this policy, an Information Gathering Form has been developed to enable proponents to gather and submit the necessary information to the MNR to inform the Ministry's assessment and determination of whether the activity is likely to contravene subsection 9(1) or 10(1) of the ESA. This form must be completed and submitted to MNR in order for this determination to be made. The *Information Gathering Form for Activities that may Affect Species or Habitat Protected under the Endangered Species Act* (IGF) is available on the Ministry's website at http://www.mnr.gov.on.ca/en/ Business/Species/index.html

^{1.} Ontario Regulation 230/08 under the Endangered Species Act, 2007.

^{2.} The application of habitat protection to individual species is subject to transition provisions outlined in subsection 10(3) of the ESA. As a result, the habitat of some threatened or endangered species is not currently protected under subsection 10(1) of the Act, although it will be protected on or before June 30, 2013. In addition, the prohibition against damaging or destroying habitat also applies to an extirpated species if the species' habitat is prescribed by a regulation for that purpose. This document will also be used in assessing whether a project will damage or destroy the habitat of an extirpated species in these cases.

^{3.} Where specific legislated requirements are met, the ESA also enables the Minister of Natural Resources to issue an authorization to a proponent that authorizes them to engage in an activity that would otherwise be prohibited by section 9 of the Act.

^{4.} This document will also be used for enforcement purposes under the ESA by informing the determination of whether an activity *already bas or is about to* damage or destroy habitat protected under the Act.

^{5.} Additional guidance to help proponents determine whether they may require an ESA authorization prior to conducting their activity can be found in the document entitled "Endangered Species Act Submission Standards for Activity Review and 17 (2)(c) Overall Benefit Permits" (link provided in section 7 of this document).

^{6.} Proponents are encouraged to contact their local MNR district office at the earliest stage when planning and designing a proposed activity in order to allow sufficient time for proponents to acquire any information requested, MNR to assess the potential effects of the activity on the protected species at risk or habitat and, if necessary, for the proponent to apply for an authorization under the ESA prior to proceeding with the proposed activity.

3 KEY TERMS, GUIDING PRINCIPLES AND CONSIDERATIONS

3.1 Key Terms

Not every activity that occurs within or near habitat will damage or destroy that habitat. Determining whether a proposed activity is likely to damage or destroy the habitat of an endangered or threatened species requires the consideration of the activity details, which parts of habitat are likely to be altered by the activity, and how the alteration may affect the species' ability to carry out its life processes.

3.1.1 Damaging Habitat

An activity that damages the habitat of a species is one that alters the habitat in ways that *impair* the function (usefulness) of the habitat for supporting one or more of the species' life processes.

3.1.2 Destroying Habitat

An activity that destroys the habitat of a species is one that alters the habitat in ways that *eliminate* the function (usefulness) of the habitat for supporting one or more of the species' life processes.

In some cases, the anticipated alteration that a proposed activity will have on habitat may be so minor that the function of the habitat for supporting the species' life processes will not become impaired or eliminated. In such cases the activity would not contravene subsection 10(1) of the ESA and would not require authorization under the Act with respect to this provision⁷. In other cases, the alteration may be more significant such that the function of the habitat for supporting one or more of the species' life processes may become impaired or eliminated. Such activities would contravene subsection 10(1) of the ESA and would require authorization under the Act prior to proceeding.

3.2 Guiding Principles

The following principles and considerations will be considered in determining whether a proposed activity will contravene subsection 10(1) of the Act.

3.2.1 The context for the Endangered Species Act, 2007

A primary purpose of the ESA is to protect Ontario's species at risk and their habitats, and to promote the recovery of species that are at risk. To achieve this purpose, it is important to recognize, protect and enhance the ability of species to carry out life processes, including, but not limited to, reproduction, rearing, hibernation, migration or feeding. Determinations regarding subsection 10(1) should reflect and be consistent with this purpose.

3.2.2 Adaptive Management

An adaptive management approach is key to implementing the ESA and its related policies and guidance. Knowledge and information gained through research, monitoring and stewardship activities will help to improve our understanding of species at risk, their needs and the effects of various human activities on these species and their habitats. As our collective understanding grows, future approaches, decisions and guidance for protecting and recovering species at risk and their habitat will be adapted accordingly.

3.2.3 Uncertainty and Risk Management

Damage and destroy determinations will be based on the best scientific information, including Aboriginal and traditional knowledge, available to MNR. A lack of scientific certainty in making damage and destroy assessments is not considered a justifiable reason to postpone assessment decisions. Knowledge gaps due to substantial scientific uncertainty may highlight research, monitoring and stewardship opportunities that can help to increase our understanding of a species and the effects a specific activity may have on a species or its habitat.

