



**Significant Wildlife Habitat Criteria Schedules
For Ecoregion 5E
January, 2015**

Ontario Ministry of Natural Resources and Forestry

Regional Operations Division:
Southern Region Resources Section:
300 Water Street, 4th Floor South
Peterborough, Ontario, Canada, K9J 8M5

Northeast Region Resources Section
5520 Highway 101, East Floor
South Porcupine, Ontario, Canada, P0N 1H0

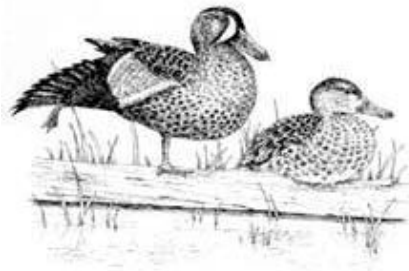


Table of Contents – SWH Ecoregion 5E Criterion Schedule

IDENTIFICATION OF Significant Wildlife Habitat	3
<i>1.1 Seasonal Concentration Areas of Animals</i>	3
Waterfowl Stopover and Staging Areas (Terrestrial)	3
Waterfowl Stopover and Staging Areas (Aquatic)	4
Shorebird Migratory Stopover Area	5
Raptor Wintering Area	6
Bat Hibernacula	7
Bat Maternity Colonies	7
Bat Migratory Stopover Area	8
Turtle Wintering Areas	9
Snake Hibernaculum	10
Colonially -Nesting Bird Breeding Habitat (Bank and Cliff)	11
Colonially -Nesting Bird Breeding Habitat Breeding Habitat (Tree/Shrubs)	11
Colonially -Nesting Bird Breeding Habitat (Ground)	12
Deer Yarding Areas	13
<i>1.2 Rare Vegetation Communities or Specialized Habitat for Wildlife</i>	15
<i>1.2.1 Rare Vegetation Communities</i>	
Beach/ Beach Ridge/ Bar/ Sand Dunes	15
Shallow Atlantic Coastal Marsh	16
Cliffs and Talus Slopes	16
Rock Barren	17
Sand Barren	17
Alvar	19
Old Growth Forest	20
Bog	21
Tallgrass Prairie	21
Savannah	22
Rare Forest Type - Red Spruce	23
Rare Forest Type – White Oak	24

1.2.2 Specialized Habitat for Wildlife	
Waterfowl Nesting Area	25
Bald Eagle and Osprey Nesting, Foraging and Perching Habitat	26
Woodland Raptor Nesting Habitat	27
Turtle and Lizard Nesting Areas	28
Seeps and Springs	29
Aquatic Feeding Habitat	30
Mineral Lick	31
Denning Sites for Mink, Otter, Marten Fisher and Eastern Wolf	32
Amphibian Breeding Habitat (Woodland)	33
Amphibian Breeding Habitat (Wetlands)	34
Mast Producing Areas	35
1.3 Habitat for Species of Conservation Concern (Not including Endangered or Threatened Species)	
Marsh Bird Breeding Habitat	37
Open Country Bird Breeding Habitat	37
Shrub/Early Successional Bird Breeding Habitat	38
Special Concern and Rare Wildlife Species	39
1.4 Animal Movement Corridors	
Amphibian Movement Corridors	41
Cervid Movement Corridors	42
Furbearer Movement Corridor	43
1.5 Exceptions for EcoRegion 5E	
Eco-District 5E-11 - Rare Forest Types: _ Jack Pine	45
Eco-District 5E- 13 – Late Winter Moose Habitat	45

SCHEDULE 5E: IDENTIFICATION OF Significant Wildlife Habitat

This schedule is designed to provide the recommended criteria for identifying Significant Wildlife Habitat (SWH) within Ecoregion 5E^{ccxvi}. Tables 1.1 through 1.4 within the Schedules provide guidance for SWH designation for the four categories of SWH outlined in the Significant Wildlife Habitat Technical Guide and its Appendices^{cxlviii, cxlix}. Table 1.5 contains and provides descriptions for exceptions criteria for ecoregional SWH which will be identified at an ecodistrict scale^{ccxvi}. Exceptions occur when criteria for a specific habitat are different within an ecodistrict compared to the remainder of an ecoregion or if a habitat only occurs within a restricted area of the ecoregion.

The schedules, including description of wildlife habitat, wildlife species, and the criteria provided for determining SWH, are based on science and expert knowledge. The ELC Ecosite codes are described using the Ecological Land Classification (ELC) for Southern Ontario^{lxxviii}. The information within these schedules will require periodic updating to keep pace with changes to wildlife species status in the Species at Risk in Ontario (SARO) list, or as new scientific information pertaining to wildlife habitats becomes available. Therefore, MNRF will occasionally need to review and update these schedules and provide addenda. A reference document for all SWH is found after the schedules and includes citations for all ecoregional schedules. Each citation used to assist with the criteria for SWH will be indicated by a roman numeric symbol. Where no reference exists, MNRF expert opinion was used for determination of criteria, this symbol “(E)” represents when MNRF expert opinion was utilized to develop defining criteria.

Criteria For Significant Wildlife Habitat in Ecoregion 5E

1. 1 Seasonal Concentration Areas

Seasonal concentration areas are areas where wildlife species occur annually in aggregations at certain times of the year. Such areas are sometimes highly concentrated with members of a given species, or several species, within relatively small areas. In spring and autumn, migratory wildlife species will concentrate where they can rest and feed. Other wildlife species require habitats where they can survive winter. Examples of seasonal concentration areas include deer wintering areas, breeding bird colonies and hibernation sites for reptiles, amphibians and some mammals^{cxlviii}. Table 1.1 outlines the wildlife habitats and defining criteria that are considered for seasonal concentration areas within Ecoregion 5E.

Table 1.1 Seasonal Concentration Areas for Wildlife Species

Wildlife Habitat	Wildlife Species	CANDIDATE SWH		CONFIRMED SWH
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria
Waterfowl Stopover and Staging Areas	American Black Duck Wood Duck Green-winged Teal	These field/meadow ELC	Fields with sheet water during Spring (mid March to May). • Fields flooding during spring	Studies carried out and verified presence of an annual concentration of any listed species, evaluation

Wildlife Habitat	Wildlife Species	CANDIDATE SWH		CONFIRMED SWH
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria
<p>(Terrestrial)</p> <p>Rationale: Habitat important to migrating waterfowl.</p>	<p>Blue-winged Teal Mallard Northern Pintail Northern Shoveler American Wigeon Gadwall</p>	<p>ecosites with appropriate soils and vegetation: G060-062 G077-079 G093-095 G109-111</p> <p>- Plus evidence of annual spring flooding from melt water or run-off.</p>	<p>melt and run-off provide important invertebrate foraging habitat for migrating waterfowl.</p> <ul style="list-style-type: none"> • Agricultural fields with waste grains are commonly used by waterfowl, these are not considered SWH unless they have spring sheet water available ^{cxlviii}. <p><u>Information Sources</u></p> <ul style="list-style-type: none"> • Anecdotal information from the landowner, adjacent landowners or local naturalist clubs may be good information in determining occurrence. • Sites documented through waterfowl planning processes (eg. EHJV implementation plan) • Field Naturalist Clubs • Ducks Unlimited Canada • Natural Heritage Information Centre (NHIC) Waterfowl Concentration Area 	<p>methods to follow “Bird and Bird Habitats: Guidelines for Wind Power Projects”^{ccxi}</p> <ul style="list-style-type: none"> • Any mixed species aggregations of 100[®] or more individuals required. • The flooded field ecosite habitat plus a 100-300m radius area, dependant on local site conditions and adjacent land use is the significant wildlife habitat ^{cxlviii}. • Annual use of habitat is documented from information sources or field studies (annual use can be based on studies or determined by past surveys with species numbers and dates). • SWHMIST^{cxlix} Index #7 provides development effects and mitigation measures.
<p>Waterfowl Stopover and Staging Areas (Aquatic)</p> <p>Rationale: Important for local and migrant waterfowl populations</p>	<p>Canada Goose Cackling Goose Snow Goose American Black Duck Northern Pintail Northern Shoveler American Wigeon Gadwall Green-winged Teal Blue-winged Teal</p>	<p>ELC Ecosites: G142-G152</p>	<ul style="list-style-type: none"> • Ponds, marshes, lakes, bays, coastal inlets, and watercourses used during migration. Sewage treatment ponds and storm water ponds do not qualify as a SWH, however a reservoir managed as a large wetland or pond/lake does qualify. • These habitats have an abundant food supply (mostly aquatic 	<p>Studies carried out and verified presence of:</p> <ul style="list-style-type: none"> • Aggregations of 100[®] or more of listed species for 7 days[®], results in > 700 waterfowl use days. • Areas with annual staging of ruddy ducks, canvasbacks, and redheads are SWH ^{cxlix} • The combined area of the

Wildlife Habitat	Wildlife Species	CANDIDATE SWH		CONFIRMED SWH
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria
during the spring or fall migration or both periods combined. Sites identified are usually only one of a few in the eco-district.	Hooded Merganser Common Merganser Lesser Scaup Greater Scaup Long-tailed Duck Surf Scoter White-winged Scoter Black Scoter Ring-necked duck Common Goldeneye Bufflehead Redhead Ruddy Duck Red-breasted Merganser Brant Canvasback Ruddy Duck		invertebrates and vegetation in shallow water); <u>Information Sources</u> <ul style="list-style-type: none"> Environment Canada. Field Naturalist clubs often are aware of staging/stopover areas. OMNRF Wetland Evaluations indicate presence of locally and regionally significant waterfowl staging. Sites documented through waterfowl planning processes (eg. EHJV implementation plan) Ducks Unlimited projects Element occurrence specification by Nature Serve: http://www.natureserve.org Natural Heritage Information Centre (NHIC) Waterfowl Concentration Area 	ELC ecosites and a 100m radius area is the SWH ^{exlviii} <ul style="list-style-type: none"> Wetland area and shorelines associated with sites identified within the SWHTG ^{exlviii} Appendix K ^{exlix} are significant wildlife habitat. Evaluation methods to follow “Bird and Bird Habitats: Guidelines for Wind Power Projects”^{ccxi} Annual Use of Habitat is Documented from Information Sources or Field Studies (Annual can be based on completed studies or determined from past surveys with species numbers and dates recorded). SWHMiST^{exlix} Index #7 provides development effects and mitigation measures.
Shorebird Migratory Stopover Area <u>Rationale:</u> High quality shorebird stopover habitat is extremely rare and typically has a long history of use.	Greater Yellowlegs Lesser Yellowlegs Marbled Godwit Hudsonian Godwit Black-bellied Plover American Golden-Plover Semipalmated Plover Solitary Sandpiper Spotted Sandpiper Semipalmated Sandpiper Pectoral Sandpiper White-rumped Sandpiper Baird’s Sandpiper	ELC Ecosites: G005-G006 G160-G162 G170-G172 G176-G178 G186-G188 G204-G214	<ul style="list-style-type: none"> Shorelines of lakes, rivers and wetlands, including beach areas, bars and seasonally flooded, muddy and un-vegetated shoreline habitats. Great Lakes coastal shorelines, including groynes and other forms of armour rock lakeshores, are extremely important for migratory shorebirds in May to mid-June and early July to October. 	Studies confirming: <ul style="list-style-type: none"> Presence of 3 or more of listed species and > 1000[®] shorebird use days during spring or fall migration period. (shorebird use days are the accumulated number of shorebirds counted per day over the course of the fall or spring migration period) Whimbrel stop briefly (<24hrs) during spring migration, any site with >100[®] Whimbrel used

Wildlife Habitat	Wildlife Species	CANDIDATE SWH		CONFIRMED SWH
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria
	Least Sandpiper Purple Sandpiper Stilt Sandpiper Short-billed Dowitcher Red-necked Phalarope Whimbrel Ruddy Turnstone Sanderling Dunlin		<ul style="list-style-type: none"> Sewage treatment ponds and storm water ponds do not qualify as a SWH. <u>Information Sources</u> <ul style="list-style-type: none"> Western hemisphere shorebird reserve network. Canadian Wildlife Service (CWS) Ontario Shorebird Survey. Bird Studies Canada Ontario Nature Local birders and field naturalist clubs Natural Heritage Information Center (NHIC) Shorebird Migratory Concentration Area 	<p>for 3 years or more is significant.</p> <ul style="list-style-type: none"> The area of significant shorebird habitat includes the mapped ELC shoreline ecosites plus a 100m radius area ^{cxlviii} Evaluation methods to follow “Bird and Bird Habitats: Guidelines for Wind Power Projects”^{ccxi} SWHMiST^{cxlix} Index #8 provides development effects and mitigation measures.
<p>Raptor Wintering Area</p> <p>Rationale: Sites used by multiple species, a high number of individuals and used annually are most significant</p>	<p>Rough-legged Hawk Long-eared Owl Boreal Owl Northern Saw-whet Owl</p> <p>Special Concern: Short-eared Owl</p>	<p>Combination of meadow/field and forest/woodland ecosites. Need to have a forest ELC Ecosite :</p> <p>G011-G019 G023-G028 G033-G043 G048-G059 G064-G076 G081-G092 G097- G108 G113-G125 or Central Ontario FEC Ecosites ES11 – ES35</p>	<ul style="list-style-type: none"> The habitat provides a combination of fields and woodlands that provide roosting, foraging and resting habitats for wintering raptors. Raptor wintering sites need to be > 20 ha ^{cxlviii, cxlix} with a combination of forest and upland. ^{xvi, xvii, xviii, xix, xx, xxi} Least disturbed sites, idle/fallow or lightly grazed field/meadow (>15ha) with adjacent woodlands ^{cxlix} Field area of the habitat is to be wind swept with limited snow depth or accumulation. <u>Information Sources:</u> <ul style="list-style-type: none"> OMNRF Ecologist or Biologist 	<p>Studies confirm the use of these habitats by:</p> <ul style="list-style-type: none"> One or more Short-eared Owls or; at least 10 individuals and two of the listed species [Ⓔ]. To be significant a site must be used regularly (3 in 5 years) ^{cxlix} for a minimum of 20 days by the above number of birds [Ⓔ]. Evaluation methods to follow “Bird and Bird Habitats: Guidelines for Wind Power Projects”^{ccxi} SWHMiST^{cxlix} Index #10 provides development effects and mitigation measures.

