March 29, 2026

Mr. Marc Davidson
Manager of Planning
City of Thorold
3540 Schmon Parkway
PO Box 1044
Thorold, ON
L2V 4A7

Dear Mr. Davidson,

RE: **Response to Niagara Region Comments Regarding Wildlife Movement Linkages – Upper's Lane Development (Thorold 2 Lands), City of Thorold**

This correspondence has been prepared as a response to Niagara Region comments (dated May 28, 2024) related to the Wildlife Movement Linkages and Refined Lot Boundaries memorandum (dated May 7, 2024), prepared as part and the Upper's Lane Development (Thorold 2), in the City of Thorold. This letter is supplemental to the May 7, 2024 Wildlife Movement Linkages and Refined Lot Boundaries memorandum and provides additional observations and assessments related to potential linkages in the area. This letter is intended to be read in conjunction with the EIS and May 7, 2024 Wildlife Movement Linkages and Refined Lot Boundaries memorandum.

BACKGROUND

Descriptions of the Subject Property have been previously provided in the EIS and memorandum, however for context and reference, this section will provide a description of Natural Environment System (NES) features and land uses in the area.

NES features on the property are generally limited to the woodland, which is located in the approximate center of the lands. The woodland on this property was described as deciduous forest and consists of two sections which are separated by a TransCanada pipeline easement and associated infrastructure. The northern portion of the woodland measures approximately 4.3ha in size, while the southern woodland measures approximately 8.9ha in size.

Other NES features in the vicinity of the property consist of Beaver Dams Pond, which is located approximately 700m north of the woodland, as well as Beaver Dams Creek, which is located approximately 450m east of the woodland, and several scattered pockets of isolated woodland, thicket and wetland habitat. The location of NES features in the vicinity of the Subject Lands are illustrated in the attached Figure 1 and have been assigned a numerical identifier for reference. Brief descriptions of each are provided in Table 1 below.

Table 1. Description of Natural Environment System Features in the Vicinity of the Subject Property.

Natural Area	Vegetation Type	Size (ha)	Proximity
1	Woodland	1.2	700m west of woodland
2	Woodland and thicket	2.7	600m northwest of woodland
3	Thicket and woodland	1.2	610m north of woodland
4	Woodland and thicket	1.2	720m northeast of woodland
5	Thicket and meadow marsh	>6.9ha Watercourse riparian area	460m east of woodland
6	Woodland and meadow marsh	1.9	280m southeast of woodland

