Appendix D Terrestrial Habitat

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Table D-1 Significant Wildlife Habitat Assessment in Proximity to Proposed Pipeline Route (Ecoregion 6E)

Seasonal Concentration Areas

Wildlife Habitat Type	Criteria	Methods	Habitat Assessment
Waterfowl Stopover and Staging Area (Terrestrial and Aquatic)	**Terrestrial:** Field with sheet water during spring (mid March to May). Fields flooding during spring melt and run-off provide important invertebrate foraging habitat for migrating waterfowl. Agricultural fields with waste grains are commonly used by waterfowl, these are not considered SWH unless they have spring sheet water available. **Aquatic:** Ponds, marshes, lakes, bays, coastal inlets and watercourses used during migration. These habitats have an abundant food supply (mostly aquatic invertebrates and vegetation in shallow water). 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.	ELC surveys, wildlife habitat assessments, and air photo interpretation will be used to assess features in proximity to the proposed pipeline route that may support waterfowl stopover and staging areas.	**Candidate:** Ponds present in proximity to the proposed pipeline route and spring flooding may occur at Westover Road based on spring aerial photography. Habitat assessment to be completed during 2026-2027 field investigations.
Shorebird Migratory Stopover Area	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 amour rock lakeshores, are extremely important for migratory shorebirds in May to mid-June and early July to October. Sewage treatment ponds and storm water ponds do not qualify as a SWH.	ELC surveys and air photo interpretation will be used to assess features in proximity to the proposed pipeline route that may support migratory shorebirds.	**Absent:** This SWH is considered absent due to natural unvegetated shoreline habitat being absent in proximity to the proposed pipeline route.

Wildlife Habitat Type	Criteria	Methods	Habitat Assessment
Raptor Wintering Area	The habitat provides a combination of fields and woodlands that provide roosting, foraging and resting habitats for wintering raptors. Raptor wintering (hawk/owl) sites need to be > 20 ha with a combination of forest and upland. Least disturbed sites, idle/fallow or lightly grazed field/meadow (>15ha) with adjacent woodlands Field area of the habitat is to be wind swept with limited snow depth or accumulation. Eagle sites have open water and large trees and snags available for roosting.	ELC surveys and air photo interpretation will be used to assess features in proximity to the proposed pipeline route that may support wintering raptors.	**Candidate:** Suitable upland forested and pasture habitat (>20 ha) may occur west of Middletown Road adjacent to forested areas. Assessment of upland habitat suitability to be completed during 2026-2027 field investigations.
Bat Hibernacula	Hibernacula may be found in caves, mine shafts, underground foundations and Karsts. Active mine sites should not be considered as SWH. The locations of bat hibernacula are relatively poorly known.	ELC surveys, wildlife habitat assessments, and air photo interpretation will be used to assess features in proximity to the proposed pipeline route that may support bat hibernacula.	**Absent:** This SWH is considered absent due to crevices, caves or abandoned mines being absent in proximity to the proposed pipeline route.
Bat Maternity Colonies	Maternity colonies can be found in tree cavities, vegetation and often in buildings (buildings are not considered to be SWH). Maternity roosts are not found in caves and mines in Ontario. Maternity colonies located in mature deciduous or mixed forest stands with >10/ha large diameter (>25cm diameter at breast height [DBH]) wildlife trees. Female bats prefer wildlife tree (snags) in early stages of decay, class 1-3 or class 1 or 2. 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.	ELC surveys, wildlife habitat assessments, and air photo interpretation will be used to assess features in proximity to the proposed pipeline route that may support bat maternity colonies.	**Candidate:** Forest habitat is present in proximity to the proposed pipeline route which may support bat maternity colonies. Habitat assessment to be completed during 2026-2027 field investigations.
Turtle Wintering Areas	For most turtles, wintering areas are in the same general area as their core habitat. Water must be deep enough not to freeze and have soft mud substrates. Over-wintering sites are permanent water bodies, large wetlands, and bogs or fens with adequate dissolved oxygen. Man-made ponds such as sewage lagoons or storm water ponds should not be considered SWH.	ELC surveys, wildlife habitat assessments, and air photo interpretation will be used to assess features in proximity to the proposed pipeline route that may support areas of permanent standing water but not deep enough to freeze.	**Candidate:** Wetlands and waterbodies present in proximity to the proposed pipeline route that may provide suitable overwintering habitat. Habitat assessment to be completed during 2026-2027 field investigations.