Wildlife Habitat	Wildlife Species	CANDIDATE SWH		CONFIRMED SWH
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria
		<p><u>And</u> A meadow/field ELC Ecosite: G020-022 G029-032 G044-047 G060-063 G077-080 G093-096 G109-112</p>	<ul style="list-style-type: none"> Field Naturalist clubs Natural Heritage Information Center (NHIC) Raptor Winter Concentration Area Data from Bird Studies Canada, most notably for Short-eared Owls. Results of Christmas Bird Counts 	
<p>Bat Hibernacula</p> <p><u>Rationale:</u> Bat hibernacula are rare habitats in all Ontario landscapes.</p>	<p>Big Brown Bat Tri-coloured Bat</p>	<p>Bat Hibernacula may be found in association with components of cliffs and rock talus in these ELC Ecosites; G158-G159 G164 G180-G181 Calcareous bedrock is fairly rare in ecoregion 5E. Or Central Ont. FEC: ES4 ES5 (Note: buildings are not considered to be SWH)</p>	<ul style="list-style-type: none"> Hibernacula may be found in caves, mine shafts, underground foundations and Karsts. Active mine sites are not SWH. The locations of bat hibernacula are relatively poorly known. <p><u>Information Sources</u></p> <ul style="list-style-type: none"> OMNRF for possible locations and contact for local experts Natural Heritage Information Center (NHIC) Bat Hibernaculum Ministry of Northern Development and Mines for location of mine shafts. Clubs that explore caves (eg. Sierra Club) University Biology Departments with bat experts Clubs that explore caves (eg. Sierra Club) University Biology Departments with bat experts. 	<ul style="list-style-type: none"> All sites with confirmed hibernating bats are SWH [ⓔ]. The habitat area includes a 200m radius around the entrance of the hibernaculum ^{cxlviii, ccvii, ⓔ} for most development types and 1000m for wind farms ^{ccv}. Studies are to be conducted during the peak swarming period (Aug. – Sept.). Surveys should be conducted following methods outlined in the “Bats and Bat Habitats: Guidelines for Wind Power Projects”^{ccv}. SWHMiST^{cxlix} Index #1 provides development effects and mitigation measures.

Wildlife Habitat	Wildlife Species	CANDIDATE SWH		CONFIRMED SWH
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria
<p>Bat Maternity Colonies</p> <p>Rationale: Known locations of forested bat maternity colonies is extremely rare in all Ontario landscapes.</p>	<p>Big Brown Bat Silver-haired Bat</p>	<p>Maternity colonies considered SWH are found in forested Ecosites.</p> <p>ELC Ecosites: G016-G019 G028 G040-G043 G055-G059 G070-G076 G088-G092 G103- G108 G118-G125 or: Central Ontario Forest Ecosites: ES14 ES17 ES18 ES23 ES24 ES25 ES26 ES27 ES28 ES29 ES30</p>	<ul style="list-style-type: none"> • Maternity colonies can be found in tree cavities, vegetation and often in buildings^{xxii, xxv, xxvi, xxvii, xxxi} (buildings are not considered to be SWH). • Maternity roosts are not found in caves and mines in Ontario^{xxii}. • Maternity colonies located in Mature (dominant trees > 80yrs old) deciduous or mixed forest stands^{ccix, ccx, ccv} with >10/ha large diameter (>25cm dbh) wildlife trees^{ccvii}. • Female Bats prefer wildlife trees (snags) in early stages of decay, class 1-3^{ccxiv} or class 1 or 2^{ccxii}. • Silver-haired Bats prefer older mixed or deciduous forest and form maternity colonies in tree cavities and small hollows. Older forest areas with at least 21 snags/ha are preferred^{ccx, lxiv}. <p><u>Information Sources</u></p> <ul style="list-style-type: none"> • OMNRF for possible locations and contact for local experts • University Biology Departments with bat experts. 	<ul style="list-style-type: none"> • confirmed use by; <ul style="list-style-type: none"> • >10 Big Brown Bats[®] • >5 Adult Female Silver-haired Bats[®] • The area of the habitat includes the entire woodland or a forest stand ELC Ecosite or an Ecoelement containing the maternity colonies[®]. • Evaluation methods for maternity colonies should be conducted following methods outlined in the “Bats and Bat Habitats: Guidelines for Wind Power Projects,^{ccv}. • SWHMIST^{cxlix} Index #12 provides development effects and mitigation measures.
<p>Turtle Wintering Areas</p>	<p>Midland Painted Turtle</p> <p>Special Concern: Northern Map Turtle</p>	<p>For Snapping and Midland Painted turtles; ELC Ecosites:</p>	<ul style="list-style-type: none"> • For most turtles, wintering areas are in the same general area as their core habitat. Water has to be deep enough not to freeze and 	<ul style="list-style-type: none"> • Presence of 5 over-wintering Midland Painted Turtles is significant[®]. • One or more Northern Map

Wildlife Habitat	Wildlife Species	CANDIDATE SWH		CONFIRMED SWH
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria
<p>Rationale: Generally sites are the only known sites in the area. Sites with the highest number of individuals are most significant.</p>	Snapping Turtle	<p>G128-G135 G140-G152</p> <p>For Northern Map Turtle - Open Water areas such as deeper rivers or streams and lakes with current can also be used as over-wintering habitat.</p>	<p>have soft mud substrates.</p> <ul style="list-style-type: none"> Over-wintering sites are permanent water bodies, large wetlands, and bogs or fens with adequate Dissolved Oxygen ^{cix, cx, cxi, cxii} Man-made ponds such as sewage lagoons or storm water ponds should not be considered SWH. <p><u>Information Sources</u></p> <ul style="list-style-type: none"> Local naturalists and experts, as well as university herpetologists may also know where to find some of these sites. OMNRF Ecologist or Biologist Field Naturalist clubs Natural Heritage Information Center (NHIC) 	<p>Turtle or Snapping Turtle over-wintering within a wetland is significant[®].</p> <ul style="list-style-type: none"> The mapped ELC ecosite area with the over wintering turtles is the SWH. If the hibernation site is within a stream or river, the deep-water pool where the turtles are over wintering is the SWH. Over wintering areas may be identified by searching for congregations (Basking Areas) of turtles on warm, sunny days during the fall (Sept. – Oct.) or spring (Mar. – April) ^{cvi}. Congregation of turtles is more common where wintering areas are limited and therefore significant ^{cix, cx, cxi, cxii}. SWHMiST^{cxlix} Index #28 provides development effects and mitigation measures for turtle wintering habitat.
<p>Reptile Hibernaculum</p> <p>Rationale: Generally sites are the only known sites in the area. Sites with the highest number of individuals are</p>	<p>Snakes: Eastern Gartersnake N. Watersnake N. Red-bellied Snake N. Brownsnake Smooth Green Snake N. Ring-necked Snake</p> <p>Special Concern: Milksnake Eastern Ribbonsnake</p>	<p>For all snakes, habitat may be found in any forested ecosite in central Ontario other than very wet ones. Talus, Rock Barren, Crevice and Cave, and Alvar sites may be directly</p>	<ul style="list-style-type: none"> For snakes, hibernation takes place in sites located below frost lines in burrows, rock crevices and other natural or naturalized locations. The existence of features that go below frost line; such as rock piles or slopes, old stone fences, and abandoned crumbling foundations assist in identifying candidate SWH. 	<p>Studies confirming:</p> <ul style="list-style-type: none"> Presence of snake hibernacula used by a minimum of five individuals of a snake sp. <u>or</u>; individuals of two or more snake spp. Congregations of a minimum of five individuals of a snake sp. <u>or</u>; individuals of two or more snake spp. near potential hibernacula

Wildlife Habitat	Wildlife Species	CANDIDATE SWH		CONFIRMED SWH
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria
most significant.	<p><u>Lizard:</u> Special Concern: Five-lined Skink</p>	<p>related to these habitats.</p> <p>The existence of rock piles or slopes, stone fences, and crumbling foundations assist in identifying candidate SWH.</p> <p>For Five-lined Skink; Central Ontario Forest Ecosites: ES14.2, ES17 – ES20, ES23 – ES30 Or; ELC Ecosites: G056-G059 G070-G076 G087-G092 G103-G108 G118-G125</p>	<ul style="list-style-type: none"> • Areas of broken and fissured rock are particularly valuable since they provide access to subterranean sites below the frost line^{xliiv, l, li, lii, cxii}. • Wetlands can also be important over-wintering habitat in conifer or shrub swamps and swales, poor fens, or depressions in bedrock terrain with sparse trees or shrubs with sphagnum moss or sedge hummock ground cover. • Five-lined skink prefer mixed forests with rock outcrop openings providing cover rock overlaying granite bedrock with fissures^{cciii}. <p><u>Information Sources</u></p> <ul style="list-style-type: none"> • In spring, local residents or landowners may have observed the emergence of snakes on their property (e.g. old dug wells). • Reports and other information available from Conservation Authorities. • Field Naturalists clubs • University herpetologists • Natural Heritage Information Center (NHIC) • OMNRF ecologist or biologist may be aware of locations of wintering skinks 	<p>(eg. foundation or rocky slope) on sunny warm days in Spring (Apr/May) and Fall (Sept/Oct)[®]</p> <ul style="list-style-type: none"> • <u>Note:</u> If there are Special Concern Species present, then site is SWH • <u>Note:</u> Sites for hibernation possess specific habitat parameters (e.g. temperature, humidity, etc.) and consequently are used annually, often by many of the same individuals of a local population (i.e. strong hibernation site fidelity). Other critical life processes (e.g. mating) often take place in close proximity to hibernacula. The feature in which the hibernacula is located plus a 30 m radius area is the SWH[®] • SWHMiST^{cxlix} Index #13 provides development effects and mitigation measures for snake hibernacula. • Presence of any active hibernaculum for skink is significant. • SWHMiST^{cxlix} Index #37 provides development effects and mitigation measures for five-lined skink wintering habitat.