A risk management approach is inherently incorporated in the categorization of species' habitat through the application of the factors in section 5, and in determining whether an activity is likely to damage or destroy habitat. In some cases, there will be a moderate to high level of understanding of a species at risk and the effects that a proposed activity will have on its habitat. In others, this understanding will be very limited.

In cases where there is a moderate to high understanding of a species at risk and the potential effects of a proposed activity, there is less risk involved when determining whether a proposed activity will damage or destroy habitat.

- In certain cases where the anticipated effects of a proposed activity on habitat cannot be predicted with reasonable confidence, determinations will err on the side of caution in favour of affording greater protection to the habitat.
- The majority of activity scenarios are likely to fall between the two extremes of certainty; risk management decisions will be informed by the details of the activity, and by the sensitivity of the habitat that may be impacted.

3.2.4 Case by case

Given the number and diversity of species at risk in Ontario, their unique habitat needs, the different ecological conditions that exist across Ontario, and the variety of human activities occurring within the province, determining whether a proposed activity will damage or destroy habitat will generally need to be done on a species-by-species, caseby-case basis.

3.2.5 Spatial Scale of damage and destroy determinations

Damage and destroy determinations will be conducted at a spatial scale that is ecologically relevant for the species (e.g., local population scale, territorial area, etc). The spatial scale will differ between species and between locations and may range from a few square metres to a much broader landscape scale.

3.3 Considerations

3.3.1 Activity Details

Evaluating how severely a proposed activity may alter habitat will involve an assessment of the activity's details, including but not limited to, the:

- spatial (direct) footprint, location, timing, methodology, and frequency of the different stages of the proposed activity;
- indirect effects of the activity (i.e., effects beyond the physical footprint of the activity);
- immediate (short term) and delayed (long term) effects of the activity;
- duration (i.e., permanency) of the effects of the activity on the habitat (e.g., days, months, years, decades, or permanently);
- the likelihood of the effects of the activity; and,
- how the cumulative effects of other human activities and natural events occurring at or near the habitat may intensify the effects that a proposed activity will have on that habitat.

4 HABITAT UNDER THE ESA

Under the ESA, habitat is defined as either:

- General Habitat: an area on which a species depends directly or indirectly to carry out its life processes (under clause 2(1)(b) of the Act) or,
- Regulated Habitat: the area prescribed for a species in a habitat regulation (under clause 2(1)(a) of the Act). A habitat regulation may prescribe an area as the habitat of a species by describing the boundaries of the area, the features of the area, or by describing the area in any other manner. Regulated habitat may be smaller or larger than general habitat. As well, unlike the general habitat of a species, regulated habitat may include areas currently unoccupied by the species, such as areas where the species formerly occurred or areas where there is the potential for the species to become re-established. These areas are commonly referred to as "recovery habitat".
 - Both general habitat and regulated habitat include places the species uses as dens, nests, hibernacula or other residences (subsection 2(1)).

Habitat Supports the Life Processes of a Species

The parts or components that make up the habitat for a species all function collectively to enable members of that species to carry out the life processes necessary to survive and reproduce. It is essential to protect these areas in ways that ensure the habitat as a whole is able to sustain the species' life processes. For example, reproduction for a species is not only supported by the nest, den, etc., of a species, but also by the other components of habitat that enable it to successfully complete courtship, mating, egg incubation, gestation, birthing and rearing young (for animals), pollination and germination (for plants), and any other stages of the species' reproductive cycle.

Other examples of life processes include:

- hibernation, which is supported by areas of habitat where a species hibernates or overwinters (e.g., terrestrial dens, wetlands, deep fractures in rocks, and river beds), by providing a place where the species can conserve energy, avoid freezing, etc.;
- migration, which is supported by staging and resting areas, travel routes, etc. (e.g., hedgerows, forest cover). Migration may occur in response to food availability, seasonal changes in weather conditions, or to support different life-stages (such as breeding, birthing or the establishment of territories); and,

feeding, which is supported by areas of habitat upon which the species depends to obtain adequate nourishment. Feeding areas may vary depending on the time of year and on the stage of development of the individual.

5 HABITAT CATEGORIZATION

Habitat categorization provides a framework for identifying which areas of habitat a species may be able to tolerate more or less changes to. Not all activities that alter habitat will damage or destroy that habitat. **Habitat is** *not* **a "no activity zone" for all human activities**.