Wildlife Habitat Type	Criteria	Methods	Habitat Assessment
Reptile Hibernaculum	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. Areas of broken and fissured rock are particularly valuable since they provide access to subterranean sites below the frost line. 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 (*Plestiodon fasciatus*) prefer mixed forests with rock outcrop openings providing cover rock overlaying granite bedrock with fissures	ELC surveys and wildlife habitat assessments will be used to document features in proximity to the proposed pipeline route that may support snake hibernacula.	**Candidate:** Suitable habitat may be present near the proposed pipeline route in the forested, agricultural, and urban areas where rock piles or foundations may be present. To be determined during 2026-2027 field investigations.
Colonial-Nesting Bird Breeding Habitat (Bank and Cliff)	Any site or areas with exposed soil banks, undisturbed or naturally eroding that is not a licensed/permitted aggregate area such as Cliff faces, bridge abutments, silos, and barns. 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.	ELC surveys, wildlife habitat assessments, and air photo interpretation will be used to assess features in proximity to the proposed pipeline route that may support colonial bird breeding habitat.	**Candidate:** Suitable habitat may be present near watercourses crossing the proposed pipeline route where eroding banks may be present. To be determined during 2026-2027 field investigations.
Colonial-Nesting Bird Breeding Habitat (Tree/Shrubs)	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.	ELC surveys and wildlife habitat assessments will be used to assess features in proximity to the proposed pipeline route that may support colonial bird breeding habitat (Trees/Shrubs).	**Candidate:** GEO identified the presence of mixed wader nesting colonies (MNR 2026a). To be confirmed during 2026-2027 field investigations.
Colonial-Nesting Bird Breeding Habitat (Ground)	Nesting colonies of gulls and terns are on islands or peninsulas (natural or artificial) associated with open water, marshy areas. Brewer's Blackbird (*Euphagus cyanocephalus*) colonies are found loosely on the ground or in low bushes in close proximity to streams and irrigation ditches within farmlands.	ELC surveys wildlife habitat assessments, and air photo interpretation will be used to assess features in proximity to the proposed pipeline route that may support colonial bird breeding habitat (Ground).	**Candidate:** GEO identified the presence of colonial waterbird nesting area (MNR 2026a). To be confirmed during 2026-2027 field investigations.

Wildlife Habitat Type	Criteria	Methods	Habitat Assessment
Migratory Butterfly Stopover Areas	A butterfly stopover area will be a minimum of 10 ha in size with a combination of field and forest habitat present and will be located within 5 km of Lake Erie or Lake Ontario. The habitat is typically a combination of field and forest and provides the butterflies with a location to rest prior to their long migration south. The habitat should not be disturbed, fields/meadows with an abundance of preferred nectar plants and woodland edge providing shelter are requirements for this habitat. Staging areas usually provide protection from the elements and are often spits of land or areas with the shortest distance to cross the Great Lakes.	GIS analysis was used to measure distance from the Lake Ontario shoreline.	**Absent:** This SWH is considered absent due to the Study Area not being located within 5 km of Lake Ontario.
Landbird Migratory Stopover Areas	Woodlots need to be >10 ha in size and within 5 km of Lake Ontario. If multiple woodlands are located along the shoreline those Woodlands <2 km from Lake Ontario are more significant. Sites have a variety of habitats, forest, grassland and wetland complexes. The largest sites are more significant. Woodlots and forest fragments are important habitats to migrating birds. These features located along the shore and located within 5km of Lake Erie and Lake Ontario are Candidate SWH.	GIS analysis was used to measure distance from the Lake Ontario shoreline.	**Absent:** This SWH is considered absent due to the Study Area not being located within 5 km of Lake Ontario.