Wildlife Habitat	Wildlife Species	CANDIDATE SWH		CONFIRMED SWH
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria
<p>Colonially - Nesting Bird Breeding Habitat (Bank and Cliff)</p> <p>Rationale: Historical use and number of nests in a colony make this habitat significant. An identified colony can be very important to local populations. All swallow population are declining in Ontario.</p>	<p>Cliff Swallow Northern Rough-winged Swallow (this species is not colonial but can be found in Cliff Swallow colonies)</p>	<p>Eroding banks, sandy hills, borrow pits, steep slopes, sand piles, cliff faces, bridge abutments, silos, barns.</p> <p>Habitat found in the following ELC Ecosites:</p> <p>G001-G004 G007-G008 G020-G021 G029-G031 G044-G046 G060-G062 G077-G079 G093-G095 G109-G111 G173-G175 G201-G203 G210-G212</p>	<ul style="list-style-type: none"> Any site or areas with exposed soil banks, sandy hills, borrow pits, steep slopes, and sand piles that are undisturbed or naturally eroding that is not a licensed/permitted aggregate area. Does not include man-made structures (bridges or buildings) or recently (2 years) disturbed soil areas, such as berms, embankments, soil or aggregate stockpiles. Does not include a licensed/permitted Mineral Aggregate Operation. <p><u>Information Sources</u></p> <ul style="list-style-type: none"> Ontario Breeding Bird Atlas. Bird Studies Canada; <i>NatureCounts</i> http://www.birdscanada.org/birdmon/ Field Naturalist Clubs. 	<p>Studies confirming:</p> <ul style="list-style-type: none"> Presence of 1 or more nesting sites with 8^{exlvix} or more cliff swallow pairs and/or rough-winged swallow pairs during the breeding season. A colony identified as SWH will include a 50m radius habitat area from the peripheral nests^{ccvii} Field surveys to observe and count swallow nests are to be completed during the breeding season. Evaluation methods to follow “Bird and Bird Habitats: Guidelines for Wind Power Projects”^{ccxi} SWHMiST^{exlix} Index #4 provides development effects and mitigation measures
<p>Colonially - Nesting Bird Breeding Habitat (Tree/Shrubs)</p> <p>Rationale: Large colonies are important to local bird population,</p>	<p>Great Blue Heron Black-crowned Night Heron</p>	<p>ELC Ecosites: G064-G076 G081-G092 G097-G108 G113-G125 G128-G136</p> <p>Central Ontario Forest Ecosites:</p>	<ul style="list-style-type: none"> Nests in live or dead standing trees in wetlands, lakes, islands, and peninsulas. Shrubs and occasionally emergent vegetation may also be used. Most nests in trees are 11 to 15 m from ground, near the top of the tree. <p><u>Information Sources</u></p>	<p>Studies confirming:</p> <ul style="list-style-type: none"> Presence of 10[®] or more active nests of Great Blue Heron. Presence of 1 or more active nests of Black-crowned Night Heron[®] is significant. The habitat extends from edge of the colony and a minimum 300m radius or extent of the

Wildlife Habitat	Wildlife Species	CANDIDATE SWH		CONFIRMED SWH
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria
typically sites are only known colony in area and are used annually.		ES11.2 ES12.2 ES13.2 ES14.2 ES15.2 ES16.2 ES17.2 ES18.2 ES19.2 ES20.2 ES21.2 ES23.2 ES24.2 ES25.2 ES26.2 ES27.2 ES28.2 ES29.2 ES30.2 ES31 ES32 ES33 ES34 ES35	<ul style="list-style-type: none"> Breeding Bird Atlas, colonial nest records. Ontario Heronry Inventory 1991 available from Bird Studies Canada or NHIC (OMNRF). Aerial photographs can help identify large heronries. MNRF District Offices. Field Naturalist clubs. 	<p>Forest Ecosite containing the colony or any island <15.0ha with a colony is the SWH ^{cc, ccvii}</p> <ul style="list-style-type: none"> Confirmation of active heronries must be achieved through site visits conducted during the nesting season (April to August) or by evidence such as the presence of fresh guano, dead young and/or eggshells SWHMiST^{cxlix} Index #5 provides development effects and mitigation measures.
<p>Colonially - Nesting Bird Breeding Habitat (Ground)</p> <p><u>Rationale:</u> Colonies are important to local bird population, typically sites are only known colony in area and are used annually.</p>	Herring Gull Great Black-backed Gull Little Gull Ring-billed Gull Common Tern Caspian Tern Brewer’s Blackbird	<p>Any rocky island or peninsula (natural or artificial) within a lake or large river (two-lined on a 1;50,000 NTS map).</p> <p>Close proximity to watercourses in open fields or pastures with scattered trees or shrubs (Brewer’s Blackbird)</p> <p>G001-G004 G007-G008 G020-G021 G029-G031 G044-G046 G060-G062</p>	<p>Nesting colonies of gulls and terns are on islands or peninsulas (natural or artificial) associated with open water, marshy areas, lake or large river (two-lined on a 1;50,000 NTS map).</p> <ul style="list-style-type: none"> Brewers Blackbird colonies are found loosely on the ground in or in low bushes in close proximity to streams and irrigation ditches within farmlands. <p><u>Information Sources</u></p> <ul style="list-style-type: none"> Ontario Breeding Bird Atlas , rare/colonial species records. Canadian Wildlife Service Reports and other information available from CAs. Natural Heritage Information Center (NHIC) Colonial Waterbird Nesting Area 	<p>Studies confirming:</p> <ul style="list-style-type: none"> Presence of > 25 active nests for Herring Gulls or Ring-billed Gulls, >5 active nests for Common Tern or >2 active nests for Caspian Tern[®]. Presence of 5 or more pairs for Brewer’s Blackbird. [®] Any active nesting colony of one or more Little Gull, and Great Black-backed Gull is significant. [®] The edge of the colony and a minimum 150m radius area of habitat, or the extent of the ELC ecosites containing the colony or any island <3.0ha with a colony is the SWH ^{cc, ccvii} Studies would be done during May/June when actively nesting. Evaluation methods to

Wildlife Habitat	Wildlife Species	CANDIDATE SWH		CONFIRMED SWH
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria
		G077-G079 G093-G095 G109-G111 G142-G145	<ul style="list-style-type: none"> MNRF District Offices. Field Naturalist clubs. 	follow “Bird and Bird Habitats: Guidelines for Wind Power Projects” ^{ccxi} <ul style="list-style-type: none"> SWHMiST^{cxlix} Index #6 provides development effects and mitigation measures.
<p>Deer Yarding Areas</p> <p>Rationale: Winter habitat for deer is considered to be the main limiting factor for northern deer populations. In winter, deer congregate in “yards” to survive severe winter conditions normally encountered. Sites typically have a long history of annual use by deer. Sites identified are typically the only known sites in the area.</p>	White-tailed Deer	May be found in all Tall Treed forest and swamp ELC Ecosites; G12-G15 G23-G27 G33-G38 G48-G54 G64-G69 G81-G87 G97-G103 G113-G118 G128-G129 Central Ontario Forest Ecosites: ES11 ES14 ES16.....ES18 ES20 ES21 ES22 ES27 ES28 ES30 ES31 ES32 ES33 ES34 Note: OMNRF to determine this habitat.	<ul style="list-style-type: none"> Deer wintering areas or winter concentration areas (yards) are areas deer move to in response to the onset of winter snow and cold. This is a behavioural response and deer will establish traditional use areas. The yard is composed of two areas referred to as Stratum I and Stratum II. Stratum II covers the entire winter yard area and is usually a mixed or deciduous forest with plenty of browse available for food. Agricultural lands can also be included in this area. Deer move to these areas in early winter and generally, when snow depths reach 20 cm, most of the deer will have moved here. If the snow is light and fluffy, deer may continue to use this area until 30 cm snow depth. In mild winters, deer may remain in the Stratum II area the entire winter. The Core of a deer yard (Stratum I) is located within Stratum II and is critical for deer survival in 	No Studies Required: <ul style="list-style-type: none"> Generally, there will be a history of traditional use of the yard by deer, although deer do move to other areas over the course of time if conditions in the yard change or due to societal impacts (i.e. artificial deer feeding). There may be circumstances where deer have recently moved to new areas. Deer Yards are mapped by OMNRF District offices. Locations of Core (Stratum 1) and Stratum 2 deer yards identified by OMNRF will be available at local MNRF offices. Field investigations that record deer tracks in winter are done to confirm use (best done from an aircraft). Preferably, this is done over a series of winters to establish the boundary of the Stratum I and Stratum II yard in an "average" winter. MNRF will complete these field investigations. ^{cxcv}

Wildlife Habitat	Wildlife Species	CANDIDATE SWH		CONFIRMED SWH
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria
			<p>areas where winters become severe. It is primarily composed of coniferous trees (pine, hemlock, cedar, spruce) with a canopy cover of more than 60%^{cxciiv}.</p> <ul style="list-style-type: none"> • OMNRF determines deer yards following methods outlined in "Selected Wildlife and Habitat Features: Inventory Manual" ^{cxcv} • Woodlots with high densities of deer due to artificial feeding are not significant. [Ⓔ] 	<ul style="list-style-type: none"> • If a SWH is determined for Deer Wintering Area or if a proposed development is within a Stratum II yarding area then Movement Corridors are to be considered as outlined in Table 1.4.1 of this Schedule. • SWHMiST^{cxlix} Index #2 provides development effects and mitigation measures.

1.2 Rare Vegetation Communities or Specialized Habitat for Wildlife

1.2.1 Rare Vegetation Communities

Rare vegetation communities often contain rare species, particularly plants and small invertebrates, which depend on such habitats for their survival and cannot readily move to or find alternative habitats. When assessing rare vegetation communities, one of the most important criteria is the current representation of the community in the planning area based on its area relative to the total landscape or the number of examples within the planning area. There are a number of criterion used to define rare vegetation communities, however the NHIC uses a system that considers the provincial rank of a species or community type as a tool to prioritize protection efforts. These ranks are not legal designations but have been assigned using the best available scientific information, and follow a systematic ranking procedure developed by The Nature Conservancy (U.S.). The ranks are based on three factors: estimated number of occurrences, estimated community aerial extent, and estimated range of the community within the province:

S1 Extremely rare - usually 5 or fewer occurrences in the province, or very few remaining hectares.

S2 Very rare - usually between 5 and 20 occurrences in the province, or few remaining hectares.

S3 Rare to uncommon - usually between 20 and 100 occurrences in the province; may have fewer occurrences, but with some extensive examples remaining.

The setting of criteria for significant wildlife habitat (SWH) has incorporated this ranking system into its process of determining rare vegetation communities and as such, a rare vegetation community is defined to include areas that contain a provincially rare vegetation community and/or areas that contain a vegetation community that is rare within the planning area.

SWH Table 1.2.1 contains a listing of rare vegetation communities that are considered SWH for the planning area contained within Ecoregion 5E.

Table 1.2.1 Rare Vegetation Communities.

Rare Vegetation Community	CANDIDATE SWH			CONFIRMED SWH
	ELC Ecosite Code	Habitat Description	Detailed Information and Sources	Defining Criteria
<p>Beach/ Beach Ridge/ Bar/ Sand Dunes</p> <p>Rationale: Uncommon to rare in Ecoregion, some of the best examples are in the North Channel (e.g. Mississagi River delta).</p>	<p><u>Central Ontario FEC:</u> ES1 ES2</p> <p><u>ELC Ecosites:</u> G005-G006 G166-G168 G182-G184 G213-G214</p>	<p>Vegetation can vary from patchy and barren to tree cover but less than 60%. Characterised by unstable sand.</p>	<p>Any identified beach, beach ridge, or sand dune.</p> <p><u>Information Sources</u></p> <ul style="list-style-type: none"> • OMNRF Districts. • Natural Heritage Information Center (NHIC) will have information on their website. • Field Naturalist clubs 	<p>Field studies confirm the presence of at least one of the indicator plant species identified is to be considered significant[®].</p> <ul style="list-style-type: none"> • ELC Ecosite Area for Beach Ridge or Bar or Sand Dune is the SWH. • SWHMiST^{exlix} Index #37 provides direction for rare species and habitats.