Where appropriate, habitat areas within a species' defined habitat will be classified into three categories (see Table 1), according to the species' anticipated level of tolerance to alterations. The categorization of habitat will be informed by a standard list of factors (see Table 2).

- Category 1 Red: Highly sensitive habitat areas where the species is anticipated to have the lowest tolerance to alteration. With few exceptions, activities with potential to alter category 1 habitat areas will likely damage and destroy the habitat, and would require authorization to continue.
- Category 2 Orange: Moderately sensitive habitat areas where the species is anticipated to have a moderate tolerance to alteration. Relatively high impact or large scale activities with potential to alter category 2 habitat areas will likely damage and destroy the habitat, and would require authorization to continue.
- Category 3 Yellow: Highly tolerable habitat areas where the species is anticipated to have the highest tolerance to alteration. Certain high impact or large scale activities that alter category 3 habitat areas will likely damage and destroy the habitat, and would require authorization to continue.

Habitat Categorization and ESA Authorizations Where an activity is determined to have the potential to damage and destroy habitat, the habitat categorizations will help to inform the conditions that may be required for an authorization. Generally, an activity that damages or destroys category 1 habitat will likely require more stringent authorization conditions than if the same activity damaged or destroyed category 3 habitat. **Factors to Consider in Categorizing Habitat** A standard list of factors (see Table 2) will be applied in categorizing species' habitat. This list of factors will ensure that the species use of its habitat, and the characteristics of that habitat, inform the categorization.

These factors include a consideration of the species' needs at different spatial scales and times, lifespan, active periods, normal daily and seasonal behaviour patterns, and how the habitat supports the species' life processes.

Habitat categorization requires that these factors be considered collectively, and not in isolation of one another.

Table 1. The components of a species habitat will be grouped into one of three categories.						
Habitat Category	Brief Description	Examples (not an inclusive list)	Generally What it Means for Activities			
Category 1 (Red)	Components of habitat where there is the lowest level of tolerance to alteration (lowest risk tolerance).	 Habitat features used for breeding or overwintering (e.g.,nest, egg laying site, hibernacula); localized areas used by a large number of individuals relative to the population size; areas known to be habitually used by individuals. 	 In general (depending on the activity details): Activities that alter these areas are likely to damage or destroy the habitat and would require authorization. 			
Category 2 (Orange)	Components of habitat where there is a moderate level of tolerance to alteration (moderate risk tolerance).	Other areas of habitat used by a species to carry out its daily activities (e.g., abundant and frequently used foraging areas).	 In general (depending on the activity details): Most small-impact activities that alter these areas are not likely to damage or destroy the habitat and are not likely to require authorization. Some larger impact activities that alter these areas would likely damage or destroy the habitat and would require authorization. 			
Category 3 (Yellow)	Components of habitat where there is the highest level of tolerance to alteration (highest risk tolerance).	Areas of habitat used less frequently by the species (e.g., areas occasionally used to travel to/from preferred habitat; areas used occasionally for foraging).	 In general (depending on the activity details): Almost all small-impact activities that alter these areas are not likely to damage or destroy the habitat and are not likely to require authorization. Some larger impact activities that alter these areas may damage or destroy the habitat and would require authorization. 			

Table 1. The components of a species' habitat will be grouped into one of three categories.

Table 2. Factors to consider in categorizing components into the three categories described in table 1.Note: these factors will be considered collectively, and not in isolation of one another.