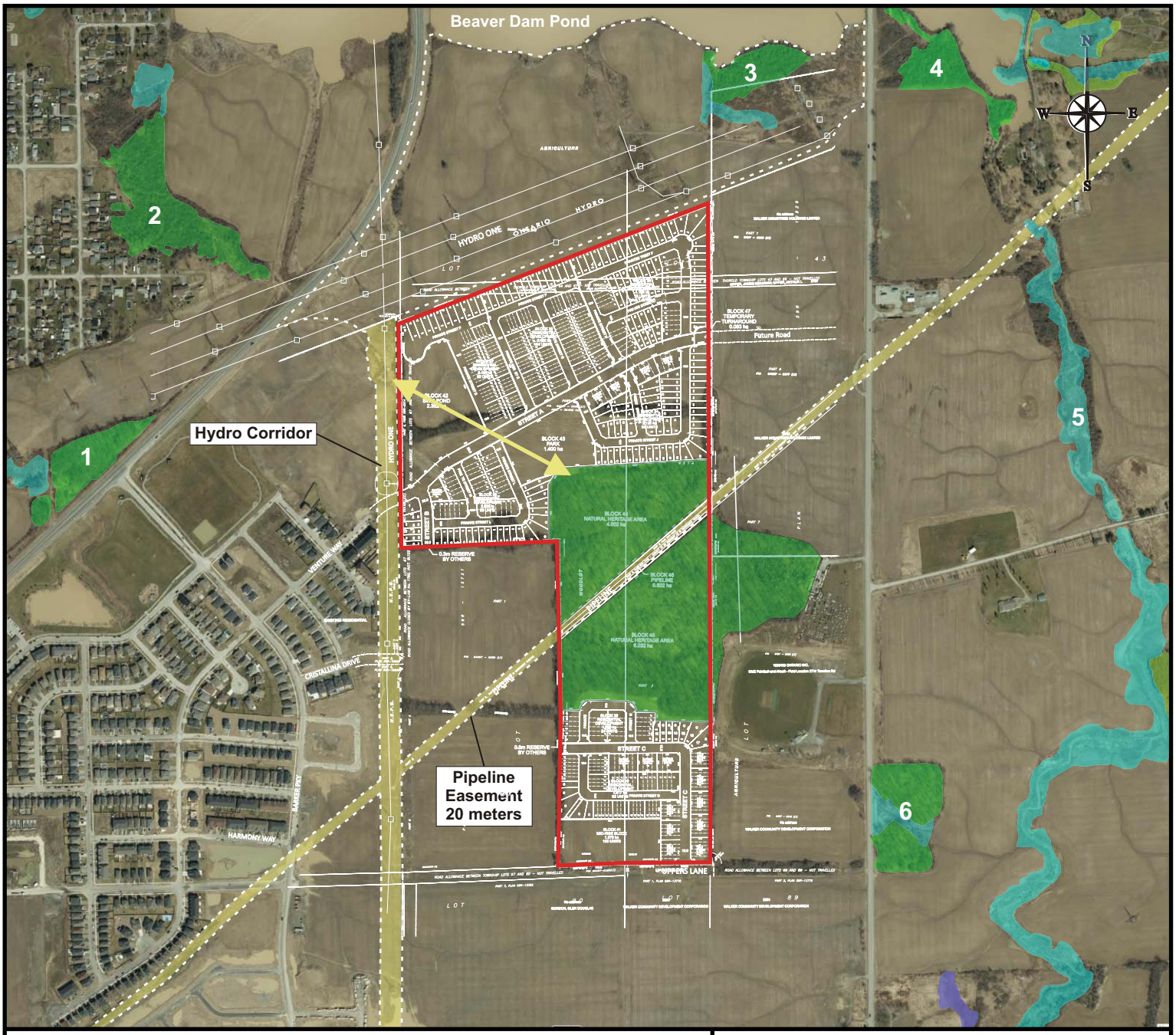
Assessments conducted as part of the EIS indicate that the woodland on this property is providing habitat for a variety of bird species, as well as Eastern Cottontail, Coyote, Grey Squirrel, Racoon and White-tailed Deer. Further assessments of this woodland using wildlife signs indicate that the woodland is providing habitat for a resident population of grey squirrel and eastern cottontail. Track evidence and the absence of any potential naturally vegetated connections to adjacent natural areas suggest these species are generally confined to the woodland.

Track evidence suggests that Racoons may be using the woodland periodically or potentially residing in a tree within the woodland. Because racoons are not at high risk for predation, it is possible that racoons may be moving between the woodland and adjacent residential areas to the west to feed.

Our assessments of this woodland suggested that White-tailed Deer are using the woodland incidentally for foraging and cover primarily during the summer and fall. This use is primarily related to food availability, which consists of agricultural crops (corn and soybeans) in the fall, as well as Hickory and Oak mast in the summer and fall. Evidence of deer use of the woodland during the winter appears to be limited, as high value food items are not generally available.

Use of the woodland by Coyotes is also considered to be incidental and primarily used for cover and during hunting movements. No potential den sites were observed on the property. It is likely that this woodland forms part of a home range for a resident population of Coyotes, which will extend far beyond the boundaries of this property. Use of the woodland by Coyotes was not detected during winter surveys.

To supplement our observations of the woodland and surrounding area, we reached out to Niagara Region and Ministry of Natural Resources and Forestry (MNRF) staff to obtain any additional available information related to wildlife in the area. Niagara Region staff indicated that they have no additional information related to the wildlife observations in the area. MNRF staff were able to provide summary hunter observation and reporting data for White-tailed Deer in the Wildlife Management Unit, however this information is not specific to this geographic area. Data provided indicates that the daily observed numbers of White-tailed Deer for the WMU is generally stable of the past 17 years.



Legend

- Property Boundary
- Mapped Extent of Significant Woodlands
- Mapped Extent of Other Woodlands
- Mapped Extent of Evaluated Wetlands
- Mapped Extent of Other Wetlands
- Utility Corridors in the Vicinity of the Subject Property

Notes: Development plan illustrated is conceptual only and intended for illustration purposes.

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Figure 1
Natural Environment Features in Proximity to the Subject Property

Wildlife Corridor Memo
Thorold Two Development

Prepared for: **QuadReal Property Group**

Prepared by: COLVILLE CONSULTING INC.

