

APPENDIX 8. CANDIDATE SIGNIFICANT WILDLIFE HABITAT ASSESSMENT
Speed River Bridge –Trails Linkage Project

Project: A15-123AA

| # | SIGNIFICANT WILDLIFE HABITAT (SWH) | CANDIDATE SWH CRITERIA | CRITERIA FOR SWH CONFIRMATION | SWH PROTECTED AREA | SITE ASSESSMENT DETAILS | CANDIDATE SWH | FIELD STUDIES REQUIRED/ COMPLETED | CONFIRMED SWH |
|---|--|---|--|--|---|---------------|--|---------------|
| SEASONAL CONCENTRATION AREAS OF ANIMALS | | | | | | | | |
| 1 | Waterfowl stopover and Staging Areas (terrestrial) | - Fields with Sheet water in spring (incl. agricultural) | - Mixed species aggregations of 100 or more individuals confirms SWH | flooded field ecosite and 100-300m radius is the SWH | No Habitat matching Criteria identified in Study Area | No | None required. | No |
| 2 | Waterfowl Stopover and Staging (Aquatic) | - Ponds, marshes, lakes, bays, coastal inlets and watercourses and reservoirs - SWTP & SWMP are not SWH | - Aggregations of 100 or more listed species for 7 days (ie. >700 waterfowl use days) confirms SWH | Aquatic ecosite and 100m radius is the SWH | The speed river is of sufficient size and is shallow depth | Yes | Waterfowl overwintering area Identified by MNRF as SWH | Yes |
| 3 | Shorebird Migratory stopover | - Shorelines of Lakes, rivers, wetlands, beaches, bars; seasonally flooded, muddy and un-vegetated shoreline habitat | - 3 or more listed species and >1000 shorebird use days, or >100 whimbrel, confirms SWH | Shoreline ecosite and 100m radius is the SWH | No Habitat matching Criteria identified in Study Area, >5km from any Great Lake | No | None required | No |
| 4 | Raptor Wintering Area | - Combination of upland field and woodland habitat >20ha total (includes >15ha upland field) - least disturbed sites, idle, fallow or lightly grazed field/meadow best | - 1 or more Short-eared Owl, or, at least 10 individuals and 2 listed species for a minimum of 20 days, and 3 of 5 years, confirms SWH | Ecosite communities (field and woodland) is the SWH | No Habitat matching Criteria identified in Study Area | No | None required | No |
| 5 | Bat Hibernacula | - Caves, mine shafts, underground foundations, karsts - buildings are not SWH | - All sites with confirmed hibernating bats, confirms SWH | Ecosite and 200m radius is the SWH | No Habitat matching Criteria identified in Study Area | No | None required | No |
| 6 | Bat Maternity Colony | - All forested ecosites, FOD, FOC, FOM, SWD, SWM, SWC with >10/ha trees (>25cm DBH) in early stages of decay (class 1-3) - buildings are not SWH | - >10 Big Brown Bats, >20 Little Brown Myotis, >5 adult female Silver-haired Bats confirms SWH | Entire woodland or forest stand ELC ecosite containing colony is the SWH | Forested ecosites present in Study area with trees >25cm DBH. | Yes | Trees assessed for suitability during Tree Inventory, no trees observed meeting candidate requirements | No |
| 7 | Turtle Wintering Area | - Areas with permanent water deep enough not to freeze, with mud/soft substrates | - 5 over-wintering Midland Painted Turtles, 1 or more Northern Map Turtle or Snapping Turtle confirms SWH | Mapped ELC ecosite, or deep pool element where turtles overwinter is the SWH | The speed river may provide areas of permanent water that do not freeze. | Yes | River habitat will not be impacted, no surveys recommended. | No |

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| 8 | Reptile Hibernaculum | - Sites below the frost line; rock barren, crevice and cave, talus, alvar, rock piles, slopes, stone fences and crumbling foundations | - Presence of hibernacula with minimum 5 individuals of 1 snake species/ individuals of 2 or more species confirms SWH - Congregations of a minimum of 5 snakes of 1 species/ individuals of 2 or more snake species, near potential hibernacula on sunny warm days in spring and fall confirms SWH | Feature hibernacula is located in, and 30m radius is the SWH | Rock and rubble pile identified in study area (east end, depth unknown) | yes | Located greater than 50m from proposed trails, no surveys recommended | No |
