

## **APPENDIX J7: WILDLIFE CONSTRAINT ASSESSMENT METHODOLOGY**

### **HABITAT CRITERIA**

#### **Forest Interior Habitat**

Forest interior species are generally considered to be those that nest only within the forest interior and rarely occur near the edge. Most authors recognize the forest interior as the area greater than 100 m away from the forest edge (Riley and Mohr, 1994). The 100 m is a general rule used in most planning level studies; actual species sensitivities to edges have been found to vary from 50 m to more than 500 m. The term “habitat for area sensitive species” has replaced the concept of forest interior, as the interpretation of interior can be subjective but the presence of breeding bird species is good evidence of habitat being suitable. The Ministry of Natural Resources’ Significant Wildlife Habitat Technical Guide speaks to this under S. 5.4.2.1 (Habitat for Area Sensitive Species). This group of species has received special concern over the past decade, since it has been shown that many are undergoing significant population decline due to increased deforestation, forest fragmentation, and nest predation/parasitism. There is no distinction of amount of forest interior; it could range from a point to a large area, or even though the 100 m criterion is not met, area sensitive forest species may be present and breeding. The presence of the breeding species is the most reliable indicator. The constraint applies to all of the contributing habitat, not just the interior. Vegetation communities along the edge of a large forest block (that contains forest interior) would be assigned a high constraint ranking if they support interior conditions nearby.

- Forest blocks that contain forest interior habitat (use 100 m threshold) = **HIGH CONSTRAINT**

#### **Grassland Habitat**

Grasslands are recognized by many as the most imperiled ecosystems worldwide. Native North American Grasslands have dramatically declined in area. In particular, grassland bird populations have shown steeper, more consistent, and more geographically widespread declines than any other behavioural guild of North American species (Department of the Interior Grassland Bird Working Group, 1996).

- Grasslands larger than 20 ha = **HIGH CONSTRAINT**

## SPECIES CRITERIA

### Significant Species

- Habitats<sup>†</sup> that are known to support...
  - ... species officially designated as ‘endangered’, ‘threatened’ or ‘vulnerable’, either nationally or provincially, with the exception of Monarch (*Danaus plexippus*), = **HIGH CONSTRAINT**. No minimum number of species is required.
- Habitats<sup>†</sup> that are known to support...
  - ...0-1 species with a subnational (Srank)<sup>\*</sup> of S4 = **LOW CONSTRAINT**
  - ...2 species with a subnational (Srank)<sup>\*</sup> of S4 = **MEDIUM CONSTRAINT**
  - ...3+ species with a subnational (Srank)<sup>\*</sup> of S4 = **HIGH CONSTRAINT**
  - ...species with a subnational (Srank)<sup>\*</sup> of S1-S3 = **HIGH CONSTRAINT**
- Habitats<sup>†</sup> that are known to support...
  - ...1-2 regionally significant species<sup>\*\*</sup> = **MEDIUM CONSTRAINT**
  - ...3+ regionally significant species<sup>\*\*</sup> = **HIGH CONSTRAINT**
- Habitats<sup>†</sup> that are known to support...
  - ...1-2 bird species of conservation priority<sup>\*\*\*</sup> = **LOW CONSTRAINT**
  - ...3-4 bird species of conservation priority<sup>\*\*\*</sup> = **MEDIUM CONSTRAINT**
  - ...5+ species of conservation priority<sup>\*\*\*</sup> = **HIGH CONSTRAINT**

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<sup>†</sup> ‘Habitats’ should be interpreted as vegetation units described at the Community Class level of the Ecological Land Classification (ELC) scheme and shown as polygons on Map 2 (Lee *et al.*, 1998). However, habitat utilization by wildlife species does not always coincide with these arbitrary distinctions. For example, some breeding bird species occur regularly in both Forest and Swamp community classes. In situations where a species was observed in one community class that was adjacent to another community class that the species could also regularly occur in, both habitat units should receive the higher constraint rating of the two.

<sup>\*</sup> Subnational ranks (Srank) are listed on the Ontario Natural Heritage Information centre website: <http://www.mnr.gov.on.ca/MNR/nhic/lists>.

<sup>\*\*</sup> Regionally significant species are those that are either recognized under the Southern Ontario Wetland Evaluation Manual (O.M.N.R., 1994) or other officially adopted regional list (*i.e.* The Regional Municipality of Waterloo, 1985a, 1985b, and 1996).

<sup>\*\*\*</sup> Bird species of conservation priority are those that are recognized by Couturier (1999).

**Amphibian Diversity**\* (includes vernal ponds, as well as upland habitats)

### ***Frogs and Toads***

Proper assessment (detection of all potentially occurring species) is typically dependent on conducting 3 sets of nocturnal calling surveys.

- Habitats that support 1-2 species of frog or toads = **LOW CONSTRAINT**
- Habitats that support 3-4 species of frog or toads = **MEDIUM CONSTRAINT**
- Habitats that support 5+ species of frog or toads = **HIGH CONSTRAINT**

### ***Salamanders***

Ideally, surveys should be conducted at night, shortly after ponds become ice-free for pond-breeding species (e.g. *Ambystoma* and *Notophthalmus* sp). Cover objects, such as logs, rocks and other natural debris should also be overturned in search of terrestrial species (e.g. *Plethodon* sp.)

- Habitats that support 1 species of salamander = **LOW CONSTRAINT**
- Habitats that support 2 species of salamander = **MEDIUM CONSTRAINT**
- Habitats that support 3+ species of salamander = **HIGH CONSTRAINT**

### **Reptilian Diversity**

Assessing reptilian diversity accurately usually requires repeated visits. An absence of observations does not necessarily mean absence of species or low diversity.

### ***Snakes***

Snakes are especially shy and difficult to detect. Therefore, an absence of species detected does not necessarily mean that none are present. Greater success at finding snakes may be achieved by conducting surveys on the first warm and sunny days of spring to correspond with the time snakes leave their subterranean hibernacula. Warm, sunny days in late fall may also be good times to look for these species as individuals begin to move back to their overwintering sites.

- Habitats that support 1-2 species of snakes = **LOW CONSTRAINT**
- Habitats that support 3 species of snakes = **MEDIUM CONSTRAINT**
- Habitats that support 4+ species of snakes = **HIGH CONSTRAINT**

### ***Turtles***

- Habitats that support 1 species of turtle = **LOW CONSTRAINT**
- Habitats that support 2 species of turtle = **MEDIUM CONSTRAINT**
- Habitats that support 3+ species of turtle = **HIGH CONSTRAINT**

**REFERENCES**

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