DATE: February 2026

FILE: C22094

In the absence of any primary observation data for NES features in the vicinity of the property, we conducted an assessment of habitat and movement requirements for terrestrial wildlife species known to occur in this portion of the Niagara Region. This summary table is provided as Appendix A.

RESPONSE TO NIAGARA REGION COMMENTS

In response to the Wildlife Movement Linkages and Refined Lot Boundaries memorandum (dated May 7, 2024), Niagara Region staff provided comments in an email dated May 28, 2024. Niagara Region comments are provided below in italic, along with a response.

Niagara Region Comments

The Region continues to be concerned with the lack of connectivity proposed between the Significant Woodland feature and the adjacent natural features to the north and east. Under current conditions wildlife dispersal can happen freely as the agricultural use provides a food source and lack of any barrier. With the removal of the food source and introduction of significant barriers to movement (i.e. residential dwellings and associated infrastructure) a formal corridor should be maintained to ensure no negative impact to the Regional Natural Environment System.

It is the position of the Region that the use of the existing pipeline lands as a wildlife corridor is problematic because those lands are maintained for infrastructure and not protected for environmental conservation. The Natural Heritage Reference Manual (NHRM) states that "Connections must be designed to be "ecologically functional," that is they must serve to function for the species, or groups of species, that may use them, and not simply be open space linkages." There is a high probability that the existing corridor will require vegetation removal to maintain the pipeline and will not be ecologically functional.

Further, the eastern connection requires a longer distance to the adjacent core natural area than the northern corridor. The NHRM also states that 'Having more than a single linkage in a system is desirable. Such redundancy should be considered as a precautionary approach that enables the system to retain overall connectedness if a linkage is interrupted by future activities or natural events. In this way, alternative or multiple linkages in the system can assist in maintaining ecological functions, as well as the overall ecological integrity of a natural heritage system.' In this case due to the above noted concerns regarding the eastern corridor and the direction for the NHRM to provide multiple corridors, the Region suggests the incorporation of a northern corridor is appropriate.

The northern corridor is preferred because of the reduced distance and reduction in conflicting landuse and infrastructure between the woodland and adjacent natural heritage features and areas. In addition a portion of an existing hedgerow can be maintained to facilitate continued connection. It should be noted that that a minimum corridor width for generalist species has been determined by Environment and Climate Change Canada to be 50m.

Based on the above, the current concept is not consistent with Niagara Official Plan (NOP) Policy 3.1.20.2 which requires in part "that an EIS shall demonstrate how enhancement to ecological function, ecological integrity, or biodiversity of the natural environment system can be achieved and will be implemented though for example the establishment or enhancement of linkages or connectivity between key natural heritage features, and/or natural heritage features and areas."

Colville Consulting Reply

As illustrated in Figure 1, NES features to the north of the property consist of two small pockets of woodland and thicket (Areas 3 and 4 on Figure 1). Observations of habitat conditions in Area 3 indicate that this area consists primarily of a Buckthorn and Hawthorn dominated thicket, with scattered pockets of Manitoba Maple, Sugar Maple, White Elm and Cherry also occurring. This thicket and woodland community measures approximately 1.2ha in size and is located approximately 610m north of the woodland on this property. Area 3 is located approximately 810m west of Area 2, with the lands between these areas consisting of agricultural lands and Highway 58.

An assessment of vegetation conditions in Area 4 was not completed as part of this reply, however from a review of air photos and observations from adjacent lands, vegetation in Area 4 appear to consist of a mix of woodland and thicket. Area 4 is located approximately 150m east of Area 3, with the lands between these two areas consisting of Thorold Townline Road and periodically mowed thicket and meadow associated with a hydro corridor. Area 4 is loosely connected with a tributary to Beaver Dams Creek, which is located approximately 460m east of the woodland on this property and has been designated as Area 5 on Figure 1.

As illustrated in Figure 1, wildlife movement opportunities between the woodland on the property and natural areas to the north and east will be maintained via the pipeline easement, which connects directly to Area 5. Because this easement houses a major natural gas distribution line, it is expected that this easement and the associated infrastructure will remain in place for the foreseeable future and therefore provide what can be assumed to be a permanent connection between the woodland on this property and NES areas in the vicinity of the property.

In their comments, Region staff state that use of the pipeline easement as a wildlife movement corridor is problematic because those lands are maintained for infrastructure and not protected for environmental conservation. It is further stated in their comments that the pipeline easement will not be ecologically functional due to the ongoing vegetation maintenance within the easement, although there is no further elaboration on how this comment is supported.