Wildlife Habitat Type	Criteria	Methods	Habitat Assessment
Deer Winter Congregation Areas	Deer yarding 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 the Stratum II area and is critical for deer survival in areas where winters become severe. It is primarily composed of coniferous trees (pine, hemlock, cedar, spruce) with a canopy cover of more than 60%. MNR determines deer yards following methods outlined in “Selected Wildlife and Habitat Features: Inventory Manual." Woodlots with high densities of deer due to artificial feeding are not significant.	The GEO database and MNR consultation were used to identify deer winter congregation areas (MNR 2026a).	**Present:** Large deer wintering area associated with the Beverly Swamp and adjacent woodlands identified within proximity to the proposed pipeline route (MNR 2026a).

Rare Vegetation Communities

Wildlife Habitat Type	Criteria	Methods	Habitat Assessment
Sand Barren, Alvar, Cliffs and Talus Slopes	**Sand Barren:** A sand barren area >0.5ha in size. Sand Barrens typically are exposed sand, generally sparsely vegetated and caused by lack of moisture, periodic fires and erosion. 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%. **Alvar:** An Alvar site > 0.5 ha in size. 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 is 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 plants. Undisturbed alvars can be phyto- and zoogeographically diverse, supporting many uncommon or relict plant and animal species. Vegetation cover varies from patchy to barren with a less than 60% tree cover. **Cliff and Talus Slopes:** Most cliff and talus slopes occur along the Niagara Escarpment. A Cliff is vertical to near vertical bedrock >3m in height. A Talus Slope is rock rubble at the base of a cliff made up of coarse rocky debris.	ELC surveys and air photo interpretation were used to assess vegetation communities in proximity to the proposed pipeline route.	To be determined during 2026-2027 field investigations.
Old-growth Forest	Woodland areas 30 ha or greater in size or with at least 10 ha interior habitat assuming 100 m buffer at edge of forest. Old-growth forests are characterized by heavy mortality or 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.	ELC surveys and air photo interpretation were used to assess vegetation communities in proximity to the proposed pipeline route.	To be determined during 2026-2027 field investigations.

Wildlife Habitat Type	Criteria	Methods	Habitat Assessment
Tallgrass Prairie and Savannah	**Tallgrass Prairie:** 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. A tallgrass prairie has ground cover dominated by prairie grasses. An open tallgrass prairie habitat has < 25% tree cover. **Savannah:** 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. A savannah is a tallgrass prairie habitat that has tree cover between 25 – 60%.	ELC surveys and air photo interpretation were used to assess vegetation communities in proximity to the proposed pipeline route.	To be determined during 2026-2027 field investigations.
Other Rare Vegetation Communities	Rare Vegetation Communities may include beaches, fens, forest, marsh, barrens, dunes and swamps. ELC Ecosite codes that have the potential to be a rare ELC Vegetation Type as outlined in appendix M of the Significant Wildlife Habitat Technical Guide (SWHTG). The MNR/NHIC will have up to date listing for rare vegetation communities.	ELC surveys and air photo interpretation will be used to assess vegetation communities in proximity to the proposed pipeline route.	To be determined during 2026-2027 field investigations.

Specialized Habitat for Wildlife

Wildlife Habitat Type	Criteria	Methods	Habitat Assessment
Waterfowl Nesting Area	A waterfowl nesting area extends 120 m from a wetland (> 0.5 ha) or a wetland (>0.5ha) and any small wetlands (0.5ha) within 120m 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. Upland areas should be at least 120 m wide so that predators such as raccoons, skunks, and foxes have difficulty finding nests. Wood Ducks (*Aix sponsa*) and Hooded Mergansers (*Lophodytes cucullatus*) utilize large diameter trees (>40 cm DBH) in woodlands for cavity nest sites.	ELC surveys, wildlife habitat assessment, and air photo interpretation will be used to assess features in proximity to the proposed pipeline route that may support nesting waterfowl.	**Candidate:** Suitable habitat may be present near the proposed pipeline route in the upland areas near the wetland areas. To be determined during 2026-2027 field investigations.