Rare Vegetation Community	CANDIDATE SWH			CONFIRMED SWH
	ELC Ecosite Code	Habitat Description	Detailed Information and Sources	Defining Criteria
	<p>Indicator Spp. Marram Grass (<u>Ammophila breviligulata</u>) Beach Pea (<u>Lathyrus japonicus</u>)</p>		<ul style="list-style-type: none"> County soil maps (sand map units along coastal bays) 	
<p>Shallow Atlantic Coastal Marsh</p> <p>Rationale: Provincially rare communities almost entirely restricted to Eco-region 5E.</p>	<p>ELC Ecosites: G143-G145 G148-G152</p> <p>Indicator Spp.: Virginia Meadow-beauty (<u>Rhexia virginica</u>)</p> <p>Other Associated Spp: <u>Rhynchospora capitellata</u>, <u>Xyris difformis</u>, <u>Panicum spretum</u>, <u>Triadenum virginicum</u>, <u>Polygonum careyi</u> and <u>Juncus militaris</u>.</p>	<p>Shallow marsh occurs on shallow mineral (sand) or mineral organic (sandy peat) shoreline subject to low wave energy, on inland lakes and beaver ponds particularly those that experience fluctuating water levels from year to year (i.e. some years with exposed shorelines in summer /fall).</p>	<p><u>Information Sources</u></p> <ul style="list-style-type: none"> OMNRF Districts. Natural Heritage Information Center (NHIC) will have information on their website. Field Naturalist clubs Nature Serve Canada 	<ul style="list-style-type: none"> A Shallow Marsh is considered significant if the Indicator Sp. and >4 Other Associated Spp. are present.[Ⓔ] ELC Ecosite Area for Shallow Atlantic Coastal Marsh is the SWH. SWHMiST^{cxlix} Index #37 provides direction for rare species and habitats.
<p>Cliffs and Talus Slopes</p> <p>Rationale: Uncommon to rare in</p>	<p>ELC Ecosites: G158-G159 G166-G168 G173G175</p>	<p>Vegetation can vary from patchy and barren to tree cover but less than 60%.</p>	<p>Any cliff or talus slope.</p> <p><u>Information Sources</u></p> <ul style="list-style-type: none"> OMNRF Districts. Natural Heritage 	<p>Any cliff or talus slope with lichen <u>Umbilicaria</u> spp and ≥3 of the characteristic species identified is considered significant. [Ⓔ]</p>

Rare Vegetation Community	CANDIDATE SWH			CONFIRMED SWH
	ELC Ecosite Code	Habitat Description	Detailed Information and Sources	Defining Criteria
<p>Ecoregion 5E, Calcium rich, marble cliffs are a much rarer feature.</p>	<p>G182-G184 G201-G203</p> <p>Central Ontario Forest Ecosites: ES6 ES7</p> <p>Characteristic flora for cliffs and talus slopes include: lichen, such as Rock Tripe <u>Umbilicaria</u> spp., and ferns <u>Polypodium virginianum</u>, <u>Cystopteris fragilis</u> and <u>Woodsia ilvensis</u>, <u>Cryptogramma stelleri</u>, <u>Woodsia alpina</u>, and <u>Saxifraga paniculata</u>.</p>	<p>Cliffs and talus slopes in 5E are primarily Precambrian rock and are typically sparsely vegetated.</p>	<p>Information Center (NHIC) will have information on their website.</p> <ul style="list-style-type: none"> Field Naturalist clubs 	<p>Fragrant Cliff Fern (<u>Dryopteris fragrans</u>), is rare in Eco-region 5E and <u>Woodsia scopulina</u> ssp. <u>laurentiana</u>, has a significant portion of its global range in 5E, where it occurs on a variety of substrates, including granite. Any cliff or talus slope with these rare plant species is significant. [Ⓔ]</p> <p>ELC Ecosite Area for the cliff or talus slope is the SWH. [Ⓔ]</p> <ul style="list-style-type: none"> SWHMiST^{cxlix} Index #21 provides development effects and mitigation measures.
<p>Rock Barren</p> <p>Precambrian Rock Barren</p> <p>Rationale: Uncommon to rare in Ecoregion,</p>	<p>ELC Ecosites: G163-G165 G179-G181</p> <p>Central Ontario Forest Ecosites: ES8</p> <p>Characteristic</p>	<p>Vegetation can vary from patchy and barren to tree cover but less than 60%.</p> <p>Rock barrens are characterized by extensive areas of exposed granitic rock</p>	<p>Any rock barren area greater than 1 ha.</p> <p>Information Sources</p> <ul style="list-style-type: none"> OMNRF Districts. Natural Heritage Information Center (NHIC) will have information on their website. 	<p>Field studies identifying the presence of >4 characteristic plant spp. and a relatively undisturbed site should be considered significant [Ⓔ].</p> <ul style="list-style-type: none"> ELC Ecosite Area for the rock barren is the SWH. [Ⓔ] SWHMiST^{cxlix} Index #21 provides development effects and mitigation measures.

Rare Vegetation Community	CANDIDATE SWH			CONFIRMED SWH
	ELC Ecosite Code	Habitat Description	Detailed Information and Sources	Defining Criteria
	flora for Rock Barrens include: lichens <u>Cladina</u> spp. and mosses <u>Polytrichum</u> spp.), sparse grasslands of <u>Danthonia spicata</u> and <u>Deschampsia flexuosa</u> , low shrubs (<u>Juniperus communis</u> , <u>Vaccinium angustifolium</u> , <u>Comptonia peregrina</u> , and stunted open grown trees <u>Quercus alba</u> , <u>Quercus rubra</u> and <u>Pinus strobus</u> . Also, <u>Pteridium aquilinum</u> , <u>Aralia hispida</u> , <u>Spiranthes casei</u> , <u>Saxifraga virginensis</u> , <u>Gaylussacia baccata</u> , <u>Corydalis sempervirens</u> , <u>Prunus pennsylvanica</u> , and <u>Comandra umbellata</u> .	bedrock sparsely vegetated.	<ul style="list-style-type: none"> • Field Naturalist clubs • County soil maps will show these as bedrock with sparse soil map units. 	
Sand Barren	ELC Ecosites:	Sand Barrens	Any sand barren area, no	Sand Barrens containing any

Rare Vegetation Community	CANDIDATE SWH			CONFIRMED SWH
	ELC Ecosite Code	Habitat Description	Detailed Information and Sources	Defining Criteria
<p>Rationale: Uncommon to rare in Ecoregion</p>	<p>G007 G215</p> <p>Central Ontario Forest Ecosite: ES10</p> <p>Characteristic plant species of sand barrens in 5E include: <i>Cladina spp.</i>, <i>Carex houghtoniana</i>, <i>Carex merritt-feraldii</i>, <i>Comptonia peregrina</i>, <i>Rubus flagellaris</i>, <i>Selaginella rupestris</i>, and <i>Viola labradorica</i>, <i>Polygonella articulata</i>, and <i>Stipa spartea</i>.</p>	<p>typically are exposed sand, generally sparsely vegetated and caused by lack of moisture, periodic fires and erosion. They have little or no soil and the underlying rock protrudes through the surface. Usually located within other types of natural habitat such as forest or savannah. Vegetation can vary from patchy and barren to tree covered but less than 60%.</p>	<p>minimum size.</p> <p><u>Information Sources</u></p> <ul style="list-style-type: none"> • OMNRF Planner, Forester, Ecologist or Biologist may be aware of locations. • Field Naturalist clubs 	<p>characteristic plant species should be considered significant[®]</p> <p>ELC Ecosite Area for the sand barren is the SWH[®]</p> <p>Site must not be dominated by exotic or introduced species (<50% vegetative cover exotics)[®].</p> <ul style="list-style-type: none"> • SWHMiST^{cxlix} Index #20 provides development effects and mitigation measures.
<p>Alvar</p> <p>Rationale: Alvars are extremely rare habitats in Ecoregion 5E. Most alvars in Ontario are in Ecoregions 6E and 7E. Alvars in 5E are small and highly localized just north of the Palaeozoic-</p>	<p>Southern Ontario ELC Ecosites:</p> <p>ALO1 ALS1 ALT1 FOC1 FOC2 CUM2 CUS2 CUT2-1</p>	<p>An alvar is typically a level, mostly unfractured calcareous bedrock feature with a mosaic of rock pavements and bedrock overlain by a thin veneer of soil. The hydrology of alvars may be</p>	<p>An Alvar site > 0.5 ha in size^{lxxv}.</p> <p><u>Information Sources</u></p> <ul style="list-style-type: none"> • Alvars of Ontario (2000), Federation of Ontario Naturalists^{lxxvi}. • Ontario Nature – Conserving Great Lakes Alvars^{ccviii}. 	<p>Field studies identify one or more of the 5E Plant Indicator species^{lxxv}</p> <p>Site must not be dominated by exotic or introduced species. The alvar must be in excellent condition and fit in with surrounding landscape with few conflicting land uses^{lxxv}.</p> <ul style="list-style-type: none"> • SWHMiST^{cxlix} Index #17 provides development effects and mitigation

Rare Vegetation Community	CANDIDATE SWH			CONFIRMED SWH
	ELC Ecosite Code	Habitat Description	Detailed Information and Sources	Defining Criteria
Precambrian contact.	<p>CUW2</p> <p>Central Ontario Forest Ecosites on very shallow soils: ES13.1 ES14.1 ES16.1 ES21.1 ES9</p> <p>5E Alvar Plant Indicator species: <u>Penstemon hirsutus</u>, <u>Panicum philadelphicum</u>, <u>Scutellaria parvula</u>, <u>Rhus aromatica</u>, <u>Monarda fistulosa</u>, <u>Senecio pauperculus</u></p>	<p>complex, with alternating periods of inundation and drought. Vegetation cover varies from sparse lichen-moss associations to grasslands and shrublands and comprising a number of characteristic or indicator plant.</p> <p>Undisturbed alvars can be phyto- and zoogeographically diverse, supporting many uncommon or are relict plant and animals species.</p> <p>Vegetation cover varies from patchy to barren with a less than 60% tree cover lxxviii</p>	<ul style="list-style-type: none"> • Natural Heritage Information Centre (NHIC) has information available on their website. • OMNRF Districts. • Field Naturalist clubs. 	<p>measures.</p>
<p>Old Growth Forest</p> <p>Rationale: Due to historic logging practices, extensive old growth forest is rare in the Ecoregion. Interior habitat provided by old growth forests is required by many wildlife species.</p>	<p>Long-lived forest spp. within these Central Ontario Forest Ecosites^{cxlviii} ; ES11 ES12 ES14 ES20 ES21 ES22 ES23 ES24 ES25 ES26</p>	<p>Old Growth forests are characterized by exhibiting the greatest number of old-growth characteristics, such as mature forest with large trees that has been undisturbed. Heavy mortality or</p>	<p>Stands 30 ha or greater in size or with at least 10 ha interior habitat assuming 100 m buffer at edge of forest [®].</p> <p><u>Information Sources</u></p> <ul style="list-style-type: none"> • OMNRF Forest Resource Inventory mapping • OMNRF Districts. • Field Naturalist clubs 	<p>Field Studies will determine:</p> <ul style="list-style-type: none"> • If dominant trees species of the ecosite are >140 years old, then stand is Significant Wildlife Habitat ^{cxlviii} • The forested area containing the old growth characteristics will have experienced no recognizable forestry activities ^{cxlviii} (cut stumps will not be present)

Rare Vegetation Community	CANDIDATE SWH			CONFIRMED SWH
	ELC Ecosite Code	Habitat Description	Detailed Information and Sources	Defining Criteria
	ES27 ES28 ES29 ES30 or; ELC Ecosites: G011-G15 G017-G018 G023 G027 G033 G036 G039-G042 G048 G051 G054-G058 G064 G066 G069 G071-G075 G081 G084 G087 G089-G091 G103 G105-G107 G113 G115 G118 G120-G124	turnover of over-storey trees resulting in a mosaic of gaps that encourage development of a multi-layered canopy and an abundance of snags and downed woody debris.	<ul style="list-style-type: none"> Sustainable Forestry Licence (SFL) companies will possibly know locations through field operations. 	<ul style="list-style-type: none"> The stand will have experienced no recognizable forestry activities ^{cxlviii} The area of forest ecosites combined or an eco-element within the ecosites that contains the old growth characteristics is the SWH. SWHMiST^{cxlix} Index #23 provides development effects and mitigation measures.
<p>Bog</p> <p>Rationale: Bogs are a fairly rare vegetation community in Eco-region 5E.</p>	ELC Ecosites: G126 G137-G138	Bogs are nutrient-poor, acid peatlands dominated by peat mosses (<i>Sphagnum sp.</i>), ericaceous shrubs and sedges (Cyperaceae). The water table is at or near the surface in spring and slightly lower the remainder	Any size Bog. <u>Information Sources</u> <ul style="list-style-type: none"> Ontario wetland Evaluation System available at OMNRF District Offices OMNRF Districts. Natural Heritage Information Center (NHIC) will have information on their 	The Bog ELC Ecosite identified is SWH. <ul style="list-style-type: none"> ELC Ecosite area is the SWH SWHMiST^{cxlix} Index #22 provides development effects and mitigation measures.