| 9 | Colonially-nesting Bird Habitat (cliff/bank) | - Eroding banks, sandy hills, borrow pits, steep slopes, sand piles, cliff faces, bridge abutments, silos, barns | - 1 or more nest sites with 8 or more Cliff Swallow or, 50 Bank Swallow and Rough-winged Swallow pairs during the breeding season. | Colony and 50m radius around peripheral nest is the SWH | No Habitat matching Criteria identified in Study Area | No | None required | No |
| 10 | Colonially-nesting Bird Habitat (Tree/shrub) | - Live or dead standing trees in wetlands, lakes, islands and peninsulas, occasionally shrubby and emergent vegetation | - 5 or more active Great-blue Heron or other listed species nests | Edge of the colony plus minimum 300m radius, or extent of the forest ecosite, or entire island <15ha is the SWH | No Habitat matching Criteria identified in Study Area | No | None required | No |
| 11 | Colonially-nesting Bird Habitat (Ground) | - Rocky islands or peninsulas within a lake or large river(natural or artificial) | - >25 active nests of Herring Gull, Ring-billed Gull, >5 active nests of Common Tern, or >2 active nests of Caspian Tern. 5 or more pairs of Brewer's Blackbird. Any active nesting colony of Little Gull, Great Black-backed Gull. | Edge of colony plus min 150m radius or extent of ELC ecosite, or island <3ha is the SWH | No Habitat matching Criteria identified in Study Area | No | None required | No |
| 12 | Migratory Butterfly Stopover Area | - At least 10ha, with undisturbed field/meadow and forest or woodland edge habitat present, within 5km of Lake Ontario. | - Presence of Monarch use days >5000 or >3000 where there is a mix of Monarch with Painted Ladies or White Admirals | Field/meadow and forest/woodland is the SWH | No Habitat matching Criteria identified in Study Area, >5km from any Great Lake | No | None required | No |
| 13 | Land bird Migratory Stopover Area | - Woodlots >5ha in size - within 5km of lake Ontario | - Use by >200 birds/day, with >35species, with at least 10sp recorded on 5 different survey dates. | Woodlot is the SWH | No Habitat matching Criteria identified in Study Area, >5km from any Great Lake | No | None required | No |
| 14 | Deer Yarding Areas | - ELC communities providing Thermal cover (FOM,FOC,SWM,SWC, CUP2, CUP3, FOD3, CUT) | - Deer yards are managed by MNRF, available through district offices and LIO. | LIO mapping | No Deer yarding areas identified on LIO Mapping | No | None required. | No |
| 15 | Deer Winter Congregation Areas | - All forested ecosites >100ha - Conifer Plantations <50ha may be used | - Deer management is the responsibility of the MNRF - Contact MNRF or LIO for known deer winter areas. | LIO mapping | No Deer Winter Congregation areas identified on LIO Mapping | No | None required. | No |
| RARE VEGETATION COMMUNITIES | | | | | | | | |
| 16 | Cliffs & Talus Slopes | - Cliff: vertical to near vertical bedrock >3m in height - Talus slope: rock rubble at the base of a cliff made up of coarse rocky debris | - Confirm any ELC Vegetation Type for Cliffs or Talus Slopes | Area of ELC sites: TAO, TAS, TAT, CLO, CLS, CLT | No Habitat matching Criteria identified in Study Area | No | None required | No |

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| 17 | Sand Barren | - Exposed, sparsely vegetated & caused by lack of moisture, fires and erosion. | - area >0.5ha in size - Confirm any ELC vegetation Type for Sand Barren - Not dominated by exotic or introduced species | Area of ELC ecosite is the SWH | No Habitat matching Criteria identified in Study Area | No | None required | No |
| 18 | Alvar | - Level, mostly un-fractured calcareous bedrock feature, overlain by a thin veneer or soil | - area >0.5ha in size - Field Studies that identify four of the five Alvar Indicator Species - Not dominated by exotic or introduced species | Area of ELC ecosite is the SWH | No Habitat matching Criteria identified in Study Area | No | None required | No |