Wildlife Habitat Type	Criteria	Methods	Habitat Assessment
Bald Eagle and Osprey nesting, Foraging, and Perching Habitat	Nests are associated with lakes, ponds, rivers or wetlands along forested shorelines, islands, or on structures over water. Osprey (*Pandion haliaetus*) nests are usually at the top of a tree whereas Bald Eagle (*Haliaeetus leucocephalus*) 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).	ELC surveys, wildlife habitat assessments, air photo interpretation and wildlife habitat assessment will be used to assess features in proximity to the proposed pipeline route that may support nesting, foraging and perching habitat for large raptors.	**Candidate:** Suitable habitat may be present near the proposed pipeline route in the forested areas near the wetland areas. To be determined during 2026-2027 field investigations.
Woodland Raptor Nesting Habitat	All natural or conifer plantation woodland/forest stands >30ha with >10ha of interior habitat. Interior habitat determined with a 200m buffer. 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 Cooper's Hawk (*Accipiter cooperii)* nest along forest edges sometimes on peninsulas or small off-shore islands. In disturbed sites, nests may be used again, or a new nest will be in close proximity to old nests.	ELC surveys, wildlife habitat assessment, and GIS analysis were used to assess features in proximity to the proposed pipeline route that may support nesting habitat for woodland raptors.	**Candidate:** Suitable forests (i.e., >10 ha of interior habitat) present within proximity to the proposed pipeline route. To be determined during 2026-2027 field investigations.
Turtle Nesting Areas	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 marshes, lakes, and rivers are most frequently used.	ELC surveys, wildlife habitat assessment, and air photo interpretation will be used to assess features in proximity to the proposed pipeline route that may support turtle nesting areas.	**Candidate:** Suitable habitat may be present near the proposed pipeline route in the more open areas near the wetland areas. To be determined during 2026-2027 field investigations.
Seeps and Springs	Any forested area (with <25% meadow/field/pasture) within the headwaters of a stream or river system. Seeps and springs are important feeding and drinking areas especially in the winter and will typically support a variety of plant and animal species.	Surveys and air photo interpretation will be used to assess areas/features of groundwater upwelling, including seeps and springs.	**Candidate:** To be determined during 2026-2027 field investigations.

Wildlife Habitat Type	Criteria	Methods	Habitat Assessment
Amphibian Breeding Habitat (Woodland and Wetland)	**Amphibian Breeding Habitat (Woodland):** Presence of a wetland, lake or pond of area >500m^2 (about 25m diameter) within or adjacent (within 120m) to a woodland (no minimum size). The wetland, lake or pond and surrounding forest, would be the candidate SWH. Some small wetlands may not be mapped and may be important breeding pools for amphibians. Woodlands with permanent ponds or those containing water in most years until mid-July are more likely to be used as breeding habitat. **Amphibian Breeding Habitat (Wetland):** Wetlands >500m^2 (about 25m diameter), supporting high species diversity are significant; some small or ephemeral habitats may not be identified on MNR mapping and could be important amphibian breeding habitats. 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. American Bullfrogs (*Lithobates catesbeianus*) require permanent water bodies with abundant emergent vegetation.	ELC surveys and wildlife habitat assessments will be used to assess features in proximity to the proposed pipeline route that may support woodland breeding amphibians.	**Candidate:** Suitable habitat may be present near the proposed pipeline route in the surrounding woodland and wetland habitats. To be determined during 2026-2027 field investigations.
Woodland Area-sensitive Bird Breeding Habitat	Habitats where interior forest breeding birds are breeding, typically large mature (>60 yrs old) forest stands or woodlots >30 ha. Interior forest habitat is at least 200 m from forest edge habitat.	ELC surveys, wildlife habitat assessments, air photo interpretation, and GIS analysis were used to determine whether woodlots that occurred in proximity to the proposed pipeline route that were >30 ha with interior habitat present (>200 m from edge).	**Candidate:** Suitable forests (i.e., >30 ha with interior habitat) present in proximity to the proposed pipeline route. To be determined during 2026-2027 field investigations.