Rare Vegetation Community	CANDIDATE SWH			CONFIRMED SWH
	ELC Ecosite Code	Habitat Description	Detailed Information and Sources	Defining Criteria
		of the year and is vitually isolated from mineral soil waters ccvii	website. • Field Naturalist clubs	
<p>Tallgrass Prairie</p> <p>Rationale: In Ecoregion 5E, there are few if any tallgrass prairie remnants. Tallgrass plant species occur, often together, primarily along shorelines.</p>	<p>Southern ELC Ecosites: TPO1 TPO2 Central Ontario Ecosite: ES10</p> <p>Indicator Spp. <u>Andropogon gerardii</u> and <u>Spartina pectinata</u></p> <p>Characteristic Spp. <u>Bromus kalmii</u>, <u>Ceanothus herbaceus</u>, <u>Lechea intermedia</u>, <u>Monarda fistulosa</u>, <u>Penstemon hirsutus</u>, <u>Polygala polygama</u>, <u>Rudbeckia hirta</u>, <u>Sorghastrum nutans</u>, <u>Viola fimbriatula</u>,</p>	<p>Tallgrass Prairie is an open vegetation with less than < 25% tree cover, and dominated by prairie species, including grasses. lxxix, lxxx, lxxxi, lxxxii, lxxxiii</p>	<p>No minimum size to site[®]. Site must be restored or a natural site. Remnant sites such as railway right of ways are not considered to be SWH.</p> <p><u>Information Sources</u></p> <ul style="list-style-type: none"> • Natural Heritage Information Center (NHIC) has location information available on their website • OMNRF Districts • Feld Naturalist clubs. 	<p>Field studies confirm one or more of the Tallgrass Prairie Indicator Species listed and 2 or more of the Characteristic Spp. identified is a SWH.[®]</p> <ul style="list-style-type: none"> • Area of the ELC Ecosite is the SWH. • Site must not be dominated by exotic or introduced species. • SWHMiST^{cxlix} Index #19 provides development effects and mitigation measures.
Savannah	Southern ELC Ecosites:	A Savannah is related to tallgrass prairie,	No minimum size to site [®] Site must be restored or a	Field studies confirm one or more of the Savannah indicator species listed in

Rare Vegetation Community	CANDIDATE SWH			CONFIRMED SWH
	ELC Ecosite Code	Habitat Description	Detailed Information and Sources	Defining Criteria
<p>Rationale: Savannahs are extremely rare habitats in Ontario.</p>	<p>TPS1 TPS2 TPW1 TPW2 CUS2</p>	<p>but includes trees, which vary from 25 – 60% canopy cover. The open areas between the trees are dominated by prairie species, while forest species are found beneath the tree canopy. ^{lxxix, lxxx, lxxxi, lxxxii, lxxxiii}</p>	<p>natural site.</p> <p><u>Information Sources</u></p> <ul style="list-style-type: none"> Natural Heritage Information Center (NHIC) has location information available on their website OMNRF Districts Feld Naturalist clubs. 	<p>^{cxlix} Appendix N should be present [®]. Note: Savannah plant spp. list from Ecoregion 6E should be used</p> <ul style="list-style-type: none"> Area of the ELC Ecosite is the SWH. Site must not be dominated by exotic or introduced species. SWHMiST^{cxlix} Index #18 provides development effects and mitigation measures.
<p>Rare Forest Type: Red Spruce</p> <p>Rationale: Stands containing red spruce trees are rare in Ecoregion 5E.</p>	<p>ELC Ecosites: G036 G051 G066 G084 G086 G100 G102 G116 G117</p> <p>Central Ontario Forest Ecosites: ES 30.1 ES 30.2</p>	<p>Red Spruce is a valued wildlife cover tree. Historically red spruce was much more abundant then it is now within the Ecoregion 5e forests. ^{ccxiii}</p> <p>Red spruce is a shade tolerant conifer that evolved within tolerant hardwood forests ^{ccxiii}.</p> <p>Red spruce grows best in a cool, moist climate. It will grow in shallow, till soils (ave. of 46 cm) and may grow on sites unfavourable for other species such as organic soils over</p>	<p>No minimum size to stand.</p> <p><u>Information Sources</u></p> <ul style="list-style-type: none"> OMNRF Districts. Natural Heritage Information Center (NHIC) will have information on their website. Field Naturalist clubs 	<p>Any forest stand with $\geq 10\%$ red spruce is to be considered significant [®].</p> <ul style="list-style-type: none"> The ELC Ecosites containing the red spruce woodland/forest stand is the SWH. SWHMiST^{cxlix} Index #37 provides direction for rare speices and habitats.

Rare Vegetation Community	CANDIDATE SWH			CONFIRMED SWH
	ELC Ecosite Code	Habitat Description	Detailed Information and Sources	Defining Criteria
		rock, steeper slopes, and wet bottomlands, although poorly drained sites will inhibit growth.		
<p>Rare Forest Type:</p> <p>White Oak</p> <p><u>Rationale:</u> Stands containing white oak trees are rare in Ecoregion 5E.</p>	<p>White Oak ELC Ecosites: G017 G041 G057 G072 G090 G106 G121</p> <p>Central Ont. FEC: ES 14.1 ES14.2</p>	<p>White oak is a valued wildlife mast producing tree. The mast produced by the white oak tree is often preferred over the more common red oak acorn. Forest stands containing white oak trees are uncommon in the Great Lakes St. Lawrence Forest.</p>	<p>No minimum size to stand.</p> <p><u>Information Sources</u></p> <ul style="list-style-type: none"> • OMNRF Districts. • Natural Heritage Information Center (NHIC) will have information on their website. • Field Naturalist clubs 	<p>Any forest stand with $\geq 10\%$ white oak is to be considered significant [®].</p> <ul style="list-style-type: none"> • The ELC Ecosites containing the white oak woodland/forest stand is the SWH. • SWHMiST^{cxlix} Index #37 provides direction for rare speices and habitats.

1.2.2 Specialized Habitat for Wildlife

Some wildlife species require large areas of suitable habitat for their long-term survival. Many wildlife species require substantial areas of suitable habitat for successful breeding. Their populations decline when habitat becomes fragmented and reduced in size^{cxlviii}. Specialized habitat for wildlife is a community or diversity-based category, therefore, the more wildlife species a habitat contains, the more significant the habitat becomes to the planning area. The largest and least fragmented habitats within a planning area will support the most significant populations of wildlife. The specialized habitats for wildlife that are considered as SWH are outlined in Table 1.2.2.

Table 1.2.2 Specialized Habitats of Wildlife considered SWH.

Specialized Wildlife Habitat	Wildlife Species	CANDIDATE SWH		CONFIRMED SWH
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria
<p>Waterfowl Nesting Area</p> <p>Rationale: Important to local waterfowl populations, sites with greatest number of species and highest number of individuals are significant.</p>	<p>American Black Duck Northern Pintail Northern Shoveler Gadwall Blue-winged Teal Green-winged Teal Wood Duck Hooded Merganser Common Merganser Red-breasted Merganser Mallard Canada Goose American Widgeon Bufflehead Common Goldeneye</p>	<p>All upland habitats located adjacent to these wetland ELC Ecosites are Candidate SWH: G129-G135 G142-G152</p> <p>Note: includes adjacency to provincially Significant Wetlands</p>	<p>A waterfowl nesting area extends 120 m^{cxlix} from a wetland (> 0.5 ha) or a cluster of 3 or more small (<0.5 ha) wetlands within 120 m of each individual wetland where waterfowl nesting is known to occur^{cxlix}.</p> <ul style="list-style-type: none"> • Upland areas should be at least 120 m wide so that predators such as racoons, skunks, and foxes have difficulty finding nests. • Wood Ducks, Bufflehead, Common Goldeneye and Hooded Mergansers utilize large diameter trees (>40cm dbh) in woodlands for cavity nest sites. <p><u>Information Sources</u></p> <ul style="list-style-type: none"> • Ducks Unlimited staff may know the locations of particularly productive nesting sites. • OMNRF Wetland Evaluations for indication of significant waterfowl nesting habitat. 	<p>Studies confirmed:</p> <ul style="list-style-type: none"> • Presence of 3 or more nesting pairs for listed species excluding Mallards[®], or; • Presence of 10 or more nesting pairs for listed species including Mallards[®]. • Any active nesting site of an American Black Duck is considered significant. • Nesting studies should be completed during the spring breeding season (April - June). Evaluation methods to follow “Bird and Bird Habitats: Guidelines for Wind Power Projects”^{ccxi} • A field study confirming waterfowl nesting habitat will determine the boundary of the waterfowl nesting habitat for

Specialized Wildlife Habitat	Wildlife Species	CANDIDATE SWH		CONFIRMED SWH
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria
			<ul style="list-style-type: none"> EIS reports and other studies. 	<p>the SWH, this may be greater or less than 120 m^{cxlviii} from the wetland and will provide enough habitat for waterfowl to successfully nest.</p> <ul style="list-style-type: none"> SWHMiST^{cxlix} Index #25 provides development effects and mitigation measures.
<p>Bald Eagle and Osprey Nesting, Foraging and Perching Habitat</p> <p><u>Rationale:</u> Nest sites are fairly uncommon in Eco-region 5E and are used annually by these species. Many suitable nesting locations may be lost due to increasing shoreline development pressures and scarcity of habitat.</p>	<p>Osprey</p> <p>Special Concern Bald Eagle</p>	<p>Forest communities directly adjacent to riparian areas – rivers, lakes, ponds and wetlands</p>	<p>Nests are associated with lakes, ponds, rivers or wetlands along forested shorelines, islands, or on structures over water.</p> <ul style="list-style-type: none"> Osprey nests are usually at the top a tree whereas Bald Eagle nests are typically in super canopy trees in a notch within the tree’s canopy. Nests located on man-made objects are not to be included as SWH (e.g. telephone poles and constructed nesting platforms). <p><u>Information Sources</u></p> <ul style="list-style-type: none"> Natural Heritage Information Center (NHIC) compiles all known nesting sites for Bald Eagles in Ontario. MNRF values information (LIO/NRVIS) will list known nesting locations Nature Counts, Ontario Nest Records Scheme data. OMNRF Districts. 	<p>Studies confirm the use of these nests by:</p> <ul style="list-style-type: none"> One or more active Osprey or Bald Eagle nests in an area^{cxlviii}. Some species have more than one nest in a given area and priority is given to the primary nest with alternate nests included within the area of the SWH. For an Osprey, the active nest and a 300 m radius around the nest or the contiguous woodland stand is the SWH^{ccvii}, maintaining undisturbed shorelines with large trees within this area is important^{cxlviii}. For a Bald Eagle the active nest and a 400-800 m radius around the nest is the SWH.^{cvi, ccvii} Area of the habitat from 400-800m is dependant on site lines from the nest to the development and inclusion of

Specialized Wildlife Habitat	Wildlife Species	CANDIDATE SWH		CONFIRMED SWH
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria
			<ul style="list-style-type: none"> Sustainable Forestry Licence (SFL) companies will identify additional nesting locations through field operations. Check the Breeding Bird Atlas or Rare Breeding Birds in Ontario for species documented EIS reports and other studies. Field Naturalist clubs 	<p>perching and foraging habitat ^{cvi}</p> <ul style="list-style-type: none"> To be significant a site must be used annually. When found inactive, the site must be known to be inactive for ≥ 3 years or suspected of not being used for >5 years before being considered not significant. ^{ccvii} Observational studies to determine nest site use, perching sites and foraging areas need to be done from mid March to mid August. Evaluation methods to follow “Bird and Bird Habitats: Guidelines for Wind Power Projects”^{ccxi} SWHMiST^{cxlix} Index #26 provides development effects and mitigation measures
<p>Woodland Raptor Nesting Habitat</p> <p>Rationale: Nests sites for these species are rarely identified; these habitats are often used annually by these species.</p>	<p>Red-tailed Hawk Great Horned Owl: Broad-winged Hawk Sharp-shinned Hawk Merlin Barred Owl Red-shouldered Hawk Coopers Hawk Northern Goshawk</p>	<p>May be found in all forested ELC Ecosites in Community Class: TR</p> <p>May also be found in the forested swamp ELC Ecosites: G128-G133</p>	<p>All natural or conifer plantation woodland/forest stands ^{lxxxviii, lxxxix, xc, xci, xciii, xciv, xcv,xcvi, cxxxiii}</p> <ul style="list-style-type: none"> Stick nests found in a variety of intermediate-aged to mature conifer, deciduous or mixed forests within tops or crotches of trees. Species such as Merlin or Coopers hawk nest along forest edges sometimes on peninsulas or small off-shore islands. Includes nest sites within tree cavities for Barred Owl and sometime Great Horned Owls and 	<p>Studies confirm:</p> <ul style="list-style-type: none"> Presence of 1 or more active nests from species list is considered significant^{cxlviii}. Red-shouldered Hawk and Northern Goshawk – A 400m radius around the nest or 28 ha of suitable habitat is the SWH ^{ccvii}. Barred Owl – A 200m radius around the nest is the SWH ^{ccvii}. Broad-winged Hawk, Coopers Hawk, Great Horned Owl,

