Appendix B Species at Risk Screening

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Species at Risk (SAR) Screening T Yellow Creek Geomorphic Systems Master Plan

Common Name	Scientific Name	SARA ¹	ESA ²	Habitat Requirements	Likelihood of Occurrence within Study Area
Amphibians Western chorus frog (Great Lakes St. Lawrence/ Canadian Shield Population)	Pseudacris triseriata	THR	_	In Ontario, habitat of this amphibian species typically consists of marshes or wooded wetlands, particularly those with dense shrub layers and grasses, as this species is a poor climber. They will breed in almost any fishless pond including roadside ditches, gravel pits and flooded swales in meadows. This species hibernates in terrestrial habitats under rocks, dead trees or leaves, in loose soil or in animal burrows. During hibernation, this species is tolerant of flooding (Environment Canada 2015).	Low - No suitable habitat is present within the Study Area.
Anthropods					
American burying beetle	Nicrophorus americanus	EXP	EXP	In Ontario, most occurrences of the American burying beetle are reported in the Mixedwood Plains Ecozone (southern Ontario). This terrestrial species is associated with mature, moderately moist forest habitats with an open understory. Well-drained soils that are not easily crumbled nor composed primarily of sand are preferred (COSEWIC 2011).	Low - No suitable habitat is present within the Study Area.
Gypsy cuckoo bumble bee	Bombus bohemicus	END	END	The Gypsy Cuckoo Bumble Bee is an obligate social parasite that usurps nests of Rusty- patched Bumble Bees and Yellow-banded Bumble Bees to rear its young. Both of these host species are habitat generalists, which primarily use rodent burrows as nest sites (Macfarlane 1974; Colla and Dumesh 2010). Forage habitat occurs in old fields, grasslands, dunes, alvars, woodlands (especially in the spring) and road sides.	Low - No suitable habitat is present within the Study Area.
Monarch	Danaus plexippus	SC	SC	In Ontario, monarch is found throughout the northern and southern regions of the province. This butterfly is found wherever there are milkweed (Asclepias spp.) plants for its caterpillars and wildflowers that supply a nectar source for adults. It is often found on abandoned farmland, meadows, open wetlands, prairies and roadsides, but also in city gardens and parks. Important staging areas during migration occur along the north shores of the Great Lakes (COSEWIC 2010).	Moderate - Milkweed plants observed growing in unmaintained pathways edges and roadside ditches within vicinity of the Study Area. No individuals observed.
Rusty-patched bumble bee	Bombus affinis	END	END	In Ontario, rusty-patched bumble bee is found in areas from the southern Great Lakes – St. Lawrence forest region southwards into the Carolinian forest. It is a habitat generalist, but it is typically found in open habitats, such as mixed farmland, savannah, marshes, sand dunes, urban and lightly wooded areas. It is cold-tolerant and can be found at high elevations. Most recent sightings in Ontario have been in oak savannah habitat with well- drained, sandy soils and moderately open canopy. It requires an abundance of flowering plants for forage. This species most often builds nests underground in old rodent burrows, but also in hollow tree stumps and fallen dead wood (Colla and Taylor-Pindar 2011). The only recent sightings in Ontario are from the Pinery Provincial Park.	Low - No suitable habitat is present within the Study Area.
Birds Acadian flycatcher	Empidonax virescens	END	END	In Ontario, the Acadian flycatcher breeds in the understory of large, mature, closed-canopy forests, swamps and forested ravines. This bird prefers forests greater than 40 ha in size, and exhibits edge sensitivity preferring the deep interior of the forest. Its nest is loosely woven and placed near the tip of branch in a small tree or shrub often, but not always, near water (Whitehead and Taylor 2002).	Low - No suitable habitat is present within the Study Area.
Bank swallow	Riparia riparia	THR	THR	In Ontario, the bank swallow breeds in a variety of natural and anthropogenic habitats, including lake bluffs, stream and river banks, sand and gravel pits, and roadcuts. Nests are built in a vertical or near-vertical bank. Breeding sites are typically located near open foraging sites such as rivers, lakes, grasslands, agricultural fields, wetlands and riparian woods. Forested areas are generally avoided (Garrison 1999).	Low - Banks of creek demonstrated favourable substrate for nests, however, anthropogenic activies and bank slope were unfavourable for occupancy of this species. No nests were observed in the substrate.