Habitat For Species of Conservation Concern

Wildlife Habitat Type	Criteria	Methods	Habitat Assessment
Marsh Bird Breeding Habitat	Nesting occurs in wetlands. All wetland habitat is to be considered as long as there is shallow water with emergent aquatic vegetation present. For Green Heron (*Butorides virescens*), 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.	ELC surveys wildlife habitat assessments, and air photo interpretation were used to identify marshes with shallow water and emergent vegetation in proximity to the proposed pipeline route that may support marsh breeding birds.	**Candidate:** Suitable habitat may be present near the proposed pipeline route in the marsh wetland habitats. To be determined during 2026-2027 field investigations.
Open Country Bird Breeding Habitat	Large grassland areas (including natural and cultural fields and meadows) >30 ha. 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). Grasslands 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.	ELC surveys, wildlife habitat assessments, air photo interpretation, and GIS analysis were used to identify grassland communities in proximity to the proposed pipeline route that may support area-sensitive breeding birds.	**Candidate:** This SWH is considered likely absent due to the lack of large grasslands and field >30 ha. To be determined during 2026-2027 field investigations.
Shrub/Early Successional Bird Breeding Habitat	Large field areas succeeding to shrub and thicket habitats >10 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 live-stock pasturing in the last 5 years). Shrub thicket habitats (>10 ha) are most likely to support and sustain a diversity of these species. Shrub and thicket habitat sites considered significant should have a history of longevity, either abandoned fields or pasturelands.	ELC surveys, wildlife habitat assessments, air photo interpretation, and GIS analysis were used to identify large communities that may support shrub/early successional breeding birds.	**Candidate:** Suitable habitat may be present near the proposed pipeline route in the surrounding thicket habitats. To be determined during 2026-2027 field investigations.
Terrestrial Crayfish	Wet meadow and edges of shallow marshes (no minimum size) should be surveyed for terrestrial crayfish. Constructs burrows in marshes, mudflats, meadows, the ground can’t be too moist. Can often be found far from water. Both species are a semi-terrestrial burrower which spends most of its life within burrows consisting of a network of tunnels. Usually, the soil is not too moist so that the tunnel is well formed.	ELC surveys were used to identify shallow marsh and meadow marsh communities that occurred in proximity to the proposed pipeline route; searches for crayfish chimneys will be conducted during wildlife habitat assessments.	**Candidate:** Suitable habitat may be present near the proposed pipeline route in the surrounding wetland habitats. To be determined during 2026-2027 field investigations.

Wildlife Habitat Type	Criteria	Methods	Habitat Assessment
Special Concern and Rare Wildlife Species	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.	ELC surveys, wildlife habitat assessment, and air photo interpretation will be used to assess features in proximity to the proposed pipeline route that may support SOCC.	**Candidate:** Candidate habitat for SOCC to be assessed during 2026-2027 field investigations

Animal Movement Corridors

Wildlife Habitat Type	Criteria	Methods	Habitat Assessment
Amphibian Movement Corridor	Movement corridors between breeding habitat and summer habitat. Movement corridors must be determined when Amphibian breeding habitat - wetland is confirmed as SWH. Corridors may be found in all ecosites associated with water.	Identified after Amphibian Breeding Habitat - Wetland is confirmed. Movement corridors should be considered when amphibian breeding habitat is confirmed as SWH from Amphibian Breeding Habitat (Wetland).	**Candidate:** Amphibian movement corridors are likely present along watercourses in proximity to the proposed pipeline route.
Deer Movement Corridor	Movement corridor must be determined when Deer Wintering Habitat is confirmed as SWH. Corridors may be found in all forested ecosites.	Movement corridors should be considered when Deer Wintering Areas are identified.	**Candidate:** Deer movement corridor anticipated to/from the Deer Wintering Area to the west along hedgerows, east along Spencer Creek, and south along riparian vegetation.

References

Ministry of Natural Resources (MNR). 2026a. Geospatial Ontario. Accessed October 2026. Available online: https://www.ontario.ca/page/geospatial-ontario?x=15&y=13

Ontario Ministry of Natural Resources (OMNR). 2015. Significant Wildlife Habitat Criteria Schedules For Ecoregion 6E. January 2015. MNR Southern Region Resources Section, Peterborough, Ontario. 38 pp.