Specialized Wildlife Habitat	Wildlife Species	CANDIDATE SWH		CONFIRMED SWH
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria
			<p>Merlin.</p> <ul style="list-style-type: none"> In disturbed sites, nests may be used again, or a new nest will be in close proximity to old nest. <p><u>Information Sources</u></p> <ul style="list-style-type: none"> OMNRF Districts. Sustainable Forestry Licence (SFL) companies will identify additional nesting locations through field operations. Check the Breeding Bird Atlas or Rare Breeding Birds in Ontario for species documented. Check data from Bird Studies Canada. EIS reports and other studies. 	<p>Red-tailed Hawk – A 100m radius around the nest is the SWH^{ccvii}.</p> <ul style="list-style-type: none"> Merlin and Sharp-Shinned Hawk – A 50m radius around the nest is the SWH^{ccvii}. Conduct field investigations from mid-March to end of May. The use of call broadcasts can help in locating territorial (courting/nesting) raptors and facilitate the discovery of nests by narrowing down the search area. SWHMiST^{cxlix} Index #27 provides development effects and mitigation measures.
<p>Turtle and Lizard Nesting Areas</p> <p><u>Rationale:</u> These habitats are rare and when identified will often be the only breeding site for local populations of turtles.</p>	<p>Midland Painted Turtle</p> <p><u>Special Concern Species</u> Northern Map Turtle Snapping Turtle Five-lined Skink</p>	<p>Turtle Nesting areas may be adjacent to these ELC Ecosites: G138 G140-149</p> <p>For Five-lined Skink; Central Ontario Forest Ecosites: ES14.2, ES17 – ES20, ES23 – ES30 Or; ELC Ecosites: G056-G059</p>	<ul style="list-style-type: none"> Best nesting habitat for turtles are close to water and away from roads and sites less prone to loss of eggs by predation from skunks, raccoons or other animals. For an area to function as a turtle-nesting area, it must provide sand and gravel that turtles are able to dig in and are located in open, sunny areas. Nesting areas on the sides of municipal or provincial road embankments and shoulders are not SWH. Sand and gravel beaches adjacent to undisturbed shallow weedy areas of 	<p>Studies confirm:</p> <ul style="list-style-type: none"> Presence of 5 or more nesting Midland Painted Turtles[®] One or more Northern Map Turtle or Snapping Turtle nesting is a SWH[®]. The area or collection of sites within an area of exposed mineral soils where the turtles nest, plus a radius of 30-100m around the nesting area dependant on slope, riparian vegetation and adjacent land use is the SWH.^{cxlviii} Travel routes from wetland to

Specialized Wildlife Habitat	Wildlife Species	CANDIDATE SWH		CONFIRMED SWH
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria
		G070-G076 G087-G092 G103-G108 G118-G125	marshes, lakes, and rivers are most frequently used. <ul style="list-style-type: none"> Skinks will nest under logs, in stumps or under loose rock in partially wooded areas <u>Information Sources</u> <ul style="list-style-type: none"> Use Ontario Soil Survey reports and maps to help find suitable substrate for nesting turtles (well-drained sands and fine gravels). Check the Ontario Herpetofaunal Summary records for uncommon turtles; location information may help to find potential nesting habitat for them. EIS reports and other studies. Field Naturalist clubs 	nesting area are to be considered within the SWH as part of the 30-100m area of habitat. ^{cxlix} <ul style="list-style-type: none"> Any confirmed active skink nest site and a 30 m radius around it is significant[®]. Field investigations should be conducted in prime nesting season typically late spring to early summer. Observational studies observing the turtles nesting is a recommended method. SWHMIST^{cxlix} Index #28 provides development effects and mitigation measures for turtle nesting habitat and Index #37 provides information for Five-lined Skink.
Seeps and Springs <u>Rationale:</u> Seeps/Springs are typical of headwater areas and are often at the source of coldwater streams.	Wild Turkey Ruffed Grouse Spruce Grouse Moose White-tailed Deer Salamander spp.	Seeps/Springs are areas where ground water comes to the surface. Often they are found within headwater areas within forested habitats. Any forested Ecosite within the headwater areas of a stream could have seeps/springs.	Any forested area (with <25% meadow/field/pasture) within the headwaters of a stream or river system ^{cxvii, cxlix} . <ul style="list-style-type: none"> Seeps and springs are important feeding and drinking areas especially in the winter will typically support a variety of plant and animal species^{cxix, cxx, cxxi, cxxii, cxiii, cxiv}. <u>Information Sources</u> <ul style="list-style-type: none"> Topographical Map. Thermography. Hydrological surveys conducted by 	Field Studies confirm: <ul style="list-style-type: none"> Presence of a site with 2 or more[®] seeps/springs should be considered SWH. The area of a ELC forest ecosite or an ecoelement within ecosite containing the seeps/springs is the SWH. The protection of the recharge area considering the slope, vegetation, height of trees and groundwater condition need to be considered in delineation the habitat^{cxlviii}.

Specialized Wildlife Habitat	Wildlife Species	CANDIDATE SWH		CONFIRMED SWH
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria
			MOE. • Field Naturalist Clubs and landowners. • Municipalities may have drainage maps and headwater areas mapped.	<ul style="list-style-type: none"> • SWHMiST ^{cxlix} Index #30 provides development effects and mitigation measures
Aquatic Feeding Habitat <u>Rationale:</u> Aquatic Feeding Habitats are an extremely important habitat component for moose and other wildlife as they supply important nutrients.	Moose White-tailed Deer	Habitat may be found in all forested ecosites adjacent to water.	MNRF maps these location on Crown land and rates the site on a scale of 0 – 4, with 4 being the best. Feeding sites classed 3 or 4 are potential/candidate significant [®] . Where MAFA habitat is in low supply, class 2 MAFA habitat could also be considered potential/candidate significant [®] . • Wetlands and isolated embayments in rivers or lakes which provide an abundance of submerged aquatic vegetation such as pondweeds, water milfoil and yellow water lily are preferred sites. Adjacent stands of lowland conifer or mixed woods will provide cover and shade ^{cxlviii} . <u>Information Sources</u> • Field Naturalists club and landowners may know some locations. • MNRF values information (LIO/NRVIS) may list known locations • OMNRF Districts. • Sustainable Forestry Licence (SFL) companies may identify additional MAFA locations through field operations.	<ul style="list-style-type: none"> • Observational studies of the moose feeding habitat observing use or track studies demonstrating use of the habitat are required for any candidate site; any candidate site with observed or demonstrated moose use is significant[®]. • The area of the habitat includes the wetland area and adjacent forest stands (120m) of mixed or conifer forest, particularly those that provide thermal cover and/or travel corridors to other habitat features are considered significant ^{cxvii}. • Surveys should be conducted from mid June to end of July when submergent aquatic vegetation has peaked.^{cxcv} • If a SWH is determined for Aquatic Feeding Habitat then Movement Corridors are to be considered as outlined in Table 1.4.1 of this Schedule • SWHMiST ^{cxlix} Index #24 provides development effects and mitigation measures.

Specialized Wildlife Habitat	Wildlife Species	CANDIDATE SWH		CONFIRMED SWH
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria
			<ul style="list-style-type: none"> Methods for identification of Moose Aquatic Feeding Areas are outlined in OMNRF's Selected Wildlife and Habitat Features: Inventory Manual ^{cxcv} 	
<p>Mineral Licks</p> <p>Rationale: Mineral licks are a valuable habitat component but are also very rare on the landscape.</p>	<p>Moose White-tailed Deer</p>	<p>Habitat may be found in all forested ecosites.</p>	<p>This habitat component is found in upwelling groundwater and the soil around these seepage areas. It typically occurs in areas of sedimentary and volcanic bedrock. In areas of granitic bedrock, the site is usually overlain with calcareous glacial till ^{cxlviii}.</p> <p><u>Information Sources</u></p> <ul style="list-style-type: none"> Field Naturalists clubs and landowners may know some locations. MNRF values information (LIO\NRVIS) may list known locations OMNRF Districts. Sustainable Forestry Licence (SFL) companies may identify additional calving locations through field operations. 	<ul style="list-style-type: none"> Studies confirming any known site will be considered significant together with a 120 m radius around the site ^{cxcvii} [®]. The area of the habitat is the wetland, seep or spring containing the mineral lick and 100-200m of undisturbed contiguous forest around the site dependant on level of disturbance in the area ^{cxlviii}. Field investigations should be conducted in early spring prior to leaf out. Since sites will be very difficult to locate, consider using a small aircraft. SWHMiST ^{cxlix} Index #29 provides development effects and mitigation measures.
<p>Denning Sites for Mink, Otter, Marten Fisher and Eastern Wolf</p> <p>Rationale: Species are important fur-</p>	<p>Mink Otter Marten Fisher Grey Wolf</p> <p>Special Concern Eastern Wolf</p>	<p>Habitat may be found in all forested ecosites.</p>	<ul style="list-style-type: none"> Mink prefer shorelines dominated by coniferous or mixed forests with dens usually underground. Mink will sometimes use old muskrat lodges ^{cxlviii}. Otters prefer undisturbed shorelines along water bodies that support productive fish populations with 	<ul style="list-style-type: none"> Any known active denning site and a 100 m radius around it with the listed species is considered to be significant ^{cxlviii}. A known Eastern or Grey Wolf den site and a 200m radius will be considered significant ^{ccvii}. Extensive searches for denning

Specialized Wildlife Habitat	Wildlife Species	CANDIDATE SWH		CONFIRMED SWH
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria
bearing mammals and specific denning habitat is becoming increasingly scarcer due to development pressures.			<p>abundant shrubby vegetation and downed woody debris for denning. They often use old beaver lodges or log jams and crevices in rock piles ^{cxlviii}.</p> <ul style="list-style-type: none"> Marten and fisher share the same general habitat, requiring large tracts of coniferous or mixed forests of mature or older age classes. Denning sites are often in cavities in large trees or under large downed woody debris ^{cxlviii}. <p><u>Information Sources</u></p> <ul style="list-style-type: none"> Field Naturalists clubs and landowners may know some locations. MNRF values information (LIO\NRVIS) may list known locations OMNRF Districts. Sustainable Forestry Licence (SFL) companies may identify additional denning sites through field operations. Local trappers may know the location of prime denning sites. 	<p>sites are not recommended as they are very difficult to locate, protection of most suitable habitat should be considered during planning.</p> <ul style="list-style-type: none"> SWHMiST ^{cxlix} Index #31 provides development effects and mitigation measures.
<p>Amphibian Breeding Habitat (Woodland).</p> <p><u>Rationale:</u> These habitats are extremely</p>	<p>Eastern Newt Blue-spotted Salamander Spotted Salamander Four-toed Salamander Northern Two-lined Salamander Spring Peeper Wood Frog</p>	<p>All forested, ELC Ecosites; The wetland breeding ponds (including vernal pools) may be permanent, seasonal, ephemeral, large or small in size and</p>	<ul style="list-style-type: none"> Presence of a wetland or pond >500m² (about 25m diameter) ^{ccvii} within or adjacent (within 120m) to a woodland (no minimum size) ^{clxxxii}, ^{lxiii, lxv, lxvi, lxvii, lxviii, lxix, lxx} The wetland, lake or pond and surrounding forest, would be the Candidate SWH. Some small 	<p>Studies confirm;</p> <ul style="list-style-type: none"> Presence of breeding population of 1 or more of the listed newt/salamander species or 2 or more of the listed frog species with at least 20 individuals (adults or eggs masses) ^{lxxi} or 2 or more of the listed frog