Vegetation within the pipeline easement on the property has been maintained in the past and is likely to be maintained in the future. Outside of the woodland, lands associated with the pipeline easement are currently farmed, similar to most of the lands adjacent to this property. Although lands to the east of the property are outside of the scope of this proposal, it is assumed that these lands will be farmed until a future development is implemented. Wildlife movement will be unchanged to the east until such time as development occurs on those lands.

Once lands to the east have been developed, it is assumed that vegetation within the pipeline easement will be left to naturalize to meadow and thicket, with periodic mowing expected. Establishing naturalized vegetation in the easement may provide improved cover conditions for some wildlife species that may move between the woodland and Area 5, however based on the species known to occur in this area, most of these species are not highly dependant on naturalized vegetation to support movement.

In addition to the pipeline easement, it is also expected that wildlife movement will occur across the park and stormwater blocks, which connect to a north-south hydro corridor to the west of the lands. Vegetation within this hydro corridor adjacent to the property generally consists of periodically mowed meadow, with the northern portion of this corridor currently farmed. The hydro corridor west of the property connects to a major hydro corridor north of the lands, which are currently farmed and expected to remain in agricultural production for the foreseeable future.

When considering the ecological functionality of a movement corridor between natural areas, it is necessary to consider the species expected to use the corridor, as well as understand the connectivity of natural areas. Because the NES areas on and adjacent to the property are generally isolated by tracts of agricultural lands and transportation infrastructure, terrestrial wildlife movement between these areas appears to be limited. Establishing a corridor north of the woodland along the east property line would only serve to provide a theoretical linkage to agricultural lands associated with the hydro corridor north of the property and not provide a direct connection to any NES areas.

Included within Niagara Region comments is a reference to Environment and Climate Change Canada determining that a minimum corridor width for generalist species should be 50m. No citation was provided with the comment, but it is assumed that this reference was extracted from a portion of the documented titled How Much Habitat is Enough? (Environment Canada 2013). If this is the reference document, then the cited reference was provided out of context. This document states that corridor widths should ultimately be determined based on a functional assessment of what the corridor is expected to achieve, and what species the corridor is expected to accommodate.

Based on our assessments and observations, the woodland on this property is providing very limited habitat functions for terrestrial wildlife species and no data is available for identified NES features in the vicinity of the property. Of the observed species using the woodland, Eastern Cottontail, Coyote, Grey Squirrel and Racoon require minimal to no corridor to move between habitat patches, and therefore the potential movement corridors to be maintained in the area are sufficient for movement of these species across the landscape.

White-tailed deer were also documented using the woodland. Use is primarily incidental and related to foraging and cover during times when food is available in agricultural lands. With the conversion of agricultural lands to residential, potential use of this woodland by white-tailed deer will be reduced. In the event that deer would continue to move to this woodland seasonally to utilize available mast, movement opportunities provided by the corridors illustrated in Figure 1 will be sufficient to maintain access to and from this woodland.

Because no specific data is available for adjacent NES areas, the species and assessment included in Appendix A is of assistance to understand what corridor requirements are needed to support other species that may occur in this area. As most of the terrestrial wildlife species expected to occur in this portion of Niagara require minimal to no corridor to move between habitat patches, it continues to be our assessment that the potential movement opportunities provided in Figure 1 are functionally appropriate. There is no ecological rationale for establishing a dedicated wildlife corridor between the woodland on this property and the thicket and woodland north of the property (Area 3).

Based on the information and recommendations provided in the EIS, the Wildlife Movement Linkages and Refined Lot Boundaries memorandum and the above, it continues to be our position that the proposal is consistent with the intent of Niagara Official Plan policy 3.1.20.2.

Please do not hesitate to contact the undersigned should you have any questions regarding this correspondence.

Respectively submitted by:

Ian Barrett, M.Sc.
Colville Consulting Inc.