Table D-2 Habitat Potential for Species at Risk in Proximity to the Proposed Pipeline Route

Plants

Species	Habitat Preference	Habitat Potential
American Chestnut (*Castanea dentata)*	Grows in rich mixed and deciduous forests, frequently with oak; most populations have been decimated by chestnut blight (Nixon 1997). Typical habitat is upland deciduous forest on acid to neutral, sandy soil (COSEWIC 2004).	Suitable habitat for the species may be present in proximity to the proposed pipeline route where deciduous forests occur. A botanical inventory will be completed in 2026-2027 to confirm species presence or absence.
American Columbo (*Frasera caroliniensis)*	Occurs in a variety of habitats but is most commonly associated with dry open forested slopes but can be found in clearings and thickets as well as swampy areas; Its long-life span may allow for persistence in sub-optimal habitats (COSEWIC 2006). Grows in dry to moist deciduous forests and openings (Reznicek et al. 2011).	Suitable habitat for the species may be present in proximity to the proposed pipeline route where openings occur in thickets or deciduous forests. A botanical inventory will be completed in 2026-2027 to confirm species presence or absence.
Black Ash (*Fraxinus nigra)*	Black Ash occurs as a pure stand or in mixed stands with Black Spruce (*Picea mariana*), Balsam Fir (*Abies balsamea*), Eastern White Cedar (*Thuja occidentalis*), Speckled Alder (*Alnus incana* ssp. Rugosa), Red Maple (*Acer rubrum*), and Silver Maple (*Acer saccharinum*); tolerates standing water, intolerant of shade. (Farrar 1995).	Suitable habitat for the species may be present in proximity to the proposed pipeline route in the surrounding wetland habitats. A botanical inventory will be completed in 2026-2027 to confirm species presence or absence.
Butternut (*Juglans cinerea)*	Butternut is a medium-sized tree commonly found in a variety of habitats throughout Southern Ontario, including woodlands and hedgerows. Ideal habitat includes rich, moist, and well-drained soils often found along streams, but may also be found on well-drained gravel sites, particularly those made of limestone (COSEWIC 2003). Butternut is intolerant of shade and occurs singly or in small groups with a variety of associates (Farrar 1995).	Suitable habitat exists for this species may be present in proximity to the proposed pipeline route within any deciduous or mixed woodlands and hedgerows. A botanical inventory will be completed in 2026-2027 to confirm species presence or absence.
Downy Yellow False Foxglove (*Aureolaria virginica)*	Found in dry woods with pine (*Pinus sp.*), hickory (*Carya sp.*), and/or oak (*Quercus sp*,; Reznicek et al. 2011). At the extant Ontario sites, this species is also associated with various combinations of Black Oak (*Quercus velutina*), Northern Red Oak (*Quercus rubra*) and White Oak (*Quercus alba*), with white oak being present at every site. (NHIC 2012).	Suitable habitat for the species may be present in proximity to the proposed pipeline route in more upland forested habitats. A botanical inventory will be completed in 2026-2027 to confirm species presence or absence.
Eastern Flowering Dogwood (*Cornus florida)*	Eastern Flowering Dogwood is an understory plant of dry to fresh deciduous and mixed forests, which frequently grows on the tops of slopes or other dry microsites, and occasionally in moister areas where no flooding occurs; preferred soils range from sand to sandy loam and clay loam (COSEWIC 2007)	Suitable habitat exists for this species may be present in proximity to the proposed pipeline route within any deciduous or mixed woodlands. A botanical inventory will be completed in 2026-2027 to confirm species presence or absence.
Fern-leaved Yellow False Foxglove (*Aureolaria pedicularia)*	Fern-leaved Yellow False Foxglove is found in Oak, oak-pine, and oak-hickory savanna, including old, forested dunes; transition zones between savanna and marsh. This species appears very associated to the presence of Black Oaks (Rezniek et.al. 2011).	Suitable habitat for the species may be present in proximity to the proposed pipeline route around the upland forested habitats and transition zones between the meadow and marsh habitats. A botanical inventory will be completed in 2026-2027 to confirm species presence or absence.