Specialized Wildlife Habitat	Wildlife Species	CANDIDATE SWH		CONFIRMED SWH
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria
important to amphibian biodiversity within a landscape and often represent the only breeding habitat for local amphibian populations.	American Toad	could be located within or adjacent to the woodland ^{lxxii} .	<p>wetlands may not be mapped and may be important breeding pools for amphibians.</p> <ul style="list-style-type: none"> Breeding ponds within the woodland or the shortest distance from forest habitat are more significant because of reduced risk to migrating amphibians and more likely to be used. Woodlands with permanent ponds or those containing water in most years until mid-July are more likely to be used as breeding habitat ^{cxlviii}. <p><u>Information Sources</u></p> <ul style="list-style-type: none"> Refer to the Ontario Herpetofaunal Summary for historical records. Local landowners may also provide assistance as they may hear spring-time choruses of amphibians on their property. OMNRF District and wetland evaluations. Field Naturalist clubs Canadian Wildlife Service Amphibian Road Call Survey information. Ontario Vernal Pool Association (http://www.ontariovernalpools.org/) 	<p>species with Call Level Codes of 3[®].</p> <ul style="list-style-type: none"> A combination of observational study and call count surveys ^{cviii} will be required during the spring (March-June) when amphibians are concentrated around suitable breeding habitat within or near the woodland/wetlands. The habitat is the wetland area plus a 230m radius of woodland area ^{lxxiii, lxxv, lxxvi, lxxvii, lxxviii, lxxix, lxxx, lxxxi}. If a wetland area is adjacent to a woodland, a travel corridor connecting the wetland to the woodland is to be included in the habitat. SWHMiST ^{cxlix} Index #14 provides development effects and mitigation measures
Amphibian Breeding Habitat (Wetlands)	Eastern Newt American Toad Spotted Salamander Four-toed Salamander Blue-spotted	ELC Ecosites: G129-G135 G142-G152 Typically these	<ul style="list-style-type: none"> Wetlands and pools (including vernal pools) >500m² (about 25m diameter) ^{ccvii}, supporting high species diversity are significant; some small or ephemeral habitats 	<p>Studies confirm:</p> <ul style="list-style-type: none"> Presence of breeding population of 1 or more of the listed newt/salamander species or 3 or more of the listed

Specialized Wildlife Habitat	Wildlife Species	CANDIDATE SWH		CONFIRMED SWH
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria
<p>Rationale: Wetlands supporting breeding for these amphibian species are extremely important and fairly rare within Central Ontario landscapes.</p>	<p>Salamander Gray Treefrog Western Chorus Frog Northern Leopard Frog Pickerel Frog Green Frog Mink Frog Bullfrog</p>	<p>wetland ecosites will be isolated (>120m) from woodland ecosites, however larger wetlands containing predominantly aquatic species (e.g. Bull Frog) may be adjacent to woodlands.</p>	<p>may not be identified on MNRF mapping and could be important amphibian breeding habitats ^{clxxxiv}.</p> <ul style="list-style-type: none"> • Presence of shrubs and logs increase significance of pond for some amphibian species because of available structure for calling, foraging, escape and concealment from predators. • Bullfrogs require permanent water bodies with abundant emergent vegetation. <p><u>Information Sources</u></p> <ul style="list-style-type: none"> • Ontario Herpetofaunal Summary database. • Canadian Wildlife Service Amphibian Road Surveys and Backyard Amphibian Call Count. • OMNRF Districts and wetland evaluations. • EIS reports and other studies. 	<p>frog/toad species with at least 20 individuals (adults or eggs masses) ^{lxxi} or 3 or more of the listed frog/toad species with Call Level Codes of 3[®]. or; Wetland with confirmed breeding Bullfrogs are significant[®].</p> <ul style="list-style-type: none"> • The ELC ecosite wetland area and the shoreline are the SWH. • A combination of observational study and call count surveys ^{cviii} will be required during the spring (April-June) when amphibians are concentrated around suitable breeding habitat within or near the wetlands. • If a SWH is determined for Amphibian Breeding Habitat (Wetlands) then Movement Corridors are to be considered as outlined in Table 1.4.1 of this Schedule. • SWHMIST ^{cxlix} Index #15 provides development effects and mitigation measures.
<p>Mast Producing Areas</p> <p>Rationale: Mast is a very</p>	<p>Black Bear White-tailed deer Wild Turkey Ruffed Grouse</p>	<p>ELC Ecosites: G015 G017 G019 G027-G028 G041-G043</p>	<ul style="list-style-type: none"> • Most important areas are mature forests >0.5 ha containing numerous large beech and red oak trees that supply the energy-rich mast that wildlife prefer ^{cxlviii}. • Other significant tree species include 	<ul style="list-style-type: none"> • Any forested site with a high component (>50%)[®] of mast producing tree species >40-65cm dbh ^{cxlix} or; • An opening within a woodland/forested site with an

Specialized Wildlife Habitat	Wildlife Species	CANDIDATE SWH		CONFIRMED SWH
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria
important food requirement for many wildlife species.		G057 G059 G072 G090 G106 G108 G121 Central Ontario Forest Ecosites: ES14 ES17.1 ES23 ES24 ES25 ES26	hickory, basswood, black cherry, ironwood, mountain ash, pin cherry, and butternut. Significant shrub species include blueberries, wild black berry, serviceberry, raspberry, beaked hazel, choke cherry and hawthorn ^{cxlviii} . <ul style="list-style-type: none"> Sites providing long-term, relatively stable food supplies, forest openings or barrens >1 ha provide excellent sites for mast producing shrubs^{cxlviii}. Sites such as clear-cuts or burns are temporary source of food and are less significant^{cxlviii}. <p><u>Information Sources</u></p> <ul style="list-style-type: none"> OMNRF Districts. Forest Resource Inventory (FRI) maps to locate stands with mast producing trees. Sustainable Forest License (SFL) companies may know of areas through regular forest inventory work. Field Naturalists clubs. 	abundance (50% ground cover) [®] of mast producing shrubs (e.g. wild blackberry, serviceberry, raspberry, blueberry and beaked hazel) species is considered significant ^{cxlix} . <ul style="list-style-type: none"> Area of the early successional habitat or woodland/forest stand ELC ecosite is the SWH. Surveys should be conducted from June to August when plants are actively growing to determine presence. SWHMiST^{cxlix} Index #3 provides development effects and mitigation measures

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

Habitats of Species of Conservation Concern include wildlife species that are listed as Special Concern or rare, that are declining, or are featured species. Habitats of Species of Conservation Concern do not include habitats of Endangered or Threatened Species as identified by the Endangered Species Act 2007. Table 1.3 assists with the identification of SWH for Species of Conservation Concern.

Table 1.3. Habitats of Species of Conservation Concern considered SWH.

Wildlife	Species	CANDIDATE SWH		CONFIRMED SWH
		ELC Ecosite	Habitat Criteria and Information Sources	Defining Criteria
<p>Marsh Bird Breeding Habitat</p> <p>Rationale: Wetlands for these bird species are very productive and rare in Central Ontario landscapes.</p>	<p>American Bittern Sora Red-necked Grebe Pie-billed Grebe Redhead Ring-necked Duck Lesser Scaup Ruddy Duck Common Moorhen American Coot Wilson’s Phalarope Common Loon Sandhill Crane Green Heron Sedge Wren Marsh Wren Trumpeter Swan</p> <p>Special Concern: Yellow Rail Black Tern</p>	<p>ELC Ecosites: G138-G152</p> <p>For Green Heron: Above Ecosites plus: G129-G136.</p>	<ul style="list-style-type: none"> Nesting occurs in wetlands. All wetland habitat is to be considered as long as there is shallow water with emergent aquatic vegetation present ^{cxiv}. For Green Heron, habitat is at the edge of water such as sluggish streams, ponds and marshes sheltered by shrubs and trees. Less frequently, it may be found in upland shrubs or forest a considerable distance from water. <p><u>Information Sources</u></p> <ul style="list-style-type: none"> OMNRF District and wetland evaluations. Field Naturalist clubs Natural Heritage Information Center (NHIC) Records. Ontario Breeding Bird Atlas.. 	<p>Studies confirm:</p> <ul style="list-style-type: none"> Presence of 5 or more nesting pairs of Sedge Wren or Marsh Wren or or 1 pair of Sandhill Cranes; or breeding by any combination of 5 or more of the listed species ^(E). Note: any wetland with breeding of 1 or more Trumpeter Swans, Black Terns, Green Heron or Yellow Rail is SWH ^(E). Area of the ELC ecosite is the SWH. Breeding surveys should be done in May/June when these species are actively nesting in wetland habitats. Evaluation methods to follow “Bird and Bird Habitats: Guidelines for Wind Power Projects”^{ccxi} SWHMiST ^{cxlix} Index #35 provides development effects and mitigation measures
<p>Open Country Bird Breeding Habitat</p> <p>Rationale:</p>	<p>Upland Sandpiper Grasshopper Sparrow Vesper Sparrow</p>	<p>ELC Ecosites: G008-G009 G020-G021 G029-G031</p>	<ul style="list-style-type: none"> Large grassland areas (includes natural and cultural fields and meadows) >30 ha ^{clx, clxi, clxii, clxiii, clxiv, clxv, clxvi, clxvii, clxviii, clxix}. 	<p>Field Studies confirm:</p> <ul style="list-style-type: none"> Presence of nesting or breeding of 2 or more of the listed species. ^(E) A field with 1 or more breeding

Wildlife	Species	CANDIDATE SWH		CONFIRMED SWH
		ELC Ecosite	Habitat Criteria and Information Sources	Defining Criteria
<p>This wildlife habitat is declining throughout Ontario and North America. Species such as the Upland Sandpiper have declined significantly the past 40 years based on CWS (2004) trend records.</p>	<p>Northern Harrier Savannah Sparrow</p> <p>Special Concern Short-eared Owl</p>	<p>G044-G046 G060-G062 G077-G079 G093-G095 G109-G111</p>	<p>Grasslands not Class 1 or 2 agricultural lands, and not being actively used for farming (i.e. no row cropping or intensive hay or livestock pasturing in the last 5 years) [Ⓔ].</p> <ul style="list-style-type: none"> Grassland sites considered significant should have a history of longevity, either abandoned fields, mature hayfields and pasturelands that are at least 5 years or older. The Indicator bird species are area sensitive requiring larger grassland areas than the common grassland species. <p><u>Information Sources</u></p> <ul style="list-style-type: none"> Agricultural land classification maps, Ministry of Agriculture. Local bird clubs. Ontario Breeding Bird Atlas EIS reports and other studies. 	<p>Short-eared Owls is to be considered SWH.</p> <ul style="list-style-type: none"> The area of SWH is the contiguous ELC ecosite field areas. Conduct field investigations of the most likely areas in spring and early summer when birds are singing and defending their territories. Evaluation methods to follow “Bird and Bird Habitats: Guidelines for Wind Power Projects”^{ccxi} SWHMiST ^{cxlix} Index #32 provides development effects and mitigation measures
<p>Shrub/Early Successional Bird Breeding Habitat</p> <p><u>Rationale:</u> This wildlife habitat is declining throughout Ontario and North America. The Brown Thrasher has declined significantly over the</p>	<p>Willow Flycatcher Brown Thrasher Blue-winged Warbler Tennessee Warbler Prairie Warbler Eastern Towhee Clay-colored Sparrow Field Sparrow</p> <p>Special Concern:</p>	<p>ELC Ecosites: G009-G010 G021-G022 G031-G032 G046-G047 G062-G063 G079-G080 G095-G096 G111-G112 G134-G135</p> <p>Patches of shrub</p>	<ul style="list-style-type: none"> Large field areas succeeding to shrub and thicket habitats >30 ha in size. Shrub land or early successional fields, not class 1 or 2 agricultural lands, not being actively used for farming (i.e. no row-cropping, haying or livestock pasturing in the last 5 years) [Ⓔ]. Larger shrub thicket habitats (>30 ha) are most likely to 	<p>Field Studies confirm:</p> <ul style="list-style-type: none"> Presence of nesting or breeding of 2 or more of species listed [Ⓔ]. A habitat with breeding Golden-winged Warbler is to be considered as Significant Wildlife Habitat. [Ⓔ] The area of the SWH is the contiguous ELC ecosite field/thicket area. Conduct field investigations of the most likely areas in spring and early

Wildlife	Species	CANDIDATE SWH		CONFIRMED SWH
		ELC Ecosite	Habitat Criteria and Information Sources	Defining Criteria
past 40 years based on CWS (2004) trend records	Golden-winged Warbler	ecosites can be complexed into a larger habitat for some bird species.	<p>support and sustain a diversity of these species^{clxxiii}.</p> <ul style="list-style-type: none"> Shrub and thicket habitat sites considered significant should have a history of longevity, either abandoned fields or lightly grazed pasturelands. <p><u>Information Sources</u></p> <ul style="list-style-type: none"> Agricultural land classification maps, Ministry of Agriculture. Local bird clubs. Ontario Breeding Bird Atlas EIS Reports. 	<p>summer when birds are singing and defending their territories</p> <ul style="list-style-type: none"> Evaluation methods to follow “Bird and Bird Habitats: Guidelines for Wind Power Projects”^{ccxi} SWHMiST^{cxlix} Index #33 provides development effects and mitigation measures.
<p>Special Concern and Rare Wildlife Species</p> <p>Rationale: These species are Provincially Rare or have experienced significant population declines in Ontario.</p>	All Special Concern and Provincially Rare (S1-S3, SH) plant and animal species. Lists of these species are tracked by the Natural Heritage Information Centre.	<p>All plant and animal element occurrences (EO) within a 1 or 10km grid.</p> <p>Older element occurrences were recorded prior to GPS being available, therefore location information may lack accuracy</p>	<p>When an element occurrence is identified within a 1 or 10 km grid for a Special Concern or Provincially Rare species; linking candidate habitat on the site needs to be completed to ELC Ecosites^{lxxviii}</p> <p><u>Information Sources</u></p> <ul style="list-style-type: none"> Natural Heritage Information Centre (NHIC) will have Special Concern and Provincially Rare (S1-S3, SH) species lists with element occurrences data. NHIC Website “Get Information” : http://nhic.mnr.gov.on.ca Ontario Breeding Bird Atlas Expert advice should be sought as many of the rare spp. have little information available 	<p>Studies Confirm:</p> <ul style="list-style-type: none"> Assessment/inventory of the site for the identified special concern or rare species needs to be completed during the time of year when the species is present or easily identifiable. Habitat form and function needs to be assessed from the assessment of vegetation types and an area of significant habitat that protects the rare or special concern species identified. The habitat needs to be easily mapped and cover an important life stage component for a species e.g. specific nesting habitat or foraging habitat. The area of the habitat to the finest ELC scale that protects the habitat form and function is the SWH, this must be delineated through detailed field studies.