	FACTOR	APPLICATION	
USE OF HABITAT A	Life Process	If a component supports reproduction (e.g., egg laying, nesting, rearing, nursery areas) or overwintering (e.g., hibernacula), there will be less tolerance to alteration than if a component supports other life processes (e.g., foraging).	
В	Concentration of Individuals	If a component is used by a high number of individuals relative to the local population size (e.g., a staging site, roosting site for colonial species, communal basking sites), there will be less tolerance to alteration, compared to a component that is used by a few individuals.	
С	Frequency or Duration of Use	If a component is frequently used (e.g., daily), there will be less tolerance to alteration, compared to a component that is used infrequently (e.g., once or twice per year).	
D	Habitual Use	If a species habitually uses a component over multiple years (e.g., major stopover sites for a migratory bird species), there will be less tolerance to alteration, compared to a component that does not experience habitual use by a species.	
E	Specialized Ecological Requirements	If a component is required by a species that has specialized food or obligate host or pollinator requirements (e.g., species such as Karner Blue and Lupine, Bogbean Buckmoth and Bogbean), there will be less tolerance to alteration, compared to a component used by a species with diverse food or host requirements.	
CHARACTERSITCS OF HABITAT F	Availability in the Province	If a component is rare within Ontario (e.g., tall grass prairie, oak savannah), or at a scale that is ecologically relevant to the species, there will be less tolerance to alteration than if a component is ample and widespread (e.g., mixed wood forest).	
G	Limiting Influence of Habitat	If habitat is not the primary limiting factor for a species (e.g., species such as Eastern Flowering Dogwood, Butternut) there will be more tolerance to alteration, than if the component is more limiting.	
Н	Resiliency or Restorability of Habitat	If a component requires a longer time to restore or be restored to its original state (e.g., bog, old growth forest), there will be less tolerance to alteration compared to a component that can be more quickly/readily restored to its original state (e.g. field, young forest).	
I	Relationship to Category 1 Habitat (Red)	If a component is adjacent to, and also maintains the function of, category 1 habitat (e.g., the riparian area adjacent to a stream reach occupied by a SAR), there will generally be less tolerance to alteration than if the component does not meet both of these conditions.	
J	Number of SAR	If a component supports more than one species at risk, there will likely be less tolerance to alteration compared to a component that supports a single species at risk.	
К	Habitat and Disturbance Thresholds	Where science-based thresholds for disturbance and habitat availability are known for landscape scale species (e.g. species such as forest-dwelling Woodland Caribou) and the disturbance level is above the known thresholds there will be less tolerance for alteration than if the disturbance level is below the threshold.	

6 ADDITIONAL INFORMATION

This document is one of a series of guidance documents being developed to support the implementation of the *Endangered Species Act*, 2007. The Ministry's Species at Risk website will continue to be updated as new information and guidance is developed. Regular visits to this website are encouraged to find the most recent species at risk information and direction.

7 REFERENCES AND OTHER INFORMATION SOURCES

7.1 Legal

- Endangered Species Act, 2007 (available at http://www.e-laws.gov.on.ca/html/statutes/english/elaws_ statutes_07e06_e.htm)
- Species at Risk in Ontario (SARO) List (*Ontario Regulation* 230/08) (available at http://www.e-laws.gov.on.ca/html/regs/

english/elaws_regs_080230_e.htm)

- Species-specific habitat regulations under the ESA (*Ontario Regulation 242/08*) (available at http://www.e-laws.gov.on.ca/ html/regs/english/elaws_regs_080242_e.htm)
- Exemptions under the ESA (Ontario Regulation 242/08) (available at http://www.e-laws.gov.on.ca/html/regs/ english/elaws_regs_080242_e.htm)

7.2 Related

- Finalized Provincial Government Response Statements (available at http://www.mnr.gov.on.ca/en/Business/ Species/2ColumnSubPage/STDPROD_075797.html)
- Finalized Provincial Recovery Strategies (available at http://www.mnr.gov.on.ca/en/Business/ Species/2ColumnSubPage/287123.html)
- Endangered Species Act Submission Standards for Activity Review and 17 (2)(c) Overall Benefit Permits (available at http://www.mnr.gov.on.ca/en/Business/Species/index.html)
- Information Gathering Form for Activities that may Affect Species or Habitat Protected under the Endangered Species Act (available at http://www.mnr.gov.on.ca/en/ Business/Species/index.html)
- Ontario Ministry of Natural Resources Species at Risk Website http://www.mnr.gov.on.ca/en/Business/Species/
- SAR policy 4.1 Habitat protection for endangered, threatened and extirpated species under the Endangered Species Act, 2007 (July 2008) (available at http://www.mnr.gov. on.ca/en/Business/Species/2ColumnSubPage/241604.html)

- SAR Bulletin 4.2 Explanation of key terms relating to habitat identification, description and protection under the Endangered Species Act, 2007 (July 2008) (Clarification of some of the terms used in this document can be found in this bulletin). (Available at http://www.mnr.gov.on.ca/en/ Business/Species/2ColumnSubPage/241604.html)
- Species-specific guidance or policy direction available on MNR's Species at Risk Website (http://www.mnr. gov.on.ca/en/Business/Species/) or through local MNR district offices (http://www.mnr.gov.on.ca/en/ ContactUs/2ColumnSubPage/STEL02_179002.html)