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Common Name	Scientific Name	SARA ¹	ESA ²	Habitat Requirements	Likelihood of Occurrence within Study Area
Barn swallow	Hirundo rustica	THR	SC	In Ontario, barn swallow breeds in areas that contain a suitable nesting structure, open areas for foraging, and a body of water. This species nests in human made structures including barns, buildings, sheds, bridges, and culverts. Preferred foraging habitat includes grassy fields, pastures, agricultural cropland, lake and river shorelines, cleared right-of-ways, and wetlands (COSEWIC 2011). Mud nests are fastened to vertical walls or built on a ledge underneath an overhang. Suitable nests from previous years are reused (Brown and Brown 1999).	Moderate - Study Area is within the range limits of this species; however, structures providing suitable nesting habitat are generally absent from the valleyland. One pedestrian bridge is present but did not contain nests at the time of the survey; better nesting habitat is available on the St. Clair Avenue bridge but no nests were observed there. Nests may be established during future breeding seasons.
Bobolink	Dolichonyx oryzivorus	THR	THR	In Ontario, bobolink breeds in grasslands or graminoid dominated hayfields with tall vegetation (Gabhauer 2007). Bobolink prefers grassland habitat with a forb component and a moderate litter layer. They have low tolerance for presence of woody vegetation and are sensitive to frequent mowing within the breeding season. They are most abundant in established, but regularly maintained, hayfields, but also breed in lightly grazed pastures, old or fallow fields, cultural meadows and newly planted hayfields. Their nest is woven from grasses and forbs. It is built on the ground, in dense vegetation, usually under the cover of one or more forbs (Martin and Gavin 1995).	Low - No suitable grassland habitat is present within the Study Area.
Canada warbler	Cardellina canadensis	THR	SC	In Ontario, breeding habitat for Canada warbler consists of moist mixed forests with a well- developed shrubby understory. This includes low-lying areas such as cedar and alder swamps, and riparian thickets (McLaren 2007). It is also found in densely vegetated regenerating forest openings. Suitable habitat often contains a developed moss layer and an uneven forest floor. Nests are well concealed on or near the ground in dense shrub or fern cover, often in stumps, fallen logs, overhanging stream banks or mossy hummocks (Reitsma et. al. 2010).	Low - No suitable habitat is present within the Study Area.
Chimney swift	Chaetura pelagica	THR	THR	In Ontario, chimney swift breeding habitat is varied and includes urban, suburban, rural and wooded sites. They are most commonly associated with towns and cities with large concentrations of chimneys. Preferred nesting sites are dark, sheltered spots with a vertical surface to which the bird can grip. Unused chimneys are the primary nesting and roosting structure, but other anthropogenic structures and large diameter cavity trees are also used (COSEWIC 2007).	Moderate - Study Area is within the range limits of this species and stream conditions may provide suitable foraging habitat. Species was observed foraging above the creek. However, breeding within the Study Area is considered unlikely due to the species' preference for anthropogenic structures which are available in the surrounding urban area.
Common nighthawk	Chordeiles minor	THR	SC	These aerial foragers require areas with large open habitat. This includes farmland, open woodlands, clearcuts, burns, rock outcrops, alvars, bog ferns, prairies, gravel pits and gravel rooftops in cities (Sandilands 2007).	Low- Forest tract was not large or mature enough to be considered suitable habitat.
Eastern meadowlark	Sturnella magna	THR	THR	In Ontario, the eastern meadowlark breeds in pastures, hayfields, meadows and old fields. Eastern meadowlark prefers moderately tall grasslands with abundant litter cover, high grass proportion, and a forb component (Hull 2003). They prefer well drained sites or slopes, and sites with different cover layers (Roseberry and Klimstra 1970).	Low - No suitable grassland habitat is present within the Study Area.
Eastern wood-pewee	Contopus virens	SC	SC	The eastern wood-pewee inhabits a wide variety of wooded upland and lowland habitats but is most commonly associated with the mid-canopy of forest clearings, and edge habitat in deciduous and mixed forests. It also occurs in anthropogenic habitats that provide an open forested aspect such as parks and suburban neighborhoods. It prefers intermediate-age mature forest stands with little understory vegetation (COSEWIC 2012a).	Moderate - Suitable habitat may be present; however, none were observed during the breeding bird survey.
Peregrine falcon (anatum/tundrius subspecies)	Falco peregrinus anatum/tundrius	SC	SC	In Ontario, peregrine falcon breeds in areas containing suitable nesting locations and sufficient prey resources. Such habitat includes both natural locations containing cliff faces (heights of 50 - 200 m preferred) and also anthropogenic landscapes including urban centres containing tall buildings, open pit mines and quarries, and road cuts. Peregrine falcons nest on cliff ledges and crevices and building ledges. Nests consist of a simple scrape in the substrate (COSEWIC 2007).	Low - No suitable habitat is present within the Study Area.