Wildlife	Species	CANDIDATE SWH		CONFIRMED SWH
		ELC Ecosite	Habitat Criteria and Information Sources	Defining Criteria
				<ul style="list-style-type: none"> • SWHMiST^{cxlix} Index #37 provides development effects and mitigation measures.

1.4 Animal Movement Corridors

Animal Movement Corridors are elongated areas used by wildlife to move from one habitat to another. They are important to ensure genetic diversity in populations, to allow seasonal migration of animals (e.g. deer moving from summer to winter range) and to allow animals to move throughout their home range from feeding areas to cover areas. Animal movement corridors function at different scales often related to the size and home range of the animal. For example, short, narrow areas of natural habitat may function as a corridor between amphibian breeding areas and their summer range, while wider, longer corridors are needed to allow deer to travel from their winter habitat to their summer habitat.

Identifying the most important corridors that provide connectivity across the landscape is challenging because of a lack of specific information on animal movements. There is also some uncertainty about the optimum width and mortality risks of corridors. Furthermore, a corridor may be beneficial for some species but detrimental to others. For example, narrow linear corridors may allow increased access for racoons, cats, and other predators. Also, narrow corridors dominated by edge habitat may encourage invasion by weedy generalist plants and opportunistic species of birds and mammals. Corridors often consist of naturally vegetated areas that run through more open or developed landscapes. However, sparsely vegetated areas can also function as corridors. For example, many species move freely through agricultural land to reach natural areas. Despite the difficulty of identifying exact movement corridors for all species, these landscape features are important to the long-term viability of certain wildlife populations.

Animal Movement Corridors should only be identified as SWH where:

Where a Confirmed or Candidate SWH has been identified by MNRF or the planning authority based on documented evidence of a habitat identified within these Criterion Schedules or the Significant Wildlife Habitat Technical Guide. The identified wildlife habitats Table 1.4.1 will have distinct passageways or rely on well defined natural features for movements between habitats required by the species to complete its life cycle.

Table 1.4.1 Animal Movement Corridors

Habitat	SPECIES	CANDIDATE SWH		CONFIRMED SWH
		ELC Eco-sites	Habitat Criteria and Information Sources	Defining Criteria
<p>Amphibian Movement Corridors</p> <p><u>Rationale:</u> Movement corridors for amphibians moving from their</p>	<p>Eastern Newt Blue-spotted Salamander Spotted Salamander Gray Treefrog Spring Peeper Western Chorus Frog Wood Frog</p>	<p>Corridors may be found in all ecosites associated with water.</p> <ul style="list-style-type: none"> Corridors will be determined based on identifying the significant breeding habitat 	<p>Movement corridors between breeding habitat and summer habitat clxxiv, clxxv, clxxvi, clxxvii, clxxviii, clxxix, clxxx, clxxxi.</p> <p>Movement corridors must be determined when Amphibian breeding habitat is confirmed as</p>	<ul style="list-style-type: none"> Field Studies must be conducted at the time of year when species are expected to be migrating or entering breeding sites. Corridors should consist of native vegetation, with several layers of vegetation.

Habitat	SPECIES	CANDIDATE SWH		CONFIRMED SWH
		ELC Eco-sites	Habitat Criteria and Information Sources	Defining Criteria
terrestrial habitat to breeding habitat can be extremely important for local populations.	Northern Leopard Frog Pickerel Frog Green Frog Mink Frog Bullfrog American Toad	for these species in Table 1.1	SWH from Table 1.2.2(Amphibian Breeding Habitat –Wetland) of this Schedule [Ⓔ] . <u>Information Sources</u> <ul style="list-style-type: none"> • MNRF District Office. • Natural Heritage Information Center (NHIC). • EIS Reports and other information. • Field Naturalist Clubs. 	Corridors unbroken by roads, waterways or bodies, and undeveloped areas are most significant ^{cxlix} <ul style="list-style-type: none"> • Corridors should have at least 15m of vegetation on both sides of waterway^{cxlix} or be up to 200m wide^{cxlix} of woodland habitat and with gaps <20m^{cxlix}. • Shorter corridors are more significant than longer corridors, however amphibians must be able to get to and from their summer and breeding habitat^{cxlix}. • SWHMiST ^{cxlix} Index #40 provides development effects and mitigation measures
Cervid Movement Corridors <u>Rationale:</u> Corridors important for all species to be able to access seasonally important life-cycle habitats or to access new habitat for dispersing individuals by minimizing their	White-tailed Deer Moose	Corridors may be found in all forested ecosites.	Movement corridor must be determined when Deer Wintering Habitat is confirmed as SWH from Table 1.1 and Moose Aquatic Feeding Area and Mineral Lick Habitat from Table 1.2.2 of this schedule. [Ⓔ] <ul style="list-style-type: none"> • A deer wintering habitat identified by the OMNRF as SWH in Table 1.1 of this Schedule will have corridors that the deer use during fall migration and spring dispersion 	<ul style="list-style-type: none"> • Studies must be conducted at the time of year when deer or moose are migrating or moving to and from yard, mineral lick or feeding areas. • Corridors that lead to a deer wintering yard should be unbroken by roads and residential areas. • Corridors that lead moose to MAFA’s, and mineral licks should remain intact.

Habitat	SPECIES	CANDIDATE SWH		CONFIRMED SWH
		ELC Eco-sites	Habitat Criteria and Information Sources	Defining Criteria
vulnerability while travelling.			<p>clxxxii, clxxxiii, cxlix, cxciv</p> <ul style="list-style-type: none"> Corridors typically follow riparian areas, woodlots, areas of physical geography (ravines, or ridges). Corridors will be multi-functional i.e. these will function for any smaller mammal species as well. <p><u>Information Sources</u></p> <ul style="list-style-type: none"> MNR District Office. Natural Heritage Information Center (NHIC). EIS Reports and other information. Field Naturalist Clubs. 	<ul style="list-style-type: none"> Corridors should be at least 200m wide^{cxlix} with gaps <20m^{cxlix} and if following riparian area with at minimum of 15m of vegetation cover on both sides of the waterway^{cxlix}. Shorter corridors are more significant than longer corridors, however cervids must be able to get to and from their habitat^{cxlix}. SWHMiST ^{cxlix} Index #39 provides development effects and mitigation measures
<p>Furbearer Movement Corridor</p> <p>Rationale: The identification of denning sites is rare, corridors to and from the habitat must be maintained as this habitat is extremely important for local populations</p>	Mink Otter	All Forested Ecosite Codes adjacent to or within shoreline habitats.	<p>Mink and Otter den sites are typically found within a riparian area of a lake, river, stream or wetland. The den site will potentially have a movement corridor associated with it.</p> <ul style="list-style-type: none"> All Mink or Otter den sites identified using Table 1.2.2 of this schedule under the habitat of Denning Sites for Mink, Otter, Marten Fisher and Eastern Wolf are to be considered for an animal movement corridor. <p><u>Information Sources</u></p> <ul style="list-style-type: none"> MNR District Office. Natural Heritage Information Center (NHIC). 	<p>Studies to confirm:</p> <ul style="list-style-type: none"> Studies must be conducted at the time of year when mink or otter are using the denning sites. Studies can be based on observation or from scat and track surveys SWHMiST ^{cxlix} Index #31 provides development effects and mitigation measures

Habitat	SPECIES	CANDIDATE SWH		CONFIRMED SWH
		ELC Eco-sites	Habitat Criteria and Information Sources	Defining Criteria
			<ul style="list-style-type: none"> • Reports and other information available from Conservation Authorities. • Field Naturalist Clubs. • Local trappers may know the location of prime denning sites and movement corridors. 	

1.5 Exceptions for EcoRegion 5E

Exceptions are candidate wildlife habitats that will have different criteria than what is proposed in the above schedules for an area within the Eco-region. The Exceptions will be based on Eco-Districts and municipalities can apply the exception for the eco-district within their planning area

Table 1.5.1 Significant Wildlife Habitat Exceptions for Ecodistricts within EcoRegion 5E

EcoDistrict	Wildlife Habitat and Species	Candidate SWH			Confirmed SWH
		Ecosites	Habitat Description	Habitat Criteria and Information	Defining Criteria
5e-11	<p>Rare Forest Types:</p> <p>Jack Pine</p> <p><u>Rationale:</u> Uncommon to rare in southern area of Ecoregion 5E.</p>	<p>Jack Pine ELC Ecosites: G012 G023 G034-G035 G049 G065 G068 G082-G083 G098-G099 G114 Central Ont. FEC: ES13.1 ES13.2 ES15.1 ES 15.2</p>	<p>Jack Pine grows best on soils that are sandy, silty or a coarse loam on dry to moist sites</p>	<ul style="list-style-type: none"> No minimum size to stand. Cultural plantations are not significant. <p><u>Information Sources</u></p> <ul style="list-style-type: none"> MNRF District. Field Naturalist clubs 	<p>Any forest stand with \geq 40% jack pine is to be considered significant ^(E).</p> <ul style="list-style-type: none"> The ELC Ecosites containing the jack pine woodland/forest stand is the SWH. SWHMiST^{cxlix} Index #37 provides direction for rare species and habitats.
5E-13	Late Winter Moose Habitat	<p>The preferred ecosites are described in the Field Guide to Forest Ecosystems of Central Ontario ^{ccvi}:</p>	<p>Late winter moose habitat is characterized by dense conifer cover with greater than 50% canopy closure and >10m in height.</p> <ul style="list-style-type: none"> Snow depth in excess of 70cm restrict moose 	<p>Conifer stands >50ha ^{cxv}, dominated by tall trees >10m ^{ccvi}, on gentle to moderately rugged sites with deep soils. Areas identified as rating 3 or 4 ^{cxv} for late winter moose habitat are Candidate SWH.</p> <p><u>Information Sources</u></p>	<p>Field Studies will confirm the use of these areas as late winter habitat by moose during the months of March and April.</p> <ul style="list-style-type: none"> Moose are very difficult to observe in late winter habitat,

		<p>ES 16 ES 22 ES 30 ES 33 ES 34</p> <p>Corresponding ELC Ecosites: G012-G014 G024-G026 G035-G038 G050-G053 G066-G068 G083-G086 G099-G102</p>	<p>movement during winter, however late winter thermal refuge is important in relieving heat stress .</p> <ul style="list-style-type: none"> • These habitats are extensively used by moose during late spring and summer due to the shade provided ^{cxcv}. 	<ul style="list-style-type: none"> • OMNRF Forester, Ecologist or Biologist may be aware of locations. • The Selected Wildlife and habitat Inventory Manual (1998)^{cxcv} outlines the inventory method for Late Winter Moose Habitat. 	<p>therefore any number of moose observed or moose tracks and trails observed in the habitat confirm this habitat as a SWH.</p> <ul style="list-style-type: none"> • The area of the SWH is the area of forest ecosites . • SWHMIST ^{cxlix} Index #24 provides development effects and mitigation measures for aquatic feeding areas, similar effects and mitigation can be used for late winter habitat.
--	--	---	---	--	--