8 GLOSSARY

- Activity: in the context of this document, activity is defined broadly to include any commercial (e.g., aggregate, agriculture, construction and development, forestry, mining, renewable and non-renewable energy, mining, tourism, transportation) or non-commercial undertaking (e.g., inventory, monitoring, research, habitat restoration, etc.) that is being assessed for a potential contravention under subsection 9(1) or 10(1) of the ESA. In determining whether an activity is likely to contravene these subsections of the Act, all the components associated with all stages of the activity must be considered. This may include, but is not limited to, the components associated with the site access and investigation, site preparation and construction, operation and maintenance, closure, decommissioning and completion, and rehabilitation and restoration stages. An activity may have both beneficial and adverse effects on species at risk and their habitat. However, only adverse effects on a species or its habitat are relevant when evaluating whether the activity will contravene subsection 9(1) or 10(1) of the ESA.
- **Damaging habitat:** an activity that damages the habitat of a species is one that alters the habitat in ways that *impair* the function (usefulness) of the habitat for supporting one or more of the species' life processes.
- **Delayed effects:** include changes to the habitat that do not occur at the time the activity is carried out (e.g., changes that; result in an increase of invasive species in habitat; will alter predator-prey or pollination dynamics; or alter future water levels).

- **Destroying habitat:** an activity that destroys the habitat of a species is one that alters the habitat in ways that *eliminate* the function (usefulness) of the habitat for supporting the species' life processes.
- **Direct effects:** include changes to the habitat that occur at the location of the activity (e.g., removing the hibernacula of a species, filling in a breeding pond, excavating a turtle nesting site).
- **Function of Habitat:** the role(s) that habitat plays in supporting the ability of the members of a species to carry out their life processes in order to survive and reproduce. Habitat function is influenced by the physical and biological conditions and the ecological processes occurring within the species' habitat, all of which can be altered as a result of natural events or human activities.

Habitat: the area defined as habitat under the ESA. Habitat is automatically protected for newly listed or newly assessed species that have been classified as either threatened or endangered on the Species at Risk in Ontario (SARO) List, Ontario Regulation 230/08. Habitat is defined as either:

- the area on which a species depends directly or indirectly to carry out its life processes (under clause 2(1)(b) of the Act, and commonly referred to as the general habitat of a species) or,
- the area prescribed for a species in a habitat regulation (under clause 2(1)(a) of the Act, and commonly referred to as the regulated habitat of a species). A habitat regulation may prescribe an area as the habitat of a species by describing the boundaries of the area, by describing the features of the area, or by describing the area in any other manner. Unlike the general habitat of a species, a habitat regulation may include areas currently unoccupied by the species such as areas where the species formerly occurred or areas where there is the potential to re-establish the species (subsection 2(2)). These areas are commonly referred to as "recovery habitat". Regulated habitat may be smaller or larger than general habitat.
 - Both general habitat and regulated habitat include places that the species uses as dens, nests, hibernacula or other residences.

- **Immediate effects:** effects that are observed at the time the activity is carried out (e.g., removing vegetation, hardening a shoreline, removing nesting sites, and wetland conversion).
- **Indirect effects:** effects that occur in a location different from the location where the activity causing the effects is taking place (e.g., activities that release chemicals at a location outside of habitat may have an indirect effect on the habitat if the chemicals seep into the habitat).
- Life processes: those processes that support species populations and include processes such as reproduction, rearing, feeding, hibernation, resting, dispersal, migration, and diurnal movement. Additional clarification and examples can be found in SAR Bulletin 4.2 - *Explanation of key terms relating to habitat identification, description and protection under the Endangered Species Act, 2007 (July 2008)* (link provided in section 7).
- Near habitat: an activity is considered "near" a species' habitat if the activity is physically located within a reasonable distance from the habitat and there is a reasonable likelihood that any effects of the activity will extend into its habitat. An example of this would be an activity that occurs upstream or on land that is adjacent to, but outside of, a particular aquatic species' habitat, but where there is reasonable confidence that the activity's effects (e.g., erosion, sedimentation, etc.) may extend or flow into the habitat of the species. Another example would be an activity that occurs outside of the wetland habitat for particular species, and where there is reasonable confidence that the activity may alter the hydrological regime that maintains that wetland habitat of the species. Depending on the nature and details of these activities, such as whether any mitigation efforts are employed, the timing of the activity, etc., the activity may damage or destroy the habitat of that species.
- **Scale of assessment:** that part of a species' habitat within the province of Ontario that is being considered in determining whether a proposed activity will damage or destroy habitat. Damage and destroy determinations will be conducted at a spatial scale that is ecologically relevant for the species (e.g., local population scale, territorial area, etc.). The spatial scale will differ between species and between locations and may range from a few square metres to a much broader landscape scale.