| 19 | Old Growth Forest | - >30ha forests with at least 10ha interior habitat and multi-layered canopy | - Dominant Tree Species >140 years old - No recognizable signs forestry practices (old stumps) | Area of ELC ecosite is the SWH | No Habitat matching Criteria identified in Study Area | No | None required | No |
| 20 | Savannah | - Tall Grass Prairie Habitat with 25%-60% Tree cover - Remnant sites such as Railway Right of ways are not SWH | - No minimum size, and must be restored to a natural state. - Confirm one or more savannah indicator species - Not dominated by exotic or introduced species | Area of ELC ecosite is the SWH | No Habitat matching Criteria identified in Study Area | No | None required | No |
| 21 | Tallgrass Prairie | - Ground cover dominated by prairie grasses with <25% tree cover - Remnant sites such as Railway Right of ways are not SWH | - No minimum size, and must be restored to a natural state. - Confirm one or more prairie indicator species - Not dominated by exotic or introduced species | Area of ELC ecosite is the SWH | No Habitat matching Criteria identified in Study Area | No | None required | No |
| 22 | Other Rare Vegetation Communities | - All Provincially Rare S1, S2, S3 Vegetation Communities (Appendix M of SWHTG) | - Field Studies Confirming ELC vegetation type is a rare vegetation community | Area of ELC ecosite is the SWH | No Habitat matching Criteria identified in Study Area | No | None required | No |
| SPECIALIZED HABITAT FOR WILDLIFE | | | | | | | | |
| 23 | Waterfowl Nesting Areas | - Upland Habitat, adjacent to Wetland ELC ecosites (except SWC, SWM) - Extends 120m from a wetland (>0.5ha) and any small wetlands (<0.5ha) within a cluster of at least 3 Upland area at least 120m wide | - Presence of 3 or more nesting pairs of listed species excluding Mallards - Presence of 10 or more nesting pairs including mallards - Any active Black Duck nesting site | SWH may be greater than or less than 120m from the wetland edge and must provide enough habitat for waterfowl to successfully nest | Treed communities adjacent locally significant wetlands, speed river may provide nesting habitat | Yes | Breeding bird surveys completed, one mallard with new ducklings observed in woodlot, does not meet criteria | No |
| 24 | Bald Eagle or Osprey Nesting, Foraging and Perching Habitat | - Forest communities, adjacent to riparian areas - Osprey nests usually at top of tree - Bald Eagle nest usually in super canopy tree in a notch within canopy | - Studies confirm one or more active Bald Eagle or Osprey nest - Alternate nests included in SWH - Nests must be used annually, if found inactive, must be known inactive at least 3 years, or suspected unused for 5 years if unknown | Active nest plus 300m for Osprey Active nest plus 400-800m for Bald Eagle | Treed Habitat adjacent the speed river may provide limited nesting opportunities for Osprey or Bald Eagle | Yes | Breeding Bird Surveys completed. | No |

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| 25 | Woodland Raptor Nesting Habitat | <ul style="list-style-type: none"> - Forested communities, forested swamp communities and cultural Plantations - Natural Forested/conifer plantations >30ha with >10ha interior habitat (200m buffer) | <ul style="list-style-type: none"> - One or more active nest of listed species | Nest protection radius: <ul style="list-style-type: none"> - Red-Shouldered Hawk, Northern Goshawk 400m - Barred Owl 200m - Broad-winged Hawk, Coopers Hawk 100m - Sharp-shinned Hawk 50 | Woodland habitat may provide opportunities for woodland raptor nesting | Yes | No stick nests observed during SWH or Winter Wildlife Surveys | No |
| 26 | Turtle Nesting Areas | <ul style="list-style-type: none"> - Exposed Mineral soil (sand or gravel) adjacent (<100m) or within shallow marsh, shallow submerged, shallow floating, bog or fen communities - Located in open sunny areas, away from roads and less prone to predation - Municipal and provincial road shoulders are not SWH. | <ul style="list-style-type: none"> - Confirm 5 or more nesting Midland Painted Turtles, 1 or more nesting Northern Map Turtle or Snapping Turtle | Area or sites with exposed mineral soils, plus a radius of 30-100m around the nesting area is the SWH. | No Habitat matching Criteria identified in Study Area | No | None required, one common snapping turtle observed moving through woodland, no suitable nesting sites observed, presume nesting occurs along existing trail or rail bed | No |