Species	Habitat Preference	Habitat Potential
Few-flowered Club-rush (*Trichophorum planifolium)*	Few-flowered Club-rush requires open-canopied forest with little shrub cover and excellent drainage (Crins 1986). It is found on semi-open south- or west-facing slopes in deciduous and mixed woods. It is only known to occur in southern Ontario in the valley of the Rouge River in the eastern region of Metropolitan Toronto and in Hamilton (COSEWIC 2000).	Suitable habitat for the species may be present in proximity to the proposed pipeline route. A botanical inventory will be completed in 2026-2027 to confirm species presence or absence.
Red Mulberry (*Morus rubra)*	Red Mulberry occurs in moist forests habitats including river valleys, floodplains, swales, sandspits, and slopes of the Niagara Escarpment (COSEWIC 2014b).	Suitable habitat exists for this species may be present in proximity to the proposed pipeline route within moist forests and thickets. A botanical inventory will be completed in 2026-2027 to confirm species presence or absence.
Spotted Wintergreen (*Chimaphila maculata)*	Occurs in a variety of forested habitats including coniferous, mixed, and deciduous forests, as well as dry sand communities (Freeman 2009).	Suitable habitat for the species may be present in proximity to the proposed pipeline route. A botanical inventory will be completed in 2026-2027 to confirm species presence or absence.

Insects

Species	Habitat Preference	Habitat Potential
Gypsy Cuckoo Bumble Bee (*Bombus bohemicus)*	Gypsy Cuckoo Bumble Bees are found in various habitats such as meadows, woodlands, boreal forest, and agricultural and urban areas (MNR 2026c). They are generalist foragers but are associated with flowering plants in wooded areas and blueberry fields (COSEWIC 2014a). They do not build nests but are obligate parasites of other bumblebee species (e.g. Rusty-patched [*Bombus affinis*] and Yellow-banded Bumble Bees [*Bombus terricola*]) and have been found in the same habitat as their hosts, which nest in abandoned underground rodent burrows (MNR 2026c). Their preferred overwintering habitat is unknown but bumble bees generally overwinter underground, in mulch, and in rotting logs near nest sites (COSEWIC 2014a).	Suitable habitat for this species may be present in proximity to the proposed pipeline route within the open meadow, woodland, agricultural, and urban habitats where nectaring flowers are present. A habitat assessment and surveys will be completed in 2026-2027.

Reptiles

Species	Habitat Preference	Habitat Potential
Blanding's Turtle (*Emydoidea blandingii*)	Blanding's Turtles frequent lakes, ponds, and marshes, and prefer shallow water with abundant aquatic vegetation and a soft bottom (MacCulloch 2002). Nesting occurs in dry conifer or mixed hardwood forests, up to 410 m from any body of water, in loose substrates including sand, organic soil, gravel and cobblestone. Turtles may also nest along gravel roadways (COSEWIC 2005).	Suitable habitat for this species may be present in proximity to the proposed pipeline route within the PSWs. A habitat assessment and surveys will be completed in 2026-2027.
Spiny Softshell (*Apalone spinifera*)	Found along lakes and large rivers. Requires sandy beaches or riverbanks for nesting, shallow soft-bottomed water bodies to function as nurseries or refugia, basking areas and deep pools for thermoregulation, and riffle areas for foraging (COSEWIC 2002).	This species is associated with the Sydenham and Thames Rivers and not known to occur in proximity to the proposed pipeline route. Suitable habitat for this species is considered absent in proximity to the proposed pipeline route.

Amphibians

Species	Habitat Preference	Habitat Potential
Jefferson Salamander (*Ambystoma jeffersonianum*)	The Jefferson Salamander is terrestrial during the adult stage and inhabits upland deciduous forests with suitable breeding areas including limestone sinkhole ponds, kettle ponds, vernal pools and other natural basins. Breeding areas are often ephemeral and are fed by spring runoff, groundwater, or springs. In Canada, the species is associated with mature, Carolinian forests. Suitable habitat is often only available in fragmented deciduous woodlots of marginal agricultural land (COSEWIC 2010).	This species is not known to occur in proximity to the proposed pipeline route (Ontario Nature 2019). Suitable habitat for this species is considered absent in proximity to the proposed pipeline route.
Unisexual Ambystoma (Jefferson Salamander dependent population) (*Ambystoma laterale – (2) jeffersonianum*)	The Unisexual Ambystoma are found near or within deciduous or mixed-wood upland forests that contain suitable breeding ponds (e.g. limestone sinkhole ponds, kettle ponds, and other natural basins). Breeding areas are often ephemeral and are fed by spring runoff, groundwater, or springs. This species is found in the same habitat as Jefferson Salamander, who they use as sperm donors to complete their life cycle (COSEWIC 2016). Outside of the breeding season, this species lives in leaf litter, under logs, and in underground cavities close to their breeding habitats. Mammal burrows, rock crevices, or underground cavities below the frost line are used to overwinter (MNR 2026c).	This species is not known to occur in proximity to the proposed pipeline route (Ontario Nature 2019). Suitable habitat for this species is considered absent in proximity to the proposed pipeline route.