Appendix A

Terrestrial Wildlife of the Niagara Region

Species	Typical Habitat	Potential Habitat in Woodland	Potential Habitat in Adjacent Areas	Linkage Requirements
White-tailed Deer	Variable. Edge habitats (forest openings, abandoned farms, and riparian zones) with abundant food preferred for summer habitat. Winter habitat influenced by snow depth.	Yes. Woodland documented to be used incidentally, primarily in summer and fall when agricultural crops/food sources are present.	Yes. Primarily agricultural lands as a food source. No other significant habitat in the area.	Minimal. Use of woodland primarily dependant on agricultural crops adjacent. Elimination of agricultural crops with residential development will reduce deer use of the area.
Coyote	Variable and highly adaptable. Agricultural lands, forest and thicket habitats. Also common in urban areas like parks, ravines, and industrial sites. Often live near humans in urban areas due to abundant food and shelter.	Yes. Woodland provides cover and incidental foraging opportunities for small mammals.	Yes. Agricultural lands provide incidental foraging opportunities. Any naturally vegetated areas beyond agricultural lands will provide cover and incidental foraging opportunities for small mammals.	Minimal. Species is adaptable and will use utility corridors for movement. Increasingly considered an urban wildlife species.
Red Fox	Variable and highly adaptable. Agricultural lands, forest and thicket habitats. Also common in urban areas like parks, ravines, and industrial sites. Often live near humans in urban areas due to abundant food and shelter.	Yes. Use not documented. Woodland provides potential cover and incidental foraging opportunities for small mammals.	Yes. Use not documented. Agricultural lands provide incidental foraging opportunities. Any naturally vegetated areas beyond agricultural lands will provide potential cover and incidental foraging opportunities for small mammals.	Minimal. Species is adaptable and will use utility corridors for movement. Considered an urban wildlife species.
Eastern Cottontail	Typically considered an edge species and common in interface between open habitats and thickets and woodlands. Common in	Yes. Woodland providing habitat for a presumed resident population of Eastern Cottontails.	Yes. Adjacent agricultural lands will provide foraging opportunities.	None. Considered an urban wildlife species.

	parks, gardens and backyards in urban areas.			
Red Squirrel	Typically coniferous and mixed forests. Often also found in suburban areas with mature trees.	No. Typical habitat not present on property and species not observed during surveys.	No. Typical habitat not present in area.	None. Woodland not typical habitat for this species.
Eastern Gray Squirrel	Deciduous and mixed forests with abundant mast trees. Are highly adapted to urban areas (parks, residential backyards and buildings).	Yes. Resident population in woodland.	Yes. Agricultural lands not providing habitat for this species. Likely present in adjacent naturalized areas.	None. Considered an urban wildlife species and does not require movement corridor.
Eastern Chipmunk	Variable. Deciduous and mixed forests, suburban gardens and parks.	Yes. Potential habitat present in woodland. Species not observed during surveys.	No. Agricultural lands not providing habitat for this species. Adjacent naturalized areas not likely providing habitat for this species.	None. Considered an urban wildlife species and does not require a movement corridor.
Common Raccoon	Variable. Forests, wetlands, farms and urban areas. Prefer areas with nearby water, such as streams and marshes.	Yes. Species present in woodland.	Yes. Agricultural lands providing foraging habitat for this species. Potentially present in adjacent naturalized areas.	None. Considered an urban wildlife species and does not require movement corridor.
Virginia Opossum	Variable. Forests, wetlands and agricultural areas. Highly adaptable to urban areas. Prefer areas with nearby water sources.	Yes. Potential habitat present in woodland. Species not detected during surveys.	Yes. Agricultural lands not providing habitat for this species. Potentially present in adjacent naturalized areas.	None. Considered an urban wildlife species and does not require movement corridor.
Striped Skunk	Variable. Forests, grasslands, wetlands and agricultural areas. Highly adaptable to urban areas.	Yes. Species present in woodland.	Yes. Agricultural lands not providing habitat for this species. Potentially present in adjacent naturalized areas.	None. Considered an urban wildlife species and does not require movement corridor.

Woodchuck	Variable. Dry forests, grasslands, and agricultural areas with loose soil for burrowing.	No. Typical habitat not present on property and species not observed during surveys.	Yes. Agricultural lands not providing habitat for this species. Potentially present in adjacent naturalized areas.	None. Typical habitat not present in woodland.
Ermine	Moist environments including coniferous and deciduous forests, riparian woodlands, marshes and fencerows. Prefer areas with thick understory, brush piles, and coarse woody debris, often near water sources.	No. Typical habitat not present on property. Species not observed during surveys.	Yes. Agricultural lands not providing habitat for this species. Potentially present in some adjacent naturalized areas.	None. Typical habitat not present in woodland.
Woodland Vole	Deciduous forests, particularly those with loose, moist soil and thick leaf litter, allowing for extensive, shallow, underground tunnel systems. They are also commonly found in orchards, brushy areas, hedgerows, and swamp edges.	No. Soils in woodland not typical habitat for species.	No. Typical habitat not present in agricultural areas or adjacent lands.	None. Typical habitat not present in area.
Meadow Vole	Moist, open, low-lying habitats with dense herbaceous cover, such as wet meadows, grasslands, marshes, and abandoned fields	No. Typical habitat not present in woodland.	No. Typical habitat not present in agricultural areas. Likely present in maintained meadows in the area.	None. Typical habitat not present in woodland.
Northern Short-tailed Shrew	Moist habitats with dense ground cover, such as deciduous and coniferous forests, shrubby bogs, marshy areas, and dense, weedy, or brushy areas.	No. Typical habitat not present in woodland.	No. Typical habitat not present in agricultural areas. Potential habitat may be present in adjacent natural areas.	None. Typical habitat not present in woodland.
Star-nosed Mole	Semi-aquatic species. Wet, marshy, and poorly drained	No. Typical habitat not present in woodland.	No. Typical habitat not present in agricultural	None. Typical habitat not present in woodland.

	soils near streams, bogs, swamps, and lakes.		areas. Potential habitat may be present in adjacent natural areas.	
Brewer's Mole	Well-drained, loose, sandy loam soils in deciduous and coniferous forests, shrubby areas, old fields, and occasionally, lawns or pastures.	No. Soils in woodland not typical habitat for species.	No. Typical habitat not present in agricultural areas or adjacent lands.	None. Typical habitat not present in area.
Meadow Jumping Mouse	Moist, dense grassy areas, meadows and forest edges. Often near water.	No. Typical habitat not present in woodland.	No. Typical habitat not present in agricultural areas or adjacent lands.	None. Typical habitat not present in area.
White-footed Mouse	Dry hardwood forests, brushlands and edge habitats with suitable sheltered areas and dry nesting sites.	Yes. Potential habitat in woodland.	Yes. Potential habitat in agricultural area.	None. Considered nuisance/urban wildlife
Deer Mouse	Variable. Will inhabit forests, woodlands, brushy fields and rocky areas. Also highly adaptable to human habitation.	Yes. Potential habitat in woodland.	Yes. Potential habitat in agricultural area.	None. Considered nuisance/urban wildlife
House Mouse	Variable. Highly adaptable. Typically found in association with humans as food source.	Yes. Potential habitat in woodland.	Yes. Potential habitat in agricultural area.	None. Considered nuisance/urban wildlife
Norway Rat	Variable. Highly adaptable. Often found in association with humans as food source.	Yes. Potential habitat in woodland.	Yes. Potential habitat in agricultural area.	None. Considered nuisance/urban wildlife
Eastern Milksnake	Variable. Tends to use open habitats such as meadows, fields and forest edges. Species may be locally common in around farmland adjacent to forested areas. Tolerant of habitat fragmentation.	Yes. Potential habitat in woodland.	Yes. Potential habitat in agricultural area.	Minimal. Regular movement between woodland and habitat patches in the area is unlikely. Species is adaptable and will use utility corridors for movement.

Smooth Greensnake	Species most often found in habitats with grass and other dense vegetation, including prairies, meadows, fields, wetland edges, forest clearings, and open woodlands.	No. Typical habitat not present in woodland.	No. Potential habitat not present in agricultural area.	None. Habitat not present in woodland.
Dekays Brownsnake	Species inhabits forests, forest clearings, meadow, fields, and areas around wetlands. Species is tolerant of edge habitats and can occur in areas of moderate human disturbance.	Yes. Potential habitat in woodland.	Yes. Potential habitat in agricultural area.	Minimal. Regular movement between woodland and habitat patches in the area is unlikely. Species is adaptable and will use utility corridors for movement.
Red-bellied Snake	Species occurs in forests and forest edge habitats, including fields and meadows.	Yes. Potential habitat in woodland.	No. Typical habitat not present in agricultural area.	Minimal. Regular movement between woodland and habitat patches in the area is unlikely. Species is adaptable and will use utility corridors for movement.
Eastern Gartersnake	Species considered a habitat generalist. Can be found in a wide variety of habitats, including mixed forest types, shrublands, fields, rocky areas, and wetland edges. The Eastern Gartersnake can inhabit urban and human-dominated landscapes, such as urban parks, railway corridors, and agricultural edge habitat.	Yes. Potential habitat in woodland.	Yes. Potential habitat in agricultural area.	Minimal. Regular movement between woodland and habitat patches in the area is unlikely. Species is adaptable and will use utility corridors for movement.