| 27 | Seeps and Springs | <ul style="list-style-type: none"> - Areas where ground water comes to the surface - Any forested area within the headwaters of a stream or river system | <ul style="list-style-type: none"> - Confirm site with 2 or more seeps/springs. | Area of ELC forest ecosite containing seep/spring is the SWH | Seeps and springs possible within forested and wetland communities | Yes | ELC complete | No seeps or springs identified |
| 28 | Amphibian Breeding Habitat (woodland) | <ul style="list-style-type: none"> - Breeding pools within woodlands - Wetland, pond or pool >500m² within or adjacent (<120m) to a woodland. - Woodlands with permanent ponds, or those with water until mid-July more likely to be used. | <ul style="list-style-type: none"> - Confirm Breeding population of 1 or more listed newt/salamander species, 2 or more of the listed frog species with at least 20 individuals (adults or egg masses), 2 or more of the listed frog species with call code levels of 3. - Wetland adjacent to woodlands includes travel corridor connecting features as SWH. | Wetland area, plus 230m radius of woodland is the SWH. | Two marginal areas of candidate habitat identified in wetland community. | yes | Amphibian Surveys complete, no amphibian calls observed during any surveys | No |
| 29 | Amphibian Breeding Habitat (Wetland) | <ul style="list-style-type: none"> - Swamp, marsh, fen, bog, open aquatic and shallow aquatic ELC communities. - Typically isolated from woodlands (>120m), but includes larger wetlands with primarily aquatic species (bull frogs) that are adjacent to woodlands. - Wetlands >500m² - Presence of shrubs & logs - Bullfrogs require permanent water bodies and abundant emergent vegetation. | <ul style="list-style-type: none"> - Confirm Breeding populations of 1 or more listed newt/salamander species, or 2 or more listed frog/toad species with at least 20 individuals (adults or egg masses), or 2 or more listed frog/toad species with a call code level of 3 - Or any wetland with confirmed breeding Bullfrog. | ELC ecosite and shoreline is the SWH Movement corridors (SWH) must be considered if this habitat is significant | No wetlands >120m from woodland habitat | No | None required | No |

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| 30 | Area-sensitive Breeding Bird Habitat | <ul style="list-style-type: none"> - Habitats where interior breeding birds are breeding - Large mature(>60 years) forest stands or woodlots >30ha - Forest and swamp ELC communities - Interior habitat at least 200m from edge | <ul style="list-style-type: none"> - Presence of nesting or breeding pairs of 3 or more of the listed species - Any site with Cerulean Warbler or Canada Warbler is SWH | ELC ecosite is the SWH | No interior habitat identified in study area | no | None required | No |
| HABITATS OF SPECIES OF CONSERVATION CONCERN CONSIDERED SWH | | | | | | | | |
| 31 | Marsh Bird Breeding Habitat | <ul style="list-style-type: none"> - Some meadow marsh, shallow submerged, shallow floating, mixed shallow floating, fen and bog communities (see SWH Ecoregion guide for specifics) - Nesting occurs in wetlands, all wetland habitat is considered with presence of shallow water with emergent aquatic vegetation - Green heron at edge of water sheltered by shrubs and trees. | <ul style="list-style-type: none"> - 5 or more nesting pairs of Sedge Wren or Marsh Wren, 1 pair of Sandhill Crane, or breeding by any combination of 5 or more of the listed species - Any Wetland with 1 or more breeding pair Black Tern, Trumpeter Swan, Green Heron or Yellow Rail | ELC ecosite is the SWH | No candidate habitat identified in study area. | No | Breeding Bird Surveys complete | No |