Mammals

Species	Habitat Preference	Habitat Potential
Eastern Red Bat (*Lasiurus borealis)*	The Eastern Red Bat is a solitary, tree dwelling species that roosts in deciduous and coniferous forests. Maternity roosts tend to be in tall, large diameter trees (COSEWIC 2023).	Suitable maternity roosting habitat may be present in forested areas along the proposed pipeline route. Candidate maternity roost trees will be identified within suitable ELC communities. Limits of clearing to be determined in 2026-2027.
Eastern Small-footed Myotis (*Myotis leibii)*	The Eastern Small-footed Myotis hibernates in the fall in caves and abandoned mines. During summer months, this species roosts in crevices and cracks associated with rocky sites but may also use old buildings (e.g., barns, and houses) (Humphrey 2017).	Suitable roosting habitat may be available in barns and old structures; however, no structures are proposed for removal. Suitable maternity roosting habitat may also be present in forested areas along the proposed pipeline route. Candidate maternity roost trees will be identified within suitable ELC communities. Limits of clearing to be determined in 2026-2027.
Hoary Bat (*Lasiurus cinereus)*	The Hoary Bat is a solitary, tree dwelling species that roosts in deciduous and coniferous forests. Maternity roosts tend to be located in tall, large diameter trees (COSEWIC 2023).	Suitable maternity roosting habitat may be present in forested areas along the proposed pipeline route. Candidate maternity roost trees will be identified within suitable ELC communities. Limits of clearing to be determined in 2026-2027.
Little Brown Myotis (*Myotis lucifugus)*	The Little Brown Myotis is a widespread species commonly found in warm sites such as buildings, attics, roof crevices, under bridges or in cavities of canopy trees in the forest (COSEWIC 2013).	Suitable roosting habitats may be available in barns and old structures; however, no structures are proposed for removal. Suitable maternity roosting habitat may be present in forested areas along the proposed pipeline route. Candidate maternity roost trees will be identified within suitable ELC communities. Limits of clearing to be determined in 2026-2027.

Species	Habitat Preference	Habitat Potential
Northern Myotis (*Myotis septentrionalis)*	The Northern Myotis is found in upland forests, typically foraging for aerial insects in the forest understory. Maternity roosts are typically located under the bark of large trees and are rarely found in human-made structures. Hibernating colonies typically reside in cave crevices (COSEWIC 2013).	Suitable maternity roosting habitat may be present in forested areas along the proposed pipeline route. Candidate maternity roost trees will be identified within suitable ELC communities. Limits of clearing to be determined in 2026-2027.
Silver-haired Bat (*Lasionycteris noctivagans)*	The Silver-haired Bat is a solitary, tree dwelling species that forms maternity colonies in tree cavities, hollow trees and under bark (COSEWIC 2023).	Suitable maternity roosting habitat may be present in forested areas along the proposed pipeline route. Candidate maternity roost trees will be identified within suitable ELC communities. Limits of clearing to be determined in 2026-2027.
Tri-coloured Bat (*Perimyotis subflavus)*	Tri-coloured Bats prefer partly open habitat such as fields with large trees or woodland edges while avoiding both denser and more open areas. In the summer, Tri-coloured Bats roost in trees or dead clusters of leaves on trees (COSEWIC 2013).	Suitable maternity roosting habitat may be present in forested areas along the proposed pipeline route. Candidate maternity roost trees will be identified within suitable ELC communities. Limits of clearing to be determined in 2026-2027.

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