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Common Name	Scientific Name	SARA ¹	ESA ²	Habitat Requirements	Likelihood of Occurrence within Study Area
Red-headed woodpecker	Melanerpes erythrocephalus	END	END	In Ontario, the red-headed woodpecker breeds in open, deciduous woodlands or woodland edges and are often found in parks, cemeteries, golf courses, orchards and savannahs (Woodliffe 2007). They may also breed in forest clearings or open agricultural areas provided that large trees are available for nesting. They prefer forests with little or no understory vegetation. They are often associated with beech or oak forests, beaver ponds and swamp forests where snags are numerous. Nests are excavated in the trunks of large dead trees (Smith et. al. 2000).	Moderate - Study Area does contain a forest tract that does provide suitable habitat.
Wood thrush	Hylocichla mustelina	THR	SC	In Ontario, wood thrush breeds in moist, deciduous hardwood or mixed stands that are often previously disturbed, with a dense deciduous undergrowth and with tall trees for singing perches. This species selects nesting sites with the following characteristics: lower elevations with trees less than 16 m in height, a closed canopy cover (>70 %), a high variety of deciduous tree species, moderate subcanopy and shrub density, shade, fairly open forest floor, moist soil, and decaying leaf litter (COSEWIC 2012c).	Moderate - Suitable habitat may be present; however, none were observed during the breeding bird survey.
Eastern small-footed myotis	Myotis leibii		END	This species is not known to roost within trees, but there is very little known about its roosting habits. The species generally roosts on the ground under rocks, in rock crevices, talus slopes, or rock piles, and occasionally inhabits buildings. Areas near the entrances of caves or abandoned mines may be used for hibernaculum, where the conditions are drafty with low humidity, and may be subfreezing (Humphrey 2017).	Low - No suitable habitat is present within the Study Area.
Little brown myotis	Myotis lucifugus	END	END	In Ontario, this species range is extensive and covers much of the province. It will roost in both natural and man-made structures. They require a number of large dead trees, in specific stages of decay and that project above the canopy in relatively open areas (Lacki 2007). May form nursery colonies in the attics of buildings within 1 km of water. Caves or abandoned mines may be used for hibernaculum, but high humidity and stable above freezing temperatures are required.	High - Potential suitable roosting habitat in the Study Area.
Northern myotis	Myotis septentrionalis	END	END	In Ontario, this species range is extensive and covers much of the province. It will usually roost in hollows, crevices, and under loose bark of mature trees. Roosts may be established in the main trunk or a large branch of either living or dead trees. Caves or abandoned mines may be used for hibernaculum, but high humidity and stable above freezing temperatures are required (COSSARO 2012).	High - Potential suitable roosting habitat in the Study Area.
Tri-colored bat	Perimyotis subflavus	END	END	In Ontario, tri-colored bat may roost in foliage, in clumps of old leaves, hanging moss or squirrel nests. They are occasionally found in buildings although there are no records of this in Canada (Poissant et. al. 2010). They typically feed over aquatic areas with an affinity to large-bodied water and will likely roost in close proximity to these. Hibernation sites are found deep within caves or mines in areas of relatively warm temperatures. These bats have strong roost fidelity to their winter hibernation sites and may choose the exact same spot in a cave or mine from year to year.	High - Potential suitable roosting habitat in the Study Area.
Reptiles Blanding's turtle (Great Lakes/St. Lawrence population)	Emydoidea blandingii	END	THR	In Ontario, Blanding's turtle will use a range of aquatic habitats, but favor those with shallow, standing or slow-moving water, rich nutrient levels, organic substrates and abundant aquatic vegetation. They will use rivers, but prefer slow-moving currents and are likely only transients in this type of habitat. This species is known to travel great distances over land in the spring in order to reach nesting sites, which can include dry conifer or mixed forests, partially vegetated fields, and roadsides. Suitable nesting substrates include organic soils, sands, gravel and cobble. They hibernate underwater and infrequently under debris close to water bodies (COSEWIC 2005).	Low - No suitable habitat is present within the Study Area.

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Common Name	Scientific Name	SARA ¹	ESA ²	Habitat Requirements	Likelihood of Occurrence within Study Area	
Eastern milksnake	Lampropeltis triangulum	SC	NAR	In Ontario, milksnake uses a wide range of habitats including prairies, pastures, hayfields, wetlands and various forest types, and is well-known in rural areas where it frequents older buildings. Proximity to water and cover enhances habitat suitability. Hibernation takes place in mammal burrows, hollow logs, gravel or soil banks, and old foundations (COSEWIC 2014).	Moderate - As a habitat generalist, this species may occur throughout and adjacent to the Study Area.	
Midland painted turtle	Chrysemys picta marginata	SC	NAR	Painted Turtles occupy slow moving, relatively shallow and well-vegetated wetlands (e.g., swamps, marshes, ponds, fens, bogs, and oxbows) and water bodies (e.g., lakes, rivers, creeks, and streams) with abundant basking sites and organic substrate. The species is semi-tolerant of human-altered landscapes and may occasionally be found occupying urban ponds and lands subject to anthropogenic disturbance (e.g., farm ponds, impoundments, water treatment facilities) (COSEWIC 2018).	Low - No suitable habitat is present within the Study Area.	
Northern map turtle	Graptemys geographica	SC	SC	In Ontario, the northern map turtle prefers large waterbodies with slow-moving currents, soft substrates, and abundant aquatic vegetation. Ideal stretches of shoreline contain suitable basking sites, such as rocks and logs. Along Lakes Erie and Ontario, this species occurs in marsh habitat and undeveloped shorelines. It is also found in small to large rivers with slow to moderate flow. Hibernation takes place in soft substrates under deep water (COSEWIC 2012b).	Low - No suitable habitat is present within the Study Area.	
Queensnake	Regina septernvittata	END	END	In Ontario, queensnake requires permanent aquatic habitat with large flat rocks, either submerged or on the bank/shoreline. Individuals rarely leave the shoreline of permanent bodies of water with abundant shoreline cover and a healthy population of crayfish. They are fairly intolerant of silty substrates and most commonly are found in streams with bedrock and gravel substrates. The best sites have water temperatures that remain at or above 18°C during the active season, have a swift to moderate current and woodland surroundings. Hibernacula may occur in the abutments of old bridges, in clay slopes above the high water mark and in bedrock fissures (Gillingwater 2011).	Low - No suitable habitat is present within the Study Area.	
Snapping turtle	Chelydra serpentina	SC	SC	In Ontario, snapping turtle utilizes a wide range of waterbodies, but shows preference for areas with shallow, slow-moving water, soft substrates and dense aquatic vegetation. Hibernation takes place in soft substrates under water. Nesting sites consist of sand or gravel banks along waterways or roadways (COSEWIC 2008).	Moderate - Some suitable movement/foraging habitat is present within the Study Area.	
Vascular Plants						
Broad beech fern	Phegopteris hexagonoptera	—	SC	In Ontario, broad beech fern inhabits rich, undisturbed mature deciduous forest dominated by beech and maple. It typically grows in moist to wet, sandy soils of lower valley slopes and occasionally swamps (van Overbeeke et. al. 2013).	Low - No suitable habitat is present within the Study Area.	
Butternut	Juglans cinerea	END	END	In Ontario, butternut is found along stream banks, on wooded valley slopes, and in deciduous and mixed forests. It is commonly associated with beech, maple, oak and hickory (Voss and Reznicek 2012). Butternut prefers moist, fertile, well-drained soils, but can also be found in rocky limestone soils. This species is shade intolerant (Farrar 1995).	High - Suitable forested/riparian habitat is present throughout the Study Area. None were observed during the 2020 field investigations but this can be further confirmed through site specific tree inventory work.	
Fern-leaved yellow false foxglove	Aureolaria pedicularia		THR	Fern-leaved Yellow False Foxglove is found in open savanna and woodland habitats along with Black Oak, its preferred host tree. All three false foxglove species are shade intolerant to varying degrees. Their hemi-parasitic behaviour provides them with a competitive advantage on drought-prone soils provided they can attach to a suitable host. About 85% of the population occurs in the Pinery Complex and Turkey Point Complex subpopulations (COSEWIC 2018).	Low - No suitable habitat is present within the Study Area.	
Notes						
¹ Species at Risk Act (SAF	(ESA), 2002. Schedule 1; Part 1	(Extirpated), F	Part 2 (Endange	ered), Part 3 (Threatened), Part 4 (Special Concern)		
Endangered Species Act (ESA), 2007. Schedule 1 (Exilipated - EXP), Schedule 2 (Endangered - END), Schedule 3 (Threatened - THR), Schedule 4 (Special Concern - SC)						