| 32 | Open Country Bird Breeding Habitat | <ul style="list-style-type: none"> - Grassland area >30ha (natural & cultural fields and meadows) - Grasslands not class 1 or 2 agriculture (no row crops or intensive hay or livestock pasturing) - Mature hayfields or pasture at least 5 years old | <ul style="list-style-type: none"> - Nesting or breeding of 2 or more of the listed species - Field with 1 or more Short-eared Owls | Contiguous ELC ecosite is the SWH | No Habitat matching Criteria identified in Study Area | No | None required | No |
| 33 | Shrub/Early Successional Bird Breeding Habitat | <ul style="list-style-type: none"> - Cultural thickets, savannah and woodland habitat - Large field area succeeding to shrub and thicket habitat >10ha in size - Patches of shrub ecosite may be complexed into larger old field ecosites for some species | <ul style="list-style-type: none"> - Confirm nesting or breeding of 1 of the listed indicator species and at least 2 of the common species - Habitat with Yellow-breasted Chat Or Golden-winged Warbler is SWH | SWH is contiguous ELC ecosite field/thicket area | No Habitat matching Criteria identified in Study Area | No | None required | No |

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| 34 | Terrestrial Crayfish | <ul style="list-style-type: none"> - Meadow marsh, shallow marsh, swamp thicket, deciduous swamp and mixed swamp communities - Cultural meadow with inclusions of meadow marsh may be used - Wet edges of marshes and wet meadows should be surveyed for crayfish | <ul style="list-style-type: none"> - Presence of 1 or more individuals of listed species or their chimneys in suitable habitat | Area of ELC ecosite or Eco element area of meadow marsh or swamp within the larger ecosite area is the SWH | Candidate habitat identified in study area. | Yes | Record all chimneys observed during ELC | No |
| 35 | Special Concern & Rare Wildlife Species | <ul style="list-style-type: none"> - All Special concern and Provincially Rare plant and animal species - Where an element occurrence is identified within a 1 or 10km grid for a species listed, linking candidate habitat on the site must be completed to ELC ecosites | <ul style="list-style-type: none"> - Assessment/inventory of site for identified special concern or rare species completed during time of year when species is present or easily identifiable - Habitat must be easily mapped and cover an important life stage component (specific nesting habitat, foraging) | SWH is the finest ELC scale that protects the form and function of the habitat | NHIC did not identify any S1-S3 species as occurring in the 1km square containing the study area. | No | Any S1-S3 Species identified during any field surveys will be identified and SWH delimited. | No |
| ANIMAL MOVEMENT CORRIDORS | | | | | | | | |
| 36 | Amphibian Movement Corridor | <ul style="list-style-type: none"> - Corridors may occur in all ecosites associated with water - Presence of significant amphibian breeding indicates the requirement for identifying corridors - Movement corridors between breeding habitat and summer habitat | <ul style="list-style-type: none"> - Corridors typically include areas with native vegetation, with several layers of vegetation, unbroken by roads, waterways or waterbodies are most significant - At least 15 of vegetation on both sides of the waterway or up to 200m wide of woodland habitat with gaps of <20m - Shorter corridors are more significant than longer, but amphibians must be able to get to and from their summer breeding habitat | Corridor is the SWH | No Habitat matching Criteria identified in Study Area | No | None required | No |
| 37 | Deer Movement Corridor | <ul style="list-style-type: none"> - May occur in all forested ecosites - Determined when deer wintering habitat is confirmed as SWH | <ul style="list-style-type: none"> - Corridors at least 200m wide with gaps <20m leading to wintering habitat - Unbroken by roads and residential areas - Shorter corridors are more significant | Corridor is the SWH | No Habitat matching Criteria identified in Study Area | No